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Stress as a badge of honour: relationships with performance, health, and well-being

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ABSTRACT

Our study examined construct validity evidence for a measure of perceptions of Stress as a Badge of Honour, consisting of four dimensions: stress as achievement, relaxation remorse, stress-related social comparison, and stress-related impression management. A pilot study among college students (Study 1; $N = 120$) informed the initial development of the measure, which was further tested in two worker samples recruited from Amazon's Mechanical Turk (MTurk). The results of Study 2 ($N = 248$) supported a four-factor structure of the measure. Study 3 utilised data collected at two time points (Matched $N = 752$), assessing stress badge perceptions, convergent and discriminant validity measures (Time 1), and measures of health, well-being, and performance (Time 2). The four subscales were related to, but unique from, convergent validity measures (e.g. workaholism, perfectionism) and were not highly related to discriminant validity measures (i.e. social desirability, positive and negative affect). The stress badge perceptions demonstrated some positive relationships with job performance, but predominantly negative relationships with psychological and physical health, and work-family conflict. Our findings expand our understanding of the dark side of viewing high stress in a laudatory manner by introducing a novel measure and can inform interventions to promote optimal views of stress.

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Stress; stressors; psychological health; physical health; stress appraisals

The widespread experience of stress is evident in everyday conversations, the media, and especially in our workplaces. Most readers can probably recall a recent conversation where, "How are you?" was met with a response of "busy" or "stressed." Particularly in the United States, survey data reinforces the commonality of stress and insufficiency of stress management practices (American Psychological Association, 2015), along with working hours that exceed those of many other developed countries (Alesina et al., 2005). Such trends beg the question of whether employees are adapting to high levels of stressors as a normal, necessary, and even laudable aspect of life. If stress is normal, then experiencing or even magnifying one's stress may feel like a legitimate way to feel and appear accomplished. If this is true, what is the impact for worker health and well-being? To address such questions, the goal of the present study was to

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develop and provide construct validity evidence for a measure of stress as a badge of honour.

Our study contributes to the literature in at least three key ways. First, stress badge (SB) perceptions represent a relevant concept that has captured the attention of popular media (e.g. The Medium; W., 2020), but is essentially unstudied. Although studies have considered personal dispositions, like stress mindsets (Crum et al., 2013), or appraisals of stressors as a challenge when facing a demand (LePine et al., 2005), no studies to our knowledge have sought to more broadly assess personal beliefs about the experience and perceived social value of a high level of stress, specifically operationalised as a high workload. Anecdotal experiences and preliminary research on pressures to appear busy (Gershuny, 2005; Kay, 2017) suggest that many individuals use their stress level to communicate their hard work, busyness, or even their personal worth. With a validated measure, researchers and practitioners can better conceptualise and quantify beliefs regarding a heavy workload as honourable and the effects of such beliefs.

Second, SB perceptions may help explain why organisational stress management interventions yield varying levels of success (e.g. Richardson & Rothstein, 2008). For instance, workers may find stress management interventions unnecessary or irrelevant if they believe stress is how they communicate their worth. Third, this construct may further inform efforts to create a more positive climate around stress. Recent work finds that individuals can feel stigma around reporting stress-related concerns at work (Klinefelter et al., 2020) and have distinct perceptions of climates around stress prevention (Sawhney et al., 2018). SB perceptions can add to this line of inquiry by exploring personal and socially influenced perceptions surrounding the experience of high amounts of stressors.

Connections to organisational stress theory

The negative effects of stressors on an individual's health and well-being are well-documented (De Lange et al., 2004; Ganster & Rosen, 2013); however, stressors can also have beneficial effects in terms of focusing one's effort or providing a personal challenge and a sense of accomplishment (Crawford et al., 2010; Crum et al., 2013). The differences in "good" and "bad" effects of stress have been explained in part by appraisal-based theories and different types of stressors. Specifically, the transactional model of stress proposes that outcomes of a stressful event depend on an individual's appraisal of the situation and their coping abilities (Folkman et al., 1986). The challenge-hindrance framework (Cavanaugh et al., 2000) classifies stressors as either a challenge, promoting positive effects through motivational processes, or a hindrance, primarily resulting in negative effects. Challenge and hindrance stressors can result in differential outcomes (Podsakoff et al., 2007), but there has been criticism that challenge stressors do not necessarily result in "positive" effects (Mazzola & Disselhorst, 2019). Challenge and hindrance stressors both require expenditure of personal energy and resources and can result in strain and negative health outcomes (e.g. French et al., 2019; Mazzola & Disselhorst, 2019).

Individuals also make general attributions about the effects of stress. Crum and colleagues (2013) measured and manipulated stress mindsets, and found different effects

when stress was viewed as performance-enhancing verses performance-debilitating. These mindsets can affect one's coping behaviours, job performance (Casper et al., 2017), and judgements of the strain experiences of peers (Ben-Avi et al., 2018). Together, these perspectives suggest that the way workers feel about stressors and experienced stress can influence well-being and work behaviour. Adding to this literature, our SB perceptions measure is a broader assessment of how individuals perceive challenge stressors (i.e. a high workload) to benefit their self-perceptions and social status. Although our initial conceptualisation of SB perceptions focused on stressors in general, our early piloting and further considerations of theory led us to operationalise the measure to focus specifically on the stressor of a high workload, as this is a common (i.e. across most all occupations) and prototypical challenge stressor (Cavanaugh et al., 2000). Furthermore, focusing on the stressor of the "amount" of work allows context for comparisons with others, as was a component of the proposed construct of interest.

Defining the stress badge (SB) perceptions construct

The development of the SB construct arose through both inductive and deductive efforts. Our recognition of the need for a measure first arose through observations of a phenomenon becoming more pervasive in our modern culture. News outlets and popular blogs (e.g. The Medium, W., 2020) have anecdotally picked up this question of why individuals wear stress as if it is a badge of honour. The present authors, and we imagine many readers, could identify this sentiment of stress being attached to importance or viewed as a competition in their own life, whether it be in personal relationships or examples seen in popular media. However, empirical investigations into this topic were lacking. Recent research has examined pressures and desires to be busy (e.g. Kay, 2017; Kaya et al., 2019; Lashewicz et al., 2020); however, most of this work focuses simply on social evaluations or self-evaluations, without offering a more comprehensive measure of forces around psychosocial dynamics of busyness or stress more broadly. A larger body of knowledge is available related to dispositions, such as workaholism or stress mindsets (e.g. Clark et al., 2016; Crum et al., 2013). Though this work captures individual dispositions toward taking on high levels of work or viewing stress as a challenge, there remains a gap in the understanding and assessment of broader perceptions of the perceived desirability of being "stressed," or more specifically operating with a high workload.

