

## RESEARCH ARTICLE

# The link between workaholism and well-being via self-care and the moderating role of group identification

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## Abstract

Although the negative consequences of workaholism for well-being are well-known, research on its underlying processes and potential boundary conditions is scarce. Drawing on the conservation of resources theory, we propose that self-care mediates the negative association between workaholism and well-being, such that workaholism decreases self-care, which, in turn, increases well-being. Building on the social identity approach, we further argue that group identification moderates the workaholism–self-care-link, such that the more individuals identify with their groups, the stronger the negative indirect association. We tested our assumptions in a longitudinal three-wave study among students (Study 1,  $N_{T1} = 300$ ,  $N_{T2} = 211$ ,  $N_{T3} = 164$ ), in which we found that the indirect association between workaholism and well-being via self-care was only significant for those students who more highly identified with their group. We replicated this contingency of the workaholism–self-care association on group identification in a two-wave time-lagged study among employees (Study 2,  $N_{T1} = 335$ ,  $N_{T2} = 134$ ). Taken together, these findings help gain a deeper understanding of why and when workaholism decreases well-being.

## KEYWORDS

group identification, self-care, social curse, well-being, workaholism

## 1 | INTRODUCTION

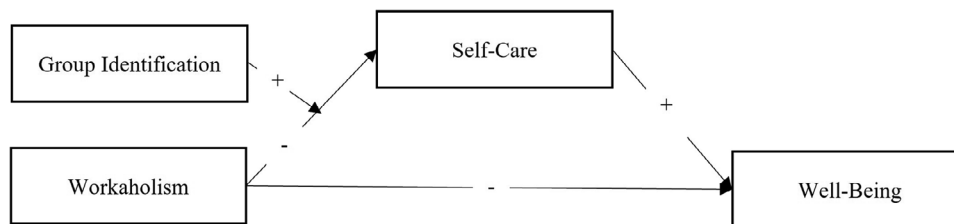
Workaholism, ‘the compulsion or the uncontrollable need to work incessantly’ (Oates et al., 1971, p. 11), has been becoming more and more prevalent in today’s working environment and has been gaining increasing popularity in recent years (Andreassen et al., 2014). Individuals higher in workaholism work beyond what is expected of them (i.e. they work excessively) and they are obsessed with their work and permanently think about work even when not working (i.e. they work compulsively; Schaufeli et al., 2008a). As a result, workaholism negatively affects employees’ well-being in the forms of less life satisfaction

(Andreassen et al., 2011), poorer health (Salanova et al., 2016; Schaufeli et al., 2008b) and higher levels of acute and chronic strain (Taris et al., 2005; see also Clark et al., 2016).

However, the mechanism *through which* and the boundary conditions *when* workaholism relates to lower well-being are mostly unclear (for exceptions, see Schaufeli et al., 2009; Shimazu et al., 2010). Building on the conservation of resources (COR) theory (Hobfoll et al., 1989, 2018), we argue that self-care, an internal resource that enables individuals to protect or promote their health (Franke et al., 2014), explains the link between workaholism and well-being. We propose that workaholism relates to less self-care; self-care, in turn, relates

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**FIGURE 1** Theoretical model.

to more well-being. Assuming that individuals higher in workaholism self-select themselves into groups with performance norms that foster excessive and compulsive working (i.e. groups with unhealthy norms), we further propose that group identification strengthens the negative workaholism–self-care association (please see Figure 1 for our theoretical model). On this basis, we aim to make two contributions to the workaholism and social identity literature.

First, we contribute to the workaholism literature by arguing that the expenditure of time and energy resource investments in the work domain (Schaufeli et al., 2008a; Snir & Harpaz, 2012) depletes these individuals of resources to care for their health (Hobfoll et al., 1989, 2001). Therefore, they are less aware of their health signals, show less health-oriented behaviour and place a lower value on their health (i.e. show less self-care; Franke et al., 2014), negatively affecting their well-being. Thus, we aim to uncover a crucial mechanism through which workaholism is related to less well-being, which is essential for developing interventions targeting workaholism.

Second, by integrating the social identity approach into the workaholism literature, we show *for whom* workaholism is particularly well-being-detrimental. Individuals with a higher group identification are more apt to adopt the group's norms (cf., Haslam et al., 2018; Jetten et al., 2017). Based on the similarity-attraction principle, individuals higher in workaholism might also be more attracted to jobs or environments favouring high work devotion and overwork (Clark et al., 2016; Montoya & Horton, 2013). Moreover, workaholism is positively associated with adopting external norms to achieve positive or avoid negative feelings (van Beek et al., 2011). In this sense, a higher group identification could reinforce the acceptance of such high-performance norms, thus amplifying the negative consequences of workaholism for self-care and, in turn, well-being. Taken differently, by focusing on the group's norms, we explain why there is inconclusive support for the health-protective function of social identification and why social identification might even decrease well-being (Steffens et al., 2017). We thus provide further evidence for when social identification represents a 'social cure' (Haslam et al., 2005, 2018; Jetten et al., 2012) and when identifying with a group rather represents a 'social curse' (cf., Wakefield et al., 2019).

In the following, we outline our theoretical rationale in more detail and present the results of a three-wave longitudinal study and a two-wave time-lagged study to test our hypotheses.

## 2 | HYPOTHESES DEVELOPMENT

To explain why workaholism leads to less well-being, we build on COR theory (Hobfoll et al., 1989; Hobfoll et al., 2018). In brief, COR theory proposes that individuals strive to protect and retain their current resources and are motivated to acquire new resources, such as energy. Following COR theory, stress occurs, for instance, if there is an actual or threatening loss of resources (Hobfoll et al., 2002).

Working compulsively and excessively exemplifies heavy work investment, for instance, by spending more time at work and having difficulties disengaging from work (i.e. experiencing negative emotions when not working; Clark et al., 2016; Ng et al., 2007). On this basis, workaholism has also been described as an addiction to work (Snir & Harpaz, 2012). However, resources are limited (Hobfoll et al., 1989). Accordingly, when investing most of their energy and time resources at work, individuals have fewer resources left to spend in non-work roles, such as family or leisure (cf. Andreassen et al., 2013; Ng et al., 2007). Although heavy work investment might also gain resources, for instance, through more positive feedback, individuals higher in workaholism are primarily driven by a prevention focus (van Beek et al., 2011). This means that they are driven by fear of failure rather than by potential gains—in line with the first principle of COR theory, which proposes that losing resources has a stronger impact than the potential to gain resources (Hobfoll et al., 1989).

The higher individuals score in workaholism, the more they are preoccupied with work so that other aspects of their lives become irrelevant to the extent that they are entirely excluded (Sussman et al., 2012). This prioritisation of work is also reflected in those higher in workaholism having fewer outside-work interests (Ng et al., 2007). Beyond, individuals who score higher in workaholism feel agitated and frustrated if they are not working (Sussman et al., 2012). They also describe negative feelings of anxiety, guilt, irritability and shame when not at work (Balducci et al., 2018; van Beek et al., 2011). Higher workaholism values are also associated with poorer recovery after work, which is crucial to replenishing individuals' resources (e.g. Sonnentag & Fritz, 2015). As a result, workaholism is negatively associated with well-being (e.g. Burke et al., 2000; Taris et al., 2008; for a meta-analytic review, see Clark et al., 2016). Accordingly, we propose:

**Hypothesis 1.** Workaholism relates to lower well-being.

## 2.1 | Self-care as a mediator of the workaholism–well-being link

As workaholism means emphasising the work role at the expense of non-work roles, it is likely to assume that individuals higher in workaholism also take less care of their health. According to Franke et al. (2014), self-care comprises engaging in health-promoting behaviours, valuing health and being aware of health signals. Workaholism is associated with poorer recovery, such as not taking breaks or continuing to work in the evening (e.g. Molino et al., 2018; van Wijhe et al., 2013). Such behaviours represent low self-care behaviour. Moreover, prioritising work over other roles essentially means that these individuals value their health to a lower degree. Finally, workaholism is positively associated with being absorbed in work, which means being fully engrossed in one's work and having difficulties detaching from work (Schaufeli et al., 2008a). Higher workaholism should therefore be associated with being less likely to detect early signs of stress, such as noticing one's higher agitation, blood pressure, or poorer mood (Balducci et al., 2018; van Beek et al., 2011). Hence, individuals scoring higher in workaholism should pay less attention to their health, value their health less and take less active care. Taken together, they should show less overall self-care.

Self-care constitutes an individual resource, enabling individuals to experience more well-being (cf., Hobfoll et al., 2001). Rather than exhausting themselves, individuals high in self-care ensure that they replenish their resources and ask for support when needed, thus capitalising on further resources and avoiding resource loss. Empirical research supports this theoretical assumption. For example, Horstmann (2018) found that self-care is negatively correlated with burnout, which represents the experience of chronic strain (Maslach et al., 2001; see also Kaluza et al., 2021). Self-care is also positively associated with general health and well-being (e.g. Franke et al., 2014; Santa Maria et al., 2019). Additionally, self-care cannot only prevent work-related strain and promote health, self-care also leads to a decreased perception of stress (Dahl et al., 2018; 2019). Therefore, we propose that:

**Hypothesis 2.** Self-care mediates the relationship between workaholism and well-being, such that workaholism is negatively associated with self-care, which, in turn, is positively associated with well-being.

## 2.2 | Group identification as a moderator of the workaholism–self-care link

We further argue that the negative association between workaholism and well-being via lower self-care, is stronger for individuals with higher group identification for the following reasons. First, van Beek et al. (2011) showed that workaholism is positively associated with introjection motivation, which means that the higher individuals score in workaholism, the more they internalise and integrate their organisation's norms. As a result of this introjection of organisational

norms that reflect 'unwritten rules that prescribe how all members of an organisation should approach their work and interact with one another' (Hammer et al., 2004, p. 84), employees strive to act by these norms (van Beek et al., 2011).

Group norms constitute an essential function in social identification (e.g. Turner et al., 1987). Following the social identity approach (Tajfel & Turner, 1979; Turner et al., 1987), social identity is that part of the self-concept that arises from a person's group memberships (such as being part of a student group, a work team, or an organisation) and influences individuals' self-definition and behaviours. Compared to members with lower group identification, highly identified group members are more likely to adopt and act per the group's norms, which Haslam et al. (2018) describe as the norm enactment hypothesis. This suggests that individuals higher in workaholism, who highly identify with their group, are more likely to adopt their group's norms (see also Junker et al., *in press*).