As we developed our measure, we felt it was important to focus on this more specific idea of viewing one's work stress (i.e. high workload) as a potentially desirable and comparable aspect of work life. As we developed our construct definition and proposed dimensions, we looked to foundational theories of human behaviour that capture the important influences of personal beliefs and emotions, as well social influences. Specifically, utilising social-cognitive theory (Bandura, 1986), we acknowledged that individuals are shaped by internal beliefs and external expectations and reinforcement through the observation of others. According to social cognitive theory, an individual's beliefs and behaviours are impacted by the perceived outcomes of their behaviours and the associated social reactions (Bandura, 1986, 1998). With this view in mind, it is important to study personal views of work and stress in a

way that is more integrated with capturing the perceived social value of operating under high workloads and stress.

We defined SB perceptions as beliefs that a high workload is impressive and both personally and socially valued. Attempting to capture internally and externally influenced affective, cognitive, and behavioural dimensions of SB perceptions, we proposed four content domains. These were derived based on several brainstorming sessions among the research team, with the goal of capturing key social and personal aspects of experiencing a high workload as honourable, as informed by broader theory (i.e. social-cognitive theory) and personal observations and examples in the popular media aligned with the idea of the stress as a badge of honour. We also thoughtfully considered theoretically-related constructs that captured internal and socially influenced views of one's orientation toward working and/or stress, such as perfectionism, workaholism, and stress mindsets. We were careful to delineate common features of our proposed dimensions from existing measures. For example, we developed a broader conceptualisation of the desire and need to express one's high workload for its social value verses a more focused compulsion toward working excessively as is the case with workaholism.

An internal affective dimension, *relaxation remorse*, focused on discomfort in the absence of stress, resulting in feelings of guilt for taking time away from work-related tasks. Two cognitive elements involved personal interpretations of the social value around stress and internal comparisons to others. Specifically, we defined *stress as achievement* as the evaluation that a high workload is a sign of importance and means to achievement and *stress-related social comparison (SRSC)* as a tendency to compare one's workload to others for purposes of self-regulation or judgment. The final behavioural dimension, *stress-related impression management (SRIM),* involves an outward expression in which one attempts to create a social image so that one appears to be under a high workload. These four dimensions were conceptualised as representing the key social cognitive elements of the SB construct. We elaborate on these four dimensions and contrast them with existing constructs in the following sections.

Relaxation remorse

Relaxation remorse is similar to the construct of workaholism, where individuals work excessively and compulsively at the expense of other desirable activities (Clark et al., 2016). Individuals prone to relaxation remorse may not necessarily feel a compulsion to work that they *must* act on, as is the case with the addictive nature of workaholism (e.g. Schaufeli et al., 2009), but still experience negative affective responses during relaxation time. Though individuals who experience relaxation remorse may not abandon relaxation efforts entirely, recovery time may be low in quality because of the underlying belief that productive activities are more important. These beliefs are problematic, given the health and well-being benefits of recovery experiences outside of work (Sonnentag & Fritz, 2007) and even during the workday (Kim et al., 2015). Relaxation remorse would be expected to be negatively related to recovery experiences because relaxation remorse may result in fewer breaks or simply breaks that are less replenishing.

Stress as achievement

The second dimension focuses on internalised beliefs about the value of a high workload. Prior research indicates that achievement-driven dispositions can be beneficial in some ways and harmful in others. For example, workaholism tends to be related to negative outcomes for well-being and has inconsistent relationships with work performance (Clark et al., 2016; Shimazu et al., 2015). Perfectionism, a broader disposition in which one strives for excessively high standards (Hewitt & Flett, 1991), relates to better performance (Stoeber et al., 2010), but more stress and psychological health symptoms (Childs & Stoeber, 2012). Rather than a compulsion toward constant or perfect work, we theorised that stress as achievement involves an appraisal that a high workload is an indicator of success. This dimension is likely more widespread among workers compared to workaholism, which is considered to be more atypical (framed often as an addiction). Further, stress as achievement is proposed to have a unique focus on viewing the experience of high workloads as impressive, rather than perfection (an evaluative outcome) as a goal. Thus, the sense of pride in high workloads would be more strongly associated with managing many responsibilities, resulting in high levels of stressors.

Stress-related social comparison (SRSC) and stress-related impression management (SRIM)

The final two dimensions concern social interpretations and expressions regarding high stress being laudable. Individuals high in SRSC will be aware of the workload of those around them and adjust their workload accordingly. Social comparisons are a fundamental mechanism by which individuals seek information to learn about and evaluate themselves (Festinger, 1954) and can explain many aspects of organisational environments (e.g. justice, performance ratings, stress; Greenberg et al., 2007). Though some comparisons can be motivational and positive, making comparisons in general has been associated with burnout (Carmona et al., 2006). No research to our knowledge has considered how employees compare their workload-related stress to other workers, thus the impact of such comparisons is unknown.

Workers may also be inclined to create an image of high-stress to keep up with perceived expectations. The idea of impression management originated with Goffman's (1959) work, where he noted that individual behaviour is affected by how individuals feel others perceive them. Impression management behaviours may be rooted in fundamental human needs to belong and to feel that others view them positively (Baumeister & Leary, 1995). We expected that SRIM would be closely related to SRSC and social comparisons in general.

SRIM and SRSC could be harmful for several reasons. First, if workers compare themselves to others who experience high workloads it could result in normative high-stress climates. Second, workers may be less likely to seek needed help if they perceive that others with equal levels of stressors do not need help. Comparisons to others can indeed make workers reluctant to seek help for personal and work-related problems (Bamberger, 2009). Third, if individuals engage in excessive SRSC and SRIM, they may miss out on the recovery benefits that can be obtained through positive social interactions (Sonnentag, 2001).

Demonstrating construct validity for the SB framework

To provide validity evidence for our measure, we sought to determine if a factor structure emerged, reflecting both internally and externally influenced personal beliefs and social expressions. Specifically, we expected the SB measure to have a four-factor structure, reflecting the dimensions described. As evidence for convergent validity, we expected (1) stress as achievement to positively correlate with workaholism and perfectionism, (2) relaxation remorse to positively correlate with workaholism and negatively correlate with recovery experiences, and (3) SRIM and SRSC to positively correlate with general social comparisons. Concerning discriminant validity, we expected weak correlations of the SB dimensions with social desirability (Crowne & Marlowe, 1960) and general positive affect (PA) and negative affect (NA; Watson et al., 1988). We chose these variables to differentiate SB perceptions from the general desire to please others or a general concern for the thoughts of others and to ensure that our items were not heavily influenced by general affect. We also examined the test-retest reliability of our scale by correlating responses on the SB measure at two time points separated by two months.

Relationships with self-rated performance, health, and well-being

A key assumption of the Conservation of Resources (COR) model (Hobfoll, 1989) is that individuals with sufficient resources to cope with stressors will be less likely to experience detriments to their health and well-being. Stress and associated physical and psychological wear and tear are more likely when an individual encounters excessive demands for too long or too frequently, without recovery (Ganster & Rosen, 2013). Viewing a high workload as normal and impressive would be problematic because workers may accept imbalance between demands and resources and simply adapt to always being subject to high stress, potentially resulting in a continuously high allostatic load (Ganster & Rosen, 2013). Based on COR and allostatic load frameworks, having insufficient resources to meet demands results in strain and further health consequences. Thus, perceiving stressors as a "badge of honour" is likely to result in substantial health and well-being costs because of the continual wear and tear on the body. However, viewing stressors as a sign of success may have motivational elements that benefit job performance, paralleling findings that challenge stressors relate to positive performance-related outcomes (LePine et al., 2005).