However, individuals self-select themselves into situations that match their values (Byrne & Clore, 1970; Kristof-Brown et al., 2005; Montoya & Horton, 2013; Yeong Tan & Singh, 1995). Hence, individuals higher in workaholism should be more likely to be part of groups with stronger work devotion, encouraging strong energy and time investments into the work role, leaving little space for health-caring behaviours. In a student context, this would suggest that individuals form peer groups based on their study drive. In an employee context, this would suggest that individuals higher in workaholism are more likely to choose to work for organisations that are known for high performance and long-workhour cultures and to form closer relations with those members of the organisation who endorse similar norms as they do.

Mazzetti et al. (2014) and Afota et al. (2021) found initial support for this assumption. In their studies, workaholism was positively associated with an overwork climate and, thus, a climate that reinforces individuals' preoccupation with work at the expense of recovery time. In other words, the higher individuals score in workaholism, the higher the likelihood of working in contexts with *unhealthy* group norms. Based on the norm enactment hypothesis (Haslam et al., 2018), we suggest that the effects of these unhealthy group norms are amplified by stronger group identification. That is, the stronger the group identification, the more should workaholism be associated with sacrificing one's health at the expense of contributing to the work role, resulting in lower self-care (cf., Jetten et al., 2017; Wakefield et al., 2019).

This general notion of high identifiers more strongly adopting (unhealthy) group norms has been supported for excessive drinking (Laghi et al., 2012) or problematic gambling (Savolainen et al., 2021). Moreover, Mühlhaus & Bouwmeester (2016) found that higher group identification related to more stress among management consultants who could not meet the high occupational standards in their organisation. Furthermore, Avanzi et al. (2012) showed that individuals' maladaptive working patterns become stronger, resulting in less well-being, if they highly identify with their group or organisation (see also Avanzi et al., 2020). On this theoretical and empirical basis, we propose that:

**Hypothesis 3.** Group identification strengthens the relationship between workaholism and self-care such that the more individuals identify with their groups, the stronger the negative association between workaholism and self-care.

We tested our hypotheses in a three-wave longitudinal study among students and a two-wave time-lagged study among employees. The data and code for the main analyses are available at [https://osf.io/uecf4/?view\\_only=ad01efa3db0149bcba44abda53f7c007](https://osf.io/uecf4/?view_only=ad01efa3db0149bcba44abda53f7c007). This study adheres to ethical guidelines specified in the APA Code of Conduct as well as the authors' national ethics guidelines. The last author's institution declared the study exempt from ethics approval.

### 3 | STUDY 1

#### 3.1 | Participants and procedure

We chose a sample with high-performance norms, namely psychology students in Germany. Universities underline excellence, thereby communicating high-performance norms students should reach (Scholl et al., 2019). Psychology students are admitted to the Bachelor's programs only with excellent grades in grammar school, so they are used to striving hard for the best possible grades. During the Bachelor's program, this pressure is continued as there is limited access to Master's programs that are highly desirable because a Master's degree is mandatory to start subsequent training to become a licensed psychotherapist in Germany.

During one of the lectures at five different universities, psychology students were approached and asked to participate in a study on academic well-being. This project was part of a larger study comprising five points of measurement.<sup>1</sup> We used data collected at three intervals for the present study, each 3 months apart.

A total of 455 individuals provided their informed consent and started to answer the first questionnaire, of which 300 answered the questions regarding their well-being and were included in the present study to make full use of the available data (Newman et al., 2014). Of these 300, 297 answered the workaholism, self-care and group identification items at Time 1. At the end of the first survey, participants answered the demographic questions. They were then forwarded to a separate survey, in which they indicated their email address and a code to be contacted and matched to the follow-up questionnaires. Of those participants invited to respond to the follow-up surveys, 228 also answered the self-care items at Time 2 (211 could be matched to their Time 1 data) and 173 the well-being items at Time 3 (164 could be matched to their Time 1 and Time 2 data).

Most of the 300 participants were women (91%, 31 missings). The average age was 21.8 ( $SD = 4.6$ , range 17–49, 27 missings). Most participants were in their first semester (69%), followed by students in their

third semester (22%, 27 missings). Most students (60%; 27 missings) did not work besides their studies.

To test whether dropout between measurement points was systematic, we conducted independent *t*-tests and  $\chi^2$ -tests, comparing those participants who completed all three questionnaires with those who dropped out during the study. Results indicated that participants did not differ in group identification,  $t(295) = 1.03$ ,  $p = .151$ , 95% confidence interval (CI) [-0.10, 0.34], self-care,  $t(295) = 0.59$ ,  $p = .553$ , 95% CI [-0.10, 0.20], well-being,  $t(298) = 0.16$ ,  $p = .435$ , 95% CI [-0.20, 0.24], or workaholism,  $t(295) = 0.91$ ,  $p = .362$ , 95% CI [-0.19, 0.07] at Time 1. Moreover, there were no differences in age, gender, part-time jobs alongside their studies and study semester among those participants remaining in the study and those dropping out, all  $p$ 's > .05.

#### 3.2 | Measures

##### 3.2.1 | Workaholism (Time 1)

Workaholism was measured using the 10-item Dutch Workaholism Scale (DUWAS; Schaufeli et al., 2008a). This scale measures the two dimensions of workaholism, namely working compulsively (e.g. 'I feel guilty when I take time off', 'I feel that there is something inside me that drives me to work hard') and working excessively (e.g. 'I spend more time working than on socialising with friends, on hobbies, or on leisure activities', 'I seem to be in a hurry and racing against the clock'). The items were rated on a 4-point scale from 1 = (almost) never to 4 = (very) often. Cronbach's alpha was .81, McDonald's omega total was .85 and omega hierarchical was .81.