Following this logic that SB perceptions could have motivational properties, as well as resource-draining properties, several measures were considered for establishing evidence of predictive validity. First, job performance was considered as a key outcome for both employees and organisations. Prior evidence suggests challenge stressors can result in performance benefits (LePine et al., 2005), but other achievement-oriented traits, such as workaholism, have shown inconsistent relationships with job performance (e.g. Clark et al., 2016). We expected the SB dimensions to relate to job performance differently. Stress as achievement was expected to positively correlate with job performance because workers who value taking on high workloads are likely to be strong performers. The relationships with the other three dimensions were more exploratory. For instance, relaxation remorse could be associated with a greater drive to work, enhancing performance, or poor recovery that limits performance. Similarly, SRSC and SRIM could be motivating, enhancing performance, or distracting, harming performance.

There are likely tradeoffs when working under high stress in terms of performance and health. We expected the SB dimensions to relate positively to perceived stress and other indicators of poor health. Related constructs, such as workaholism, perfectionism, and social comparisons, have been associated with indicators of poor health and well-being (e.g. Butzer & Kuiper, 2006; Clark et al., 2016; DiBartolo et al., 2007). Thus, we expected all SB dimensions to be related to poor health, indexed as more depression and anxiety symptoms and more physical health symptoms. We expected relaxation remorse would be one of the stronger predictors of health outcomes, given the impact these perceptions would have on resource replenishment.

Finally, we considered how the SB dimensions would relate to one's social relationships and ability to balance work and non-work responsibilities. Based on the COR framework, as well as the effort-recovery model's (Meijman & Mulder, 1998) tenant that work demands require investment of personal resources, the tendency to take on many work-related responsibilities would leave fewer resources for the non-work domain. Further, a focus on work demands and SRSC may leave fewer resources to build and maintain quality work relationships. Thus, we expected each dimension to relate to more work-family conflict (WFC) and lower quality work relationships (i.e. with one's co-workers and supervisor). We expected the strongest relationships for relaxation remorse (which could interfere with one's ability to engage in the family domain in particular) and the socially oriented dimensions because SRSC and SRIM are likely to affect an individual's work relationships.

A multi-sample approach was used to examine the structure, reliability, and construct validity of the SB measure, following recommendations for scale development (e.g. Hinkin, 1995). The measure was initially developed and tested using a college student sample (Study 1) and then adapted to an employee sample in a cross-sectional study of Amazon's Mechanical Turk (MTurk) workers (Study 2). Study 3 was a two-time point study of MTurk employees designed to provide additional validity evidence for the measure.

Study 1: college student pilot

Undergraduate researchers provided input on typical perceptions of stressors among students and helped generate items addressing the four theorised content domains. As previously mentioned in the introduction, the process of generating items was completed while referencing proposed construct definitions and referring to theory, personal examples brought up in group discussion, and references to examples in popular media. Once a set of items addressing each proposed dimension was developed as a team, and to provide initial content validity evidence, five student researchers reviewed the resulting 47 items in detail and rated the extent to which items reflected the provided construct definitions (1 = *Does not fit at all* to 5 = *Fits very well*). Items with an average rating less than 4.5 were removed or reworded. A resulting 31-item SB measure rated on a five-point Likert scale (1 = *strongly disagree* to 5 = *strongly agree*) was then administered via paper and pencil survey to college students ($N = 120$) recruited using an online participant pool. Open-ended questions asked for examples or reasoning the student used in responding to the items representing each dimension. The sample was 60% females, 87% white, and mostly freshman (44%) or sophomores (28%).

Results

Data were analyzed using SPSS v. 27. A principal components analysis provided initial evidence for a three-factor structure, based on examination of a scree plot and a parallel analysis. We then conducted an exploratory factor analysis with a promax rotation to better interpret the factor structure. Items were considered to load on a factor when the loading on one and only one factor was greater than .40. The full set of initial items and factor loadings are provided in the supplementary materials (Table S1 can be viewed at https://osf.io/9xq4g/).

In the three-factor structure, SRIM and SRSC items tended to load onto the same factor or fail to load onto any factor. A fourth factor did not improve the results. The combined SRSC and SRIM subscale demonstrated acceptable reliability ($\alpha = .89$), as did relaxation remorse ($\alpha = .91$), but stress as achievement exhibited lower reliability ($\alpha = .65$). Item descriptive statistics and qualitative remarks further informed areas for improvement, particularly with the stress as achievement and SRIM/SRSC subscales. Items with low levels of endorsement were adjusted to be less strongly worded to elicit more variability in the revised version. We also re-worded SRSC and SRIM items to more clearly differentiate internal comparisons to evaluate one's own stress in comparison to others versus the external behaviours more aligned with SRIM. Additional changes for Study 2 included expanding to a seven-point response scale to increase variability and referring to workload, rather than "stress" in general for a cleaner application in an employee sample. We expected that these modifications to the measure would result in a cleaner four-factor structure that aligned with the theorised dimensions of the SB construct.

Study 2: cross-sectional employee study

Method

An online survey containing the modified SB measure, open-ended items regarding responses to the SB items, and general individual difference measures (e.g. Big Five traits) was administered to 264 employees recruited through MTurk. We note that the individual difference measures demonstrated largely non-significant relationships with SB dimensions and are thus not reported in detail in the current paper. Prior to starting the survey, individuals had to agree that they were 18 years of age or older, a U.S. citizen, and were employed at least 30 h per week in a job outside of MTurk. Two attention check items, asking participants to select a specific item response, were included to detect inattentiveness (Cheung et al., 2016). Sixteen participants did not meet study qualifications, did not pass attention checks, or took the survey in an unreasonably fast amount of time (less than 3 min). Thus, a final sample of 248 participants were compensated $1.50 at the completion of the survey.

The sample consisted of a similar percentage of males (52%) and females (48%). The average age was 34.79 ($SD = 9.58$). The majority of participants identified as white (81%), with the remaining being African American (9%), Asian (8%), American Indian or Alaska native (<1%) or other (2%). Most participants had a bachelor's degree (40%), some college (21%), or an Associates or two-year technical degree (15%). Some of the most common occupational areas were sales and related occupations (14%), computer and mathematical (12%), and business and financial operations (11%). Average weekly work hours were 41.63 ($SD = 7.19$).

Measures

Demographics. Demographic information included age, gender, ethnicity, highest level of education, vocational field, and average hours worked per week.

Stress Badge Perceptions. The modified SB measure consisted of 30 items assessing stress as achievement, relaxation remorse, SRSC, and SRIM. Items were rated on a seven-point scale (1 = *strongly disagree* to 7 = *strongly agree*). Open-ended questions were included at the end of each subscale, asking participants to reflect on why they responded to the items the way they did, providing specific thoughts or examples.

Results

A series of confirmatory factor analyses (CFAs) were conducted using the lavaan package (Rosseel, 2012) in RStudio (Version 1.3.959) to confirm the whether the four-factor structure fit the SB measure better than alternatives. Robust maximum likelihood estimation was used to account for non-normality in the data (Hu & Bentler, 1992). As guidelines for acceptable fit, we used recommendations put forth by Hu and Bentler (1999), such that good fit is considered a CFI greater than .95, RMSEA lower than .06, and the SRMR lower than .08.

The four-factor model initially exhibited acceptable fit to the data and was superior to alternative models (Table 1). Focusing on the four-factor model, we examined the factor loadings (Table 2) and modification indices to inform whether any items should be considered for removal. Most items loaded greater than .70 on their respective factor. Nine items loaded between .56 and .68; two of those were also cross-loading. After considering qualitative remarks noting confusion in the wording of some items, along with the CFA results, eight items were removed. One item on the SRSC subscale that originally loaded .68 was retained to keep the subscale length at four items. Removing the eight items resulted in very good fit to the data, improving upon the original four factor model, *SB* χ^2 difference (188) = 367.12, $p < .001$. In sum, the CFA analyses supported a final set of 21 items to be included in the longitudinal survey.

Table 1. Model comparisons of confirmatory factor analyses in Study 2.

Model	Satorra-Bentler χ^2	*df*	CFI	RMSEA	90% CI Lower	90% CI Upper	SRMR	Satorra-Bentler χ^2 Difference Test [c]
Model 1: 1 factor	2438.03**	377	.48	.164	.158	.170	.145	607.66**
Model 2: 2 factors[a]	1791.19**	376	.64	.136	.129	.142	.127	412.85**
Model 3: 3 factors[b]	894.66**	374	.86	.084	.077	.091	.087	121.68**
Model 4: 4 factors	632.48**	371	.93	.060	.052	.068	.061	
Model 5: 4-Factors (shortened)	264.47**	183	.97	.048	.034	.060	.045	367.12**

[a]Internal evaluations of Stress as achievement, Relaxation remorse, and SRSC modelled as one factor, outward displays of SRIM modelled as a separate factor.
[b]Stress as achievement and Relaxation remorse modelled separately, SRSC and impression management combined as socially-related one factor.
[c]All models were compared to Model 4 as a reference.
** $p < .001$; $N = 248$.

Table 2. Standardised factor loadings from confirmatory factor analysis testing four stress badge dimensions in Study 2.

Item	1	2
Stress as achievement *(M* = 4.33, *SD* = 1.26, *α* = .91)		
Having a high amount of work is an important component to achieving goals	**.82**	.81
Having a lot to do is a necessary part of working hard	**.71**	.68
People who are high achievers must frequently endure high amounts of work	.64	
Part of being a successful person is accomplishing tasks under a high workload	.65	
It is difficult for people to achieve great things without experiencing a high workload	.65	
Other people will think I'm successful if I have a high workload	**.72**	.72
Having a high workload makes it apparent that I'm successful	**.78**	.79
I admire people who have a very high workload	**.75**	.76
I tend to think people who have a high amount of work are impressive	**.79**	.81
I assume that individuals with high amounts of work to do must be important	**.83**	.84
Relaxation remorse *(M* = 3.94, *SD* = 1.68, *α* = .94)		
Relaxing makes me feel guilty because there is always something else I could be doing for work	**.91**	.91
Relaxing often makes me feel bad because I feel I am wasting time when I should be doing something productive for work	**.94**	.94
When I try to relax, I feel like I should be doing work instead	**.94**	.94
Relaxing is difficult for me because there are always more important things I need to do	**.83**	.83
Relaxing when I have other things to do for work makes me feel guilty	**.78**	.78
SRSC (*M* = 3.66, *SD* = 1.38, *α* = .83)		
When my co-workers tell me how much work they have to do, it often makes me feel like I am not doing enough	.63	
When my co-workers tell me how much work they have to do, it often makes me feel like my work ethic is inadequate	.65	
I often get bothered when friends with easier jobs think they have more work to do than me	.62	
I look to my co-workers to determine if my workload is high enough	**.77**	.79
If I want to know if I'm under a high enough workload, I look to those around me	**.75**	.78
I feel accomplished when I compare myself to those who do not have a high amount of work to do in their jobs	**.70**	.69
I pay close attention to how much work I do, compared to those around me	**.68**	.71
SRIM (*M* = 2.47, *SD* = 1.27, *α* = .91)		
I list off all my tasks to my coworkers so they know my workload is high	**.88**	.89
I give people a rundown of my busy schedule so they know I am working hard	**.80**	.80
I incorporate how much work I have to do into conversations with my co-workers so they know I am working hard	**.86**	.86
I publicly compete with my co-workers about the amount of work I have to do (e.g. by saying I have more work than them)	**.80**	.79
When my co-workers tell me about their workload I feel competitive because I need to make sure they're aware I have just as much work to do	**.79**	.79
I sometimes exaggerate how much I work to my co-workers	.68	
When co-workers tell me how much they work, I let them know I am just as busy with work	.58	

Notes. Column 1 contains standardised factor loadings for the original four-factor solution; column 2 contains loadings for the shortened measure, following the removal of low-loading items

All subscales demonstrated acceptable levels of reliability, with Cronbach's alpha and omega above .90 for stress as achievement, relaxation remorse, and SRIM, and .83 for SRSC. The correlations among the factors ranged from .28 to .58. When comparing the square root of the average variance extracted (AVE) for each subscale (.77 stress as achievement; .88 relaxation remorse; .74 SRSC; and .83 SRIM) to the correlations among the subscales, there was strong evidence of convergent validity among items within the subscales and evidence of discriminant validity, where the subscales appeared to assess related, but unique constructs.

Exploratory analyses revealed minimal significant relationships between SB perceptions and demographic variables. There was a negative relationship between age and SRSC ($r = -.16$, $p < .05$) and a positive relationship between hours worked per week and relaxation

remorse ($r = .18$, $p < .01$). A series of one-way ANOVAs revealed no significant mean differences on any of the subscales by gender, ethnicity, or education ($p > .05$).

Study 3: two time-point employee study

Method

At Time 1, MTurk workers completed an online survey including the SB measure and convergent and discriminant validity measures. To begin, workers had to agree that they were 18 years of age or older, a U.S. citizen, and employed at least 30 h per week in a job outside of MTurk. Of the 1,126 workers who completed the survey, 49 were removed for extremely fast completion times or failed attention checks, resulting in a final sample of 1,077 workers compensated $2.00 for participating. The sample was 54% male and the average age was 35.48 ($SD = 10.56$). Most participants were white (82%), followed by African American (9%), Asian (5%), American Indian or Alaska native (1%), Native Hawaiian or Pacific Islander (<1%) or other (3%). Most had a bachelor's degree (38%) or some college (26%). Common occupational fields were sales and related occupations (13%), computer and mathematical (12%), and education, training, and library (10%). Average weekly work hours were 42.21 ($SD = 7.33$).