##### 3.2.2 | Group identification (Time 1)

Group identification was assessed with the measurement by Doosje et al. (1995), which we adapted to focus on study peers (sample item: 'I identify with the fellow students in my semester') on a 5-point scale ranging from 1 = *do not agree at all* to 5 = *fully agree*. Cronbach's alpha and McDonald's omega were .90.

##### 3.2.3 | Self-care (Time 1 and Time 2)

Self-care was assessed with 13 items of the self-care sub-scale of the Health-oriented Leadership (HoL) instrument (Franke et al., 2014). Five items measured health-related awareness (e.g. 'I immediately notice when something is wrong with my health'), three items the importance of health (e.g. 'My health is my first priority') and five items health-related behaviour (e.g. 'I see to it that I have enough relaxation and recovery'). Items were rated on a 5-point scale ranging from 1 = *not at all true* to 5 = *completely true*. Cronbach's alpha was .87 at Time 1 and Time 2, McDonald's omega total was .90 at Time 1 and Time 2 and omega hierarchical was .78 at Time 1 and .74 at Time 2.

<sup>1</sup> Parts of these data have been used in a previous publication (Junker et al., 2021), but none of the variables presented in the present study have previously been used.

**TABLE 1** Results of confirmatory factor analyses in Study 1.

Model	$\chi^2$	df	Scaling correction factor for MLR	CFI	TLI	RMSEA	SRMR	Sartorra–Bentler scaled $\Delta\chi^2$ ( $\Delta$ test scaling correction)
Model 1	2399.21	464	1.04	.37	.33	.12	.13	Model 1 vs. 4: 1499.41 (1.04), $\Delta$ df = 9, $p < .001$
Model 2	1769.24	461	1.04	.57	.54	.10	.14	Model 2 vs. 4: 869.44 (1.04), $\Delta$ df = 6, $p < .001$
Model 3	1146.26	458	1.04	.78	.76	.07	.08	Model 3 vs. 4: 246.46 (1.04), $\Delta$ df = 3, $p < .001$
Model 4	899.80	455	1.04	.86	.84	.06	.07	

Note: The  $p$ -value of all models was  $<.001$ . Model 1: a 1-factor model, in which all items loaded on the same latent factor; Model 2: a 3-factor model, in which the workaholism and group identification items (i.e. all assessed at Time 1) loaded on the same latent factor, the self-care items and well-being items loaded on separate latent factors; Model 3: a 4-factor model, in which all items loaded on their intended latent factor; Model 4: a second-order model, in which the two dimensions of workaholism loaded on a second-order workaholism factor, the three dimensions of self-care loaded on a second-order self-care factor, and the group identification and well-being items loaded on their intended factors.

Abbreviations: CFI, Comparative Fit Index; MLR, Maximum Likelihood parameter estimation with robust standard errors; RMSEA, Root mean square error of approximation; SRMR, Standardised root mean square residual; TLI, Tucker–Lewis Index.

### 3.2.4 | Well-being (Time 1 and Time 3)

Well-being was assessed using the 5-item World Health Organization Well-Being Index (WHO-5; Topp et al., 2015), the most widely used questionnaire for measuring psychological well-being (sample item: 'I have felt cheerful and in good spirits'). Participants rated how they felt during the last 2 weeks on a 6-point scale ranging from 1 = *at no time* to 6 = *all of the time*. Cronbach's alpha was .83 at Time 1 and .85 at Time 3. McDonald's omega was .83 at Time 1 and .85 at Time 3.

The Confirmatory Factor Analyses (CFA) supported the constructs' distinctiveness. In particular, a four-factor-second-order model, in which the workaholism items (Time 1) loaded on their intended dimension (i.e. working compulsively, working excessively), which, in turn, loaded on a second-order workaholism factor, the self-care items (Time 2) loaded on their intended dimension (i.e. awareness, behaviour, value), which, in turn, loaded on a second-order self-care factor and the group identification (Time 1) and well-being items (Time 3) loaded on their respective latent factor had a good fit to the data ( $\chi^2 = 899.80$ ,  $df = 455$ , Scaling Correction Factor for maximum likelihood robust (MLR) = 1.04, Comparative Fit Index (CFI) = .86, Tucker–Lewis Index (TLI) = .84, root mean square error of approximation (RMSEA) = .06, standardised root mean square residual (SRMR) = .07) and a superior fit than the comparison models (all  $p$ 's  $<.001$ ; see Table 1).

### 3.3 | Statistical analyses

We used SPSS version 28 for data preparation and descriptive analyses. We ran all analyses in MPlus version 8 to test our hypotheses using structural equation modelling. We simultaneously analysed Hypotheses 1 and 2, thereby controlling for Time 1 values of self-care and well-being. Workaholism at Time 1 and self-care at Time 2 predicted well-being at Time 3, and we calculated workaholism's direct and total effects in predicting well-being at Time 3. Furthermore, for testing the postulated mediation (Hypothesis 2), we computed the indirect effect of workaholism at Time 1 on well-being at Time 3 via self-care at Time 2. As Chen et al. (2001) proposed, we fixed the residual variance of self-care at Time 2 to zero in the moderated mediation analysis because

its confidence interval showed that it did not significantly differ from zero, 95% CI [-0.03, 0.02]. We conducted a Johnson–Neyman analysis to determine whether the relationship between workaholism and self-care depended on group identification at Time 1 (Hypothesis 3). Compared with simple slope analysis, the Johnson–Neyman analysis has the advantage of not testing moderation effects at distinct (and arbitrary) values of the moderator (such as 1 SD above and below the mean) but inspecting the range of significance (cf., Finsaas & Goldstein, 2021). That is, this method allows us to uncover at which values of the moderator (here, group identification) the association between the independent (here, workaholism) and the dependent variable (here, changes in self-care) was positive (i.e. the lower and upper limit CI are above 0), negative (i.e. the lower and upper limit CI are below 0) and non-significant (i.e. the CI includes 0). We probed a significant conditional indirect effect at one value above and one below the value that emerged as a turning point in the Johnson–Neyman plot.