Participants were contacted on MTurk for the follow-up survey two months later. The Time 2 survey included the SB measure and measures to establish evidence for predictive validity. Of those invited, 781 (73%) completed the second survey, but 29 failed attention checks, resulting in a final sample of 752 who were compensated another $2.00. Differences between participants who completed only the Time 1 survey and those who completed both surveys (matched) were minimal. The average age of the matched sample ($M = 36.65$, $SD = 10.63$) was higher than the Time 1 only group ($M = 32.69$, $SD = 9.84$), $t(1074) = 5.73$, $p < .001$. There was also a difference in highest level of education between the two groups (χ^2 (5) = 11.17, $p = .05$), in which the Time 1 only sample generally held higher levels of education. There were not significant differences in terms of average hours worked per week, gender, or ethnicity.

Measures

Demographics. Demographic variables included age, gender, ethnicity, highest level of education, required work hours per week, and average hours actually worked per week.

Stress badge perceptions. The SB measure was used, with slight modifications based on the results from Study 1. This refined measure contained a total of 22 items (21 items that were retained in Study 1 and one Relaxation Remorse item that was unintentionally left out of the Study 1 survey). At both Time 1 and 2, the four-factor structure was confirmed to fit the data well using a CFA [Time 1: SB $\chi 2$ (203) = 748.76, $p < .05$, CFI = 0.96, RMSEA (90% CI) = .06 (.054, .063), SRMR = 0.05; Time 2: SB $\chi 2$ (203) = 605.14, $p < .05$, CFI = 0.96, RMSEA (90% CI) = .06 (.055, .067), SRMR = 0.05]. Each subscale demonstrated good internal consistency at both time points with alpha values above .90 for stress as achievement, relaxation remorse, and SRIM, and above .80 for SRSC.

Construct Validity Measures. To provide evidence of convergent validity, we included measures of workaholism (Schaufeli et al., 2009), perfectionism (Hewitt & Flett, 1991), general social comparisons (Gibbons & Buunk, 1999), and recovery experiences (Sonnentag & Fritz, 2007). To provide evidence of discriminant validity, we assessed social desirability (Reynolds, 1982) and general affect (Watson et al., 1988). Finally, we were interested in how the stress badge dimensions related to relevant outcome measures, as evidence of predictive validity. Thus, we included measures of self-rated job performance (Odle-Dusseau et al., 2012; Williams & Anderson, 1991), physical health symptoms (Spector & Jex, 1998), Anxiety (Bieling et al., 1998), depression (Spitzer et al., 1999), perceived stress (Cohen et al., 1984), work-family conflict (Matthews et al., 2010), and work relationship quality (adapted from Poerio et al., 2015). Sample items, response options, and reliability information for each of these measures is summarised in Table 3.

Results

The primary study hypotheses were examined using CFA and Structural Equation Modelling (SEM) analyses performed using the Lavaan package for R (Rosseel, 2012). Maximum likelihood estimation was used for all analyses; robust estimates are reported to account for non-normality in the data. The same guidelines were used for assessing model fit as were reported in Study 2.

We began by conducting individual CFAs of each measure that would be included in our overall models. In modelling the SB subscales independently with the Time 1 data, modification indices indicated that one SRSC item (*I feel accomplished when I compare myself to those who do not have a high amount of work to do in their jobs*) was cross-loading. Because this item also had a loading below .70 in Study 2, the variable was removed from further analyses. Several measures selected to provide evidence for convergent, discriminant, and predictive validity did not exhibit good model fit (see Supplementary Table S2, which can be viewed at https://osf.io/9xq4g/, for the results of the CFA for each measure). These measures included: workaholism, perfectionism, general social comparisons, PA and NA, anxiety, and perceived stress. For these measures, we modelled each dimension as a single indicator latent variable (with the mean scale score as the indicator), fixing the error variance based on the reliability (i.e. $1 - \alpha * \text{variance of mean score}$).

Convergent and discriminant validity evidence was examined by including the four SB subscales in a CFA with workaholism (two factors), perfectionism, psychological detachment, relaxation experiences, general social comparisons, social desirability, PA, and NA. The model with 13 factors demonstrated acceptable fit, $SB\ \chi^2\ (523) = 1385.07$, $p < .001$; CFI = .96; RMSEA = .044, 90% CI (.041, .046); SRMR = .03. The correlations among the variables generally supported our hypotheses (see Table 4). Stress as achievement was moderately positively correlated with the dimensions of workaholism and perfectionism. Relaxation remorse was moderately to strongly correlated with workaholism in a positive direction, and detachment and relaxation activities in a negative direction. Lastly, SRSC and SRIM were both moderately and positively related to general social comparisons.

All four subscales correlated with social desirability below .10, suggesting responses were not a result of socially desirable dispositions. Correlations with PA were significant,

Table 3. Summary of measures used for validity evidence in Study 3.

Measure	Survey	# items	Cronbach's alpha	Sample item	Response format
Workaholism (Schaufeli et al., 2009)	T1	10	.81 excessive .79 compulsive	I often feel that there's something inside me that drives me to work hard	Almost never (1) to almost always (5)
Perfectionism (Self-oriented subscale, Hewitt & Flett, 1991)	T1	15	.93	I must work to my full potential at all times	Strongly disagree (1) to strongly agree (5)
Recovery experiences (Sonnentag & Fritz, 2007)	T1	8	.84 detachment .90 relaxation	I forget about work	Rated typical time outside of work, strongly disagree (1) to strongly agree (5)
General social comparisons (Gibbons & Buunk, 1999)	T1	11	.89	I often compare myself with others with respect to what I have accomplished in life	Strongly disagree (1) to strongly agree (5)
Social desirability (Crowne & Marlowe, 1960; Reynolds, 1982)	T1	13	N/A	It is sometimes hard for me to go on with my work if I am not encouraged	True/False
General affect (Watson et al., 1988)	T1	20	.92 positive .94 negative	Positive: enthusiastic, interested Negative: nervous, distressed	Rated tendencies to feel each item in general, very slightly or not at all (1) to very much (5)
Job performance [a] (Odle-Dusseau et al., 2012; Williams & Anderson, 1991)	T2	8	.87 task performance .80 cognitive effectiveness	Task performance: Adequately completes assigned duties Cognitive effectiveness: Handles important details with sustained and focused attention	Rated in comparison to similar referent, worse than most (1) to better than most (5)
Physical health symptoms (Spector & Jex, 1998)	T2	18	N/A	Cold, headache	Rated whether experienced during past six weeks, Yes/No
Anxiety (Bieling et al., 1998; Spielberger, 1983)	T2	20	.94	Anxious feelings: inadequate, nervous non-anxious feelings: happy, content	Rated extent to which emotions were generally felt, almost never (0) to almost always (3)
Depression (Spitzer et al., 1999)	T2	9	.92	Little interest or pleasure in doing things	Rated referencing the past two weeks, not at all (0) to nearly every day (3)
Perceived stress (Cohen et al., 1984)	T2	14	.91	Been upset because something happened unexpectedly	Rated referencing the past month, never (1) to very often (5)
Work-Family conflict [b] (Matthews et al., 2010)	T2	3	.68	I have to miss family activities due to the amount of time I must spend on work responsibilities	Strongly disagree (1) to strongly agree (5)
Work relationship quality [c] (modified from Poerio et al., 2015)	T2	6	.88 coworkers .93 supervisors	closeness, liking, trust rated for co-worker and supervisor	Not at all (1) to extremely (7)

Note: T1 = Time 1, T2 = Time 2.

[a]Job performance dimensions of task performance and cognitive effectiveness were highly correlated ($r = .90$) and were thus modelled as a higher order performance factor in CFA and SEM models.

[b]Work-Family Conflict Cronbach's α was lower than expected (.68) and a CFA indicated that the behaviour-based item loaded poorly onto the factor (.42). Because of the poor reliability and low loading, this item was removed from further analyses and WFC was modelled with two items.

[c]Because the coworker and supervisor subscales were highly correlated ($r = .76$), the subscales were modelled as a higher-order factor in CFA and SEM models

but generally small in magnitude (ranging from .13 to .27), as were the correlations with NA (ranging from .09 to .26). These findings suggest that SB perceptions were somewhat related to general affect, but the magnitude of the correlations provides support for discriminant validity.

To examine test-retest reliability, we conducted a CFA with the four factors at Time 1 and Time 2 (eight factors total). The model exhibited acceptable fit, $SB\chi^2$ (874) = 2139.07, $p < .001$; CFI = .94; SRMR = .05; RMSEA = .051, 90% CI (.048, .054). There were significant correlations between Time 1 and Time 2 subscales (stress as achievement, $r = .74$; relaxation remorse, $r = .69$; SRSC, $r = .64$; and SRIM, $r = .70$; $p < .01$), indicating relatively high reliability over time.

To examine predictive validity, we built a measurement model which included the Time 1 SB subscales and Time 2 measures of job performance, physical health symptoms, perceived stress, anxiety, depression, WFC, and work relationship quality. PA and NA (Time 1) were included as control variables, given the small, but significant correlations with the SB dimensions in the previous models and the consistent findings that both PA and NA can impact health (e.g. Cohen & Pressman, 2006). The initial measurement model demonstrated acceptable fit to the data, $SB\chi^2$ (1145) = 2231.98, $p < .001$; CFI = .95; SRMR = .043; RMSEA = .041, 90% CI (.039, .044). The correlations among the variables (Table 5) provided mixed support for our predictions. Stress as achievement significantly correlated with work-related outcomes of job performance and work relationship quality. Relaxation remorse was significantly related to perceived stress, health symptoms, and WFC. SRSC exhibited weak, but significant correlations with anxiety, perceived stress, and WFC. SRIM exhibited weak, but significant relationships with job performance, anxiety, depression, WFC, and perceived stress.

Next, a structural model specified the four SB subscales as predictors of each of the outcome variables, controlling for PA and NA. These results are displayed in Table 6. PA and NA were significant predictors of all outcome variables. Focusing on the SB subscales while controlling for PA and NA, stress as achievement was a significant predictor of job performance ($p < .05$); SRIM approached significance ($p = .07$). When considering perceived stress, stress as achievement and relaxation remorse were significant predictors ($p < .05$). For depression symptoms, relaxation remorse was asignificant predictor ($p < .05$). For anxiety, relaxation remorse was a significant predictor ($p < .05$). For physical health, relaxation remorse and SRIM were significant predictors ($p < .05$). Finally, for WFC, relaxation remorse and SRIM emerged as unique predictors ($p < .05$). Similarly, with work relationship quality, stress as achievement and relaxation remorse were significant predictors ($p < .05$).

In supplemental analyses (See Table S3, which can be viewed at https://osf.io/9xq4g/), we further considered whether the stress-badge subscales exhibited incremental validity in predicting the same outcomes, over and above measures of convergent validity (i.e. workaholism, perfectionism, general social comparisons), while also controlling for positive and negative affect. We found that relaxation remorse was most consistent in showing predive ability beyond these additional measures, with significant relationships with all outcomes except depression and WFC. Stress as achievement remained a significant predictor of perceived stress and work relationship quality. Stress-related impression management remained a significant predictor of physical health and WFC. Stress-related social comparisons did not exhibit any significant relationships above and beyond the other predictors.

In sum, there was more consistent support that the SB perceptions, especially relaxation remorse, seem to be detrimental to psychological health and interpersonal

relationships, with most subscales being related to higher WFC and/or lower work relationship quality. Relationships with physical health seemed to be isolated to relaxation remorse. Those higher on the SB dimensions generally reported experiencing more stress. The relationships with job performance were not consistent across dimensions and were only significant for stress as achievement.

Discussion

This study explored the phenomenon of high workloads being perceived as a badge of honour, a concept anecdotally acknowledged in the popular media but relatively absent in the stress literature. Though prior research has examined ways that stress or a particular stressor can be perceived positively by an individual (e.g. Cavanaugh et al., 2000; Crum et al., 2013), no studies to our knowledge have examined perceptions of experiencing a high workload. We developed a measure of personal beliefs and social interpretations and expressions around experiencing about a high workload. We believe that this measure, informed by a broader social-cognitive approach, fills a gap in our understanding of both individually and socially influenced views of stress that can impact worker's performance, health, and well-being. Across three studies, we found evidence for the psychometric properties and construct validity of the measure. The four subscales were related to, but distinct from, existing measures of workaholism, perfectionism, recovery experiences, and general social comparisons. Weak correlations with social desirability and affect suggested that responses to the items do not seem to be driven by a desire to create a socially-desirable image or one's general affect.

Considering the subscales in more detail, stress as achievement was related to, but distinct from working excessively or desiring perfection. Relaxation remorse correlated with workaholism more strongly, suggesting conceptual similarities. Still, at least 40% of the variance was unshared, providing support for the uniqueness of relaxation remorse. Relaxation remorse perhaps captures more normative dispositions toward workload and relaxation, which could be commonly experienced alongside the addictive behaviours associated with workaholism (Schaufeli et al., 2009). Relaxation remorse was negatively related to psychological detachment and relaxation activities, supporting the proposition that relaxation remorse would result in fewer recovery experiences.

SRSC and SRIM moderately correlated with general social comparisons. These relationships make sense, where those who generally make many social comparisons would also be likely to compare their workload. Knowing that social comparisons affect a number of organisational outcomes (Greenberg et al., 2007), the specification of comparing stressor levels could be particularly informative by pinpointing a specific source of comparison that could yield conflict or dissatisfaction among employees.

Our analyses of predictive validity indicated that the overall SB phenomenon matters for worker performance and well-being, but the dimensions contribute unique effects, with the exception of SRSC exhibiting no unique effects with any outcomes. Also evidenced by small bivariate correlations, it appears that SRSC is simply not a strong predictor of performance or health. These types of comparisons may take on more of a role in other relational outcomes, such as contextual performance, incivility, or more general attitudes, like life satisfaction.