## 3.4 | Results

### 3.4.1 | Descriptive statistics and correlations

Table 2 provides an overview of the means, standard deviations and correlations of relevant study variables. Interestingly, workaholism at Time 1 was negatively correlated with well-being at Time 1 but not at Time 3. Furthermore, workaholism at Time 1 was negatively associated with self-care at Time 1 and Time 2, which, in turn, was positively associated with well-being at Time 1 and 3, lending initial support for our mediation assumption (Hypothesis 2). There was no correlation between workaholism at Time 1 and group identification at Time 1, suggesting that these two constructs are independent.

### 3.4.2 | Results of hypothesis testing

Our mediation model to test Hypotheses 1 and 2 had a fit to the data of  $-2^*(\text{loglikelihood}) = 5174.83$ , Akaike Information Criterion (AIC) = 5246.83 and Bayesian Information Criterion (BIC) = 5382.61.



**TABLE 2** Means (*M*), standard deviations (*SD*) and correlations in Study 1 (based on pairwise-deletion).

Variable	N	M	SD	Range	1	2	3	4	5	6	7	8	9
1. Gender <sup>a</sup>	269	1.91	0.29	1.00–2.00									
2. Age	273	21.80	4.59	17.00–49.00	-.06								
3. Work alongside studies <sup>b</sup>	273	1.40	0.49	1.00–2.00	-.05	.16**							
4. Semester	273	1.86	1.50	1.00–11.00	.03	.15*	.23***						
5. T1 Workaholism	297	2.40	0.56	1.20–2.00	.07	-.08	.00	.14*					
6. T1 Group identification	297	3.54	0.96	1.00–5.00	-.05	-.17**	-.09	-.11	-.06				
7. T1 Self-care	297	3.43	0.65	1.50–5.00	-.05	-.01	-.02	-.15*	-.32***	.23***			
8. T2 Self-care	211	3.44	0.63	1.67–5.00	-.06	.05	.10	-.08	-.33***	.15*	.76***		
9. T1 Well-being	300	3.72	0.95	1.00–5.80	-.07	-.07	.00	-.01	-.26***	.17**	.33***	.39***	
10. T3 Well-being	164	3.37	0.95	1.00–5.40	-.04	.06	.06	.18*	.01	.13	.23**	.40***	.33***

Note: The sub-sample sizes differ due to time-related drop-out.

<sup>a</sup>1 = male, 2 = female.

<sup>b</sup>1 = yes, 2 = no.

\* $p < .05$  (two-tailed test); \*\* $p < .01$  (two-tailed test); \*\*\* $p < .001$  (two-tailed test).

We proposed that workaholism would relate to lower well-being in Hypothesis 1. This hypothesis could not be confirmed as the total effect of workaholism at Time 1 on changes in well-being at Time 3 was positive,  $\gamma = .61$ ,  $SE = 0.23$ ,  $z = 2.70$ ,  $p = .007$ , 95% CI [0.17, 1.05]. Thus, workaholism related to more—rather than less—well-being 6 months later when controlling for well-being at Time 1.

Furthermore, the data could not support Hypothesis 2. Contrary to our expectation that self-care would mediate the association between workaholism and well-being, the indirect effect of workaholism on changes in well-being via changes in self-care was not significant with  $-0.10$ ,  $SE = 0.06$ ,  $z = -0.15$ ,  $p = .880$ , 95% CI [-0.14, 0.12]. This non-significant indirect effect was due to workaholism at Time 1 not being associated with decreases in self-care at Time 2,  $\gamma = -.02$ ,  $SE = 0.10$ ,  $z = -0.15$ ,  $p = .880$ , 95% CI [-0.21, 0.18]. In line with our assumption, however, self-care at Time 2 increased well-being at Time 3,  $\gamma = .65$ ,  $SE = 0.21$ ,  $z = 3.12$ ,  $p = .002$ , 95% CI [0.24, 1.05]. Moreover, similar to the total effect of workaholism, the remaining direct effect was positive,  $\gamma = .62$ ,  $SE = 0.22$ ,  $z = 2.87$ ,  $p = .004$ , 95% CI [0.20, 1.04].

The model to test our moderated mediation Hypothesis 3, which proposed that the indirect effect of workaholism on well-being via self-care would be stronger for higher group identification, had a fit to the data with  $-2^*(\text{loglikelihood}) = 5965.76$ ,  $AIC = 6051.76$  and  $BIC = 6213.93$ . The interaction term of group identification at Time 1  $\times$  workaholism at Time 1 was significant,  $\gamma = -.19$ ,  $SE = 0.09$ ,  $z = -2.12$ ,  $p = .034$ , 95% CI [-0.36, -0.01]. The index of moderated mediation was marginally significant,  $\gamma = -.11$ ,  $SE = 0.07$ ,  $z = -1.71$ ,  $p = .087$ , 95% CI [-0.24, 0.02].