Table 4. Correlations among stress badge measure and measures of convergent and discriminant validity in Study 3.

	M	*SD*	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Stress as achievement	4.32	1.34	(.92)												
2. Relaxation remorse	4.15	1.73	.38**	(.96)											
3. SRSC	4.06	1.42	.56**	.30**	(.86)										
4. SRIM	2.94	1.45	.43**	.32**	.58**	(.92)									
5. Detachment	3.15	0.94	−.27**	−.55**	−.14**	−.15**	(.84)								
6. Relaxation activities	3.73	0.84	−.16**	−.58**	−.12**	−.18**	.72**	(.90)							
7. Workaholism- excessive	3.09	0.87	.42**	.77**	.28**	.36**	−.26**	−.59**	(.81)						
8. Workaholism- compulsive	3.33	0.90	.43**	.69**	.29**	.22**	−.47**	−.42**	.90**	(.79)					
9. Perfectionism	3.62	0.78	.41**	.45**	.25**	.20**	−.40**	−.27**	.58**	.68**	(.93)				
10. General social comparison	3.32	0.75	.37**	.27**	.58**	.45**	−.17**	−.07	.27**	.29**	.35**	(.89)			
11. Social desirability	19.87	3.44	−.06	.04	.08*	.10**	.002	−.07*	.06	−.01	−.08*	.20**	(.81)		
12. Positive affect	3.27	0.87	.27**	.10**	.11**	.13**	−.13**	.01	.26**	.29**	.36**	.07	−.27**	(.92)	
13. Negative affect	1.56	0.74	.09*	.24**	.15**	.26**	−.11**	−.18**	.20**	.11**	.01	.19**	.25**	−.12**	(.94)

Notes. * $p < .05$ ** $p < .01$. $N = 1076$. Means are reported for composite variables; all correlations are among latent variables. Cronbach's alpha is reported along the diagonal.

Table 5. Study 3 Correlations between Time 1 stress badge measure and controls and Time 2 performance, health, and well-being outcomes.

	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Stress as achievement	(.92)												
2. Relaxation remorse	.40*	(.96)											
3. SRSC	.55*	.28*	(.89)										
4. SRIM	.42*	.32*	.58*	(.92)									
5. Positive affect	.33*	.09*	.14*	.16*	(.92)								
6. Negative affect	.08	.24*	.13*	.24*	−.16*	(.94)							
7. Job performance	.14*	−.01	−.03	−.08*	.37*	−.33*	(.81 / .87)						
8. Physical health symptoms	.00	.27*	−.01	−.03	−.17*	.33*	−.08*	–					
9. Anxiety	.03*	.36*	.13*	.18*	−.34*	.72*	−.38*	.53*	(.94)				
10. Depression	.03	.29*	.07	.13	−.26*	.66*	−.26*	.54*	.86*	(.92)			
11. Perceived stress	.05	.40*	.16*	.24*	−.30	.61*	−.34*	.53*	.87*	.80*	(.91)		
12. WFC	.05	.33	.13*	.28*	−.22*	.44*	−.27*	.46*	.66*	.63*	.71*	(.68)	
13. Work relationship quality	.23*	−.11*	.08	.05*	.41*	−.30*	.29*	−.20*	−.43*	−.33*	−.41*	−.43*	(.88/.93)

Notes. $N = 715$. Cronbach's alpha is displayed along the diagonal. For Job performance, alpha is presented as task performance / cognitive effectiveness. For work relationship quality, alpha is presented as co-worker/supervisor.

Several dimensions exhibited unique relationships in models controlling for the other SB dimensions and in supplemental tests of incremental relationships above and beyond convergent validity measures. When examining correlates of self-rated job performance,

Table 6. Study 3 SEM regression results with stress badge dimensions (Time 1) predicting performance, health, and well-being outcomes (Time 2).

Criterion	Predictors	*b*	SE	*z*	*β*	R^2
Job performance						.23
	Positive affect	0.18	0.03	7.11**	.31	
	Negative affect	−0.20	0.04	−5.67**	−.26	
	Stress as achievement	0.05	0.02	2.51*	.13	
	Relaxation remorse	0.00	0.01	0.40	.02	
	Stress-related SC	−0.02	0.02	−1.18	−.06	
	Stress-related IM	−0.03	0.02	−1.85†	−.09	
Physical health symptoms						.19
	Positive affect	−0.52	0.17	−3.16**	−.12	
	Negative affect	1.52	0.24	6.41**	.29	
	Stress as achievement	−0.07	0.14	−0.53	−.03	
	Relaxation remorse	0.53	0.08	6.84**	.28	
	Stress-related SC	−0.03	0.12	−0.25	−.01	
	Stress-Related IM	−0.37	0.12	−3.02**	−.15	
Anxiety						.62
	Positive affect	−0.18	0.02	−8.02**	−.25	
	Negative affect	0.56	0.03	19.50**	.62	
	Stress as achievement	−0.03	0.02	−1.40	−.06	
	Relaxation remorse	0.08	0.01	7.63**	.25	
	Stress-related SC	0.02	0.02	1.28	.06	
	Stress-related IM	−0.01	0.02	−0.64	−.03	
Depression						.48
	Positive affect	−0.15	0.03	−4.89**	−.17	
	Negative affect	0.64	0.05	13.34**	.60	
	Stress as achievement	−0.01	0.02	−0.40	−.02	
	Relaxation remorse	0.07	0.01	4.66**	.18	
	Stress-related SC	0.00	0.02	−0.07	.00	
	Stress-related IM	−0.02	0.03	−0.70	−.04	
Perceived stress						.51
	Positive affect	−0.20	0.03	−7.01**	−.25	
	Negative affect	0.49	0.04	13.33**	.49	
	Stress as achievement	−0.05	0.02	−2.17*	−.09	
	Relaxation remorse	0.11	0.01	8.60**	.31	
	Stress-related SC	0.02	0.02	1.09	.05	
	Stress-related IM	0.03	0.02	1.35	.07	
WFC						.31
	Positive affect	−0.18	0.04	−4.51**	−.20	
	Negative affect	0.36	0.05	6.92**	.31	
	Stress as achievement	−0.06	0.04	−1.52	−.09	
	Relaxation remorse	0.11	0.02	5.38**	.25	
	Stress-related SC	−0.02	0.03	−0.50	−.03	
	Stress-related IM	0.11	0.03	3.46**	.21	
Work relationship quality						.27
	Positive affect	0.46	0.07	7.14**	.32	
	Negative affect	−0.41	0.08	−4.92**	−.23	
	Stress as achievement	0.22	0.06	3.85**	.22	
	Relaxation remorse	−0.12	0.03	−3.66**	−.18	
	Stress-related SC	−0.02	0.05	−0.44	−.03	
	Stress-related IM	0.03	0.05	0.58	.03	

Notes. SC = Social comparison. IM = Impression management.
† $p < .10$. * $p < .05$. ** $p < .01$. $N = 716$.

stress as achievement correlated with better job performance and SRIM was marginally related to worse job performance, though neither remained significant in incremental validity models. These relationships were small in magnitude, but the directions of these relationships are interesting. Viewing stress as part of success may result in better performance, but if one becomes overly concerned with outward display of their stress, it could be detrimental. Given the limitations of self-rated job performance, more objective performance measures may be needed to better understand the nature of these effects in future research.