As depicted in Figure 2, the Johnson–Neyman analysis revealed that workaholism decreased self-care if group identification had a value of 2.00 in the latent factor or higher ( $-0.43$ ,  $SE = 0.22$ ,  $z = -1.97$ ,  $p = .049$ , 95% CI [-0.85, -0.00]). However, if group identification was 1.90 or lower, the association between workaholism and self-care was not significant ( $-0.41$ ,  $SE = 0.21$ ,  $z = -1.96$ ,  $p = .051$ , 95% CI [-0.82, 0.00]).

### 3.5 | Discussion of Study 1

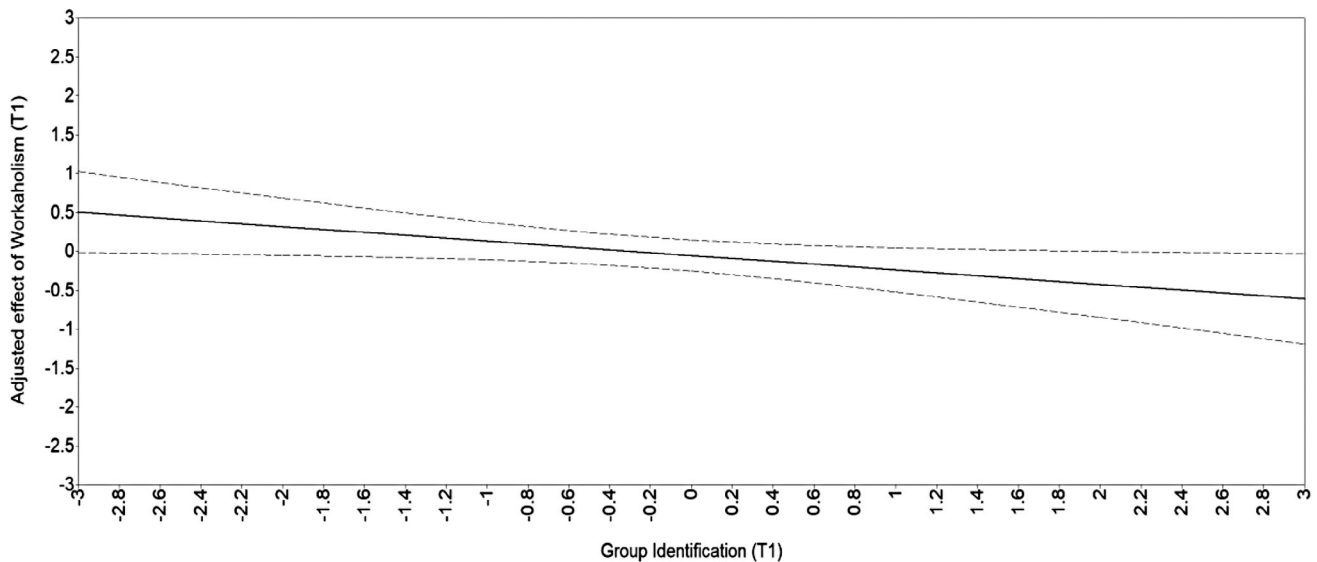
The aim of Study 1 was to examine the mediating role of self-care and the moderating role of group identification in the relationship between workaholism and well-being. Unexpectedly, we obtained a positive total effect of workaholism on well-being 6 months later. This finding contradicts numerous publications highlighting a negative association between workaholism and well-being (e.g. Shimazu & Schaufeli, 2009). We also did not find support for the assumption that lower self-care explains this association. However, supporting our assumptions, group identification represented a relevant boundary condition, such that there was a negative association between workaholism and self-care (and, in turn, well-being) among those who more highly identified with their peers. Before drawing further conclusions, especially because the association was only significant at extreme values of group identification, we deemed it important to test whether this moderating role of group identification was specific to a student population or would replicate in an employee sample. That is, we intended to test whether the first part of our model would replicate.

## 4 | STUDY 2

### 4.1 | Participants and procedure

For Study 2, we reanalysed an existing data set in which employees were recruited via social networks in Germany (e.g. Xing, LinkedIn) in 2017<sup>2</sup>. Participants were required to have a direct supervisor and be employed. In total, 494 individuals provided informed consent and started to answer this survey, and 335 participants responded to the demographic questions, the workaholism and group identification items and consented to participate in a second survey 6 weeks later.

<sup>2</sup> Parts of these data were used in a previous publication (Kaluza & Junker, 2022).



**FIGURE 2** Johnson–Neyman plot for the adjusted effect of workaholism on changes in self-care in Study 1. The black line represents values of the adjusted effect of workaholism at Time 1 on changes in self-care at Time 2 contingent on group identification at Time 1. The dashed lines above and below the thick black line represent 95% confidence bands around the adjusted effect of workaholism on self-care.

Like Study 1, participants provided their email addresses to invite them to the follow-up survey and a code to match their responses in a separate survey. At Time 2, 134 individuals completed the self-care questions.

Consistent with our approach in Study 1, we included all 335 individuals in the analysis to use the existing data fully. Of these, most were women (59%) and averaged 38.8 years ( $SD = 11.2$ ). They were employed with an average of 35.8 h per week ( $SD = 8.4$ ) and had been employed by their current organisation for 8.2 years ( $SD = 8.7$ ). Nearly half of the participants were parents (43%) and held supervisory positions (45%).

Again, we conducted independent  $t$ -tests and  $\chi^2$ -tests comparing those participants who completed both questionnaires with those who dropped out during the study. There were no differences in workaholism,  $t(333) = 1.63$ ,  $p = .104$ , 95% CI  $[-0.25, 0.23]$ , or group identification,  $t(333) = 0.40$ ,  $p = .688$ , 95% CI  $[-0.19, 0.28]$ . Moreover, we did not find differences in age, gender, average work hours, or tenure among those participants remaining in the study and those who dropped out, all  $p$ 's  $> .05$ .

## 4.2 | Measures

Consistent with Study 1, workaholism at Time 1 was assessed with the DUWAS (in its original form; Schaufeli et al., 2008a; Cronbach's alpha = .83, McDonald's omega total = .83, omega hierarchical = .71). Self-care at Time 2 was measured with the 13-item-self-care subscale of the HoL instrument (Franke et al., 2014; Cronbach's alpha = .91, McDonald's omega total = .91, omega hierarchical = .85).

### 4.2.1 | Group identification (Time 1)

We used three items of Doosje et al.'s (1995) scale to operationalise *group identification* (sample item: 'I feel part of my organisation') on a 5-point scale from 1 = *do not agree at all* to 5 = *fully agree*. Cronbach's alpha was .93 and McDonald's omega was .94.

As for Study 1, the results of the CFAs support the constructs' distinctiveness with a good fit of the intended three-factor-second-order model ( $\chi^2 = 604.83$ ,  $df = 291$ ,  $p < .001$ , Scaling Correction Factor for MLR = 1.06, CFI = .88, TLI = .87, RMSEA = .06, SRMR = .09) and a superior model than the alternative models (all  $p$ 's  $< .001$ ; see Table 3).

## 4.3 | Statistical analyses

Consistent with Study 1, we used SPSS version 28 for data preparation and descriptive analyses and Mplus version 8 for hypothesis testing. Again, we used MLR estimation and structural equation modelling, whereby workaholism at Time 1, group identification at Time 1 and their latent interaction term predicted self-care at Time 2. We used the Johnson–Neyman approach to determine the range of significance of the moderation effect.

## 4.4 | Results

### 4.4.1 | Descriptive statistics and correlations

We summarise the descriptive statistics and correlations in Table 4. Similar to Study 1, workaholism at Time 1 and group identification at

**TABLE 3** Results of confirmatory factor analysis in Study 2.

Model	$\chi^2$	df	Scaling correction factor for MLR	CFI	TLI	RMSEA	SRMR	Sartorra–Bentler scaled $\Delta\chi^2$ ( $\Delta$ test scaling correction)
Model 1	1743.28	299	1.08	.45	.40	.12	.13	Model 1 vs. 4: 686.93 (1.81), $\Delta$ df = 8, $p < .001$
Model 2	1585.00	298	1.08	.51	.46	.11	.12	Model 2 vs. 4: 560.15 (1.91), $\Delta$ df = 7, $p < .001$
Model 3	773.86	296	1.08	.82	.80	.07	.09	Model 3 vs. 4: 86.74 (2.24), $\Delta$ df = 5, $p < .001$
Model 4	604.83	291	1.06	.88	.87	.06	.09	

Note: The  $p$ -value of all models was  $<.001$ . Model 1: a 1-factor model, in which all items loaded on the same latent factor; Model 2: a 2-factor model, in which all workaholism and group identification items (i.e. all assessed at Time 1) loaded on the same latent factor and the self-care items loaded on a separate latent factor; Model 3: a 3-factor model, in which all items loaded on their intended latent factor; Model 4: a second-order-model, in which the two dimensions of workaholism loaded on a second-order workaholism factor, the three dimensions of self-care loaded on a second-order self-care factor, and the group identification items loaded on their intended factor.

Abbreviations: CFI, Comparative Fit Index; MLR, Maximum Likelihood parameter estimation with robust standard errors; RMSEA, Root mean square error of approximation; SRMR, Standardised root mean square residual; TLI, Tucker–Lewis Index.

**TABLE 4** Means ( $M$ ), standard deviations ( $SD$ ) and correlations in Study 2 (based on pairwise-deletion).

Variable	N	M	SD	Range	1	2	3	4	5	6	7
1. Gender <sup>a</sup>	335	1.41	0.49	1.00–2.00							
2. Age	335	38.81	11.15	20.00–63.00	.24***						
3. Work hours per week	335	35.82	8.43	5.00–55.00	.29***	.17**					
4. Tenure	335	8.20	8.72	0.00–37.00	.11	.61***	.02				
5. Supervisory responsibility <sup>b</sup>	335	.45	.50	0.00–1.00	.25***	.28***	.18***	.15**			
6. T1 Workaholism	335	2.49	0.62	1.10–4.00	.06	-.10	.10	-.10	.17**		
7. T1 Group identification	335	3.66	1.07	1.00–5.00	.05	.21***	.07	.16**	.20***	-.05	
8. T2 Self-care	134	3.52	0.78	1.23–4.85	-.07	.09	.03	.17*	.10	-.55***	.02

Note: The sub-sample sizes differ due to time-related drop-out.

<sup>a</sup>1 = male, 2 = female.

<sup>b</sup>0 = no, 1 = yes.

\* $p < .05$  (two-tailed test); \*\* $p < .01$  (two-tailed test); \*\*\* $p < .001$  (two-tailed test).