When considering perceived stress and physical and mental health symptoms, relaxation remorse emerged as the most consistent, unique predictor. These relationships make sense considering COR theory (Hobfoll, 1989) and the effort-recovery model (Meijman & Mulder, 1998), where those with relaxation remorse may be unlikely to sufficiently replenish lost resources, resulting in more physical and psychological strain. Stress as achievement uniquely related to less perceived stress. These results were somewhat surprising, but may be explained by the motivational potential to view stressors as performance enhancing (Crum et al., 2013), and thus experience less distress. SRIM was related to fewer reported physical health symptoms. One possible explanation could be that those who use SRIM may provide surface level displays in the absence of actual distress. It could also be that these individuals downplay personal problems as something that can be handled, including reporting of physical health concerns. To better understand this possibility, future studies should examine comparisons of self-reports and more objective metrics of health for those high on SRIM.

Relaxation remorse and SRIM predicted more WFC, with only SRIM exhibiting significance in the incremental validity model. Negative work-related attitudes, like workaholism, have been related to WFC in prior research (Clark et al., 2016), so it makes sense that these dimensions could be associated with WFC. Workers may take on high workloads to display high levels of stress, thus depleting personal resources (Meijman & Mulder, 1998) and leaving fewer resources to invest well in family relationships or allowing work responsibilities to directly take away from non-work time in order to maintain their "stressed" image. Concerning workplace relationships, relaxation remorse predicted and lower quality work relationships while stress as achievement predicted better work relationship quality. Thus, workers may experience strain in relationships if they do not recover well; however, simply viewing stress as achievement may still allow workers to take on a high workload, while also protecting work relationships.

Practical implications

Our results provide initial evidence of SB perceptions as a legitimate construct worthy of consideration in organisational settings. Speaking broadly, these perceptions may have little impact on performance, or even some benefit, but seem to be largely detrimental to worker health and some social relationships. Workers being accepting of high workloads may sound like a benefit to organisations, but excessive stressors and the associated outcomes can be costly. Mental and physical health problems in particular result in a number of direct and indirect costs to the organisation (Goetzel et al., 2004). Thus, the impacts of continually high workloads on health (Ganster & Rosen, 2013) must be seriously considered, even if workers do not view their stress as a problem. SB

perceptions could further represent a potential concern for underreporting risks or experienced strain due to the normality of stressors in such contexts. For example, one study found that correctional officers may underreport stress and emotional concerns, yet experience high rates of health concerns that tend to be related to stress (Faghri et al., 2015). If managing a high level of stressors becomes accepted and valued, workers may not make time for sufficient recovery or seek help when demands exceed their resources.

Perhaps the most practical findings come from the relationships between relaxation remorse and health and well-being outcomes. The importance of recovery experiences has been well-documented (Sonnentag et al., 2017). Our findings add that one's mindset toward recovery could be a barrier to resource replenishment and thus an antecedent to a variety of negative well-being outcomes. Organisations should consider practical ways to help workers to recover effectively, during and after work. For instance, creating a precedent that breaks are encouraged could help create the space for replenishing breaks during the workday. Further, creating norms that support work-life balance could help workers to feel okay when they do take a break, not worrying that they should be continuing to get ahead on work tasks. Generally acknowledging that these SB perceptions exist can also inform better stress management interventions. Even well-designed interventions may be unsuccessful if there is an underlying perception that relaxation is unproductive, and stress is impressive.

On a larger scale, our results could have important societal implications. If these results are replicated, public health initiatives could be increased to support healthy views of stress. Providing more examples of individuals who have healthy views of stressors, in balance with a value on recovery, in our media content and even in our organisational leaders may be needed to change societal norms that often emphasise busyness. Targeting social norms, as has been done with other behavioural change interventions (e.g. Schultz et al., 2007), may be a valuable strategy that produces more lasting change.

Limitations and future directions

Our study had several strengths through the use of multiple samples and multiple measurement occasions, but also several limitations that should be considered in interpreting our findings. First, our primary samples were obtained from MTurk, which has received mixed reviews from researchers (Cheung et al., 2016). Our initial goal was to obtain a relatively diverse sample of workers using MTurk. Still, we cannot eliminate the possibility that though our samples represent various occupational fields, there could be nuances about individuals who pursue additional work on MTurk that could limit our generalizability. Sampling more homogenous occupational groups may be an important future direction and a better fit for developing interventions in future studies. Studies with employees who may be likely to expect a very high amount of stress (e.g. healthcare workers; Thompson et al., 2013) and thus be susceptible to a "stress badge" mentality would be important to consider.

Second, the data collected in this study were all self-report, which is optimal for constructs that are perceptual in nature, but future researchers are encouraged to

seek more objective reports of performance and health. Of particular interest, future studies would benefit from using multi-source data from supervisors and/or peers to determine whether SB perceptions are associated with discrepancies between different rating sources. Third, our longitudinal study did not use a full panel design with all variables measured at both times, but the separation of measurement occasions was a strength to reduce concerns about common method variance (Podsakoff et al., 2003). Our goal was to understand initial relationships between the SB perceptions and relevant outcomes, but future studies could also examine how SB perceptions relate to changes in health and well-being by controlling for baseline reports.

We have several other recommendations for future research. First, we operationalised the SB measure to reference workload, as workload is a commonly experienced challenge stressor across many occupations. Future studies could develop and test the psychometric properties of variations of this measure, referencing stressors in general or even non-work stressors. Second, researchers could consider whether particular combinations of dimensions could be more or less harmful. These possibilities could be examined with person-centered analyses, which has been encouraged in occupational health research (Wang et al., 2012). Third, studies could explore mediating and moderating effects, both among the subscales and with additional variables. For instance, SB perceptions could change the way some individuals respond to certain stressors and strain. Work-group climates, such as those proposed by Sawhney et al. (2018), could be explored as important moderators of the relationships between the SB dimensions and performance and well-being outcomes. Future research could even consider whether unit-level effects exist with the SB measure. That is, do work units form "stress badge" climates that impact workers.

Conclusion

As cultural norms appear to grow more accepting and supportive of high stress, busy schedules, and long work hours as an expected part of life, it is important to understand how individuals may begin to view high amounts of stressors as honourable. We developed a measure to understand this sentiment, finding that those high on this disposition may experience negative health and well-being outcomes. Extensions of this study can be used to understand the complex relationships that may exist within this proposed construct and in relation to other performance, health, and well-being outcomes, as well as how to develop interventions that can help employees adopt healthy views of stress.

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Data availability statement

The data that support the findings of this study are available from the corresponding author, Kristen Black, upon reasonable request.

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