Time 1 were uncorrelated, while workaholism at Time 1 was negatively associated with self-care at Time 2.

#### 4.4.2 | Results of hypothesis testing

Our moderation model to test Hypothesis 3 had a fit to the data of  $-2^*(\text{loglikelihood}) = 3124.47$ ,  $AIC = 3166.47$  and  $BIC = 3246.57$ . There was a negative association between workaholism at Time 1 and self-care at Time 2,  $\gamma = -.92$ ,  $SE = 0.15$ ,  $z = -6.10$ ,  $p < .001$ , 95% CI  $[-1.21, -0.62]$ . Thus, the more workaholism, the less self-care participants reported. There was no association between group identification at Time 1 and self-care at Time 2,  $\gamma = -.09$ ,  $SE = 0.06$ ,  $z = -1.53$ ,  $p = .126$ , 95% CI  $[-0.19, 0.02]$ .

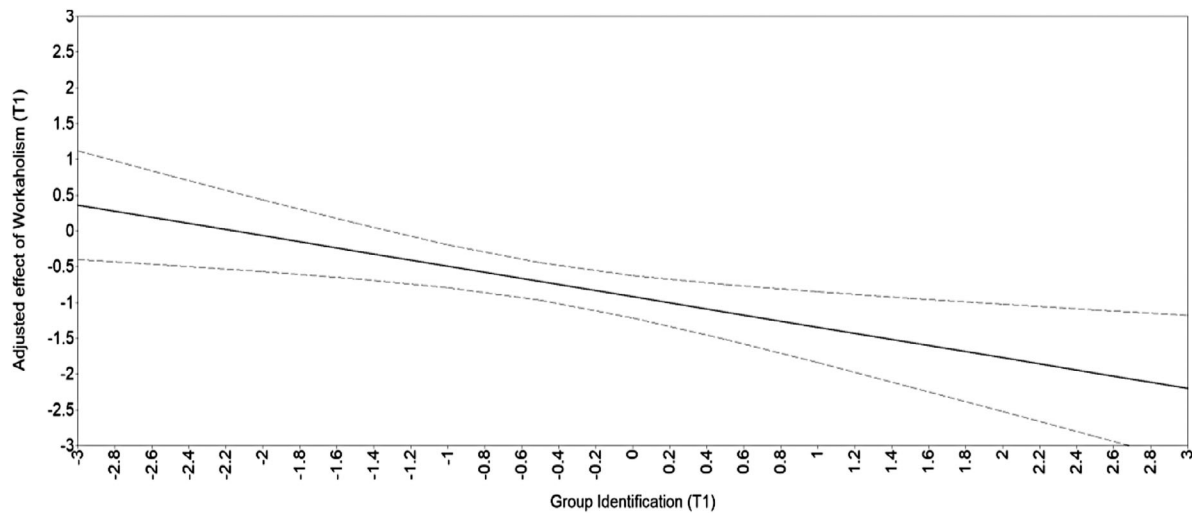
Replicating the results from Study 1 and consistent with Hypothesis 3, which proposed that the association between workaholism and self-care would be contingent on group identification, the interaction term of workaholism at Time 1  $\times$  group identification at Time 1 was significant,  $\gamma = -.43$ ,  $SE = 0.14$ ,  $z = -2.95$ ,  $p = .003$ , 95% CI  $[-0.71, -0.14]$ . As shown in Figure 3, the Johnson–Neyman analysis revealed that if group identification had a value of  $-1.32$  in the latent factor (or

higher), workaholism at Time 1 was associated with less self-care at Time 2,  $\gamma = -.36$ ,  $SE = 0.18$ ,  $z = -1.98$ ,  $p = .048$ , 95% CI  $[-0.71, -0.00]$ . Conversely, if group identification had a value of  $-1.33$  in the latent factor (or below), this association was not significant,  $\gamma = -.35$ ,  $SE = 0.18$ ,  $z = -1.95$ ,  $p = .052$ , 95% CI  $[-0.70, 0.00]$ . Thus, as proposed in Hypothesis 3, higher group identification strengthened the negative association between workaholism and self-care.

## 5 | GENERAL DISCUSSION

Based on COR theory (Hobfoll et al., 1989) and the social identity approach (Tajfel & Turner, 1979; Turner et al., 1987), the present study examined why and when workaholism relates to less well-being. In this regard, we postulated self-care as a mediator explaining the negative association between workaholism and well-being. Further, we argued that group identification acts as a boundary condition in the proposed relationship, such that higher group identification should strengthen this mechanism. In Study 1, we found partial support for these assumptions. Unexpectedly, we observed a positive association between workaholism and changes in well-being 6 months later and a





**FIGURE 3** Johnson–Neyman plot for the adjusted effect of workaholism on self-care in Study 2. The black line represents values of the adjusted effect of workaholism at Time 1 on self-care at Time 2 contingent on group identification at Time 1. The dashed lines above and below the thick black line represent 95% confidence bands around the adjusted effect of workaholism on self-care.

non-significant association between workaholism and changes in self-care 3 months later. Yet, we found support for the proposed indirect negative association between workaholism and changes in well-being via changes in self-care among those higher in group identification. In Study 2, we replicated this contingency of the association between workaholism and self-care on group identification.

### 5.1 | Theoretical implications and future research

Even though workaholism was negatively correlated with well-being at the same measurement point in Study 1, it showed positive associations with changes in well-being 6 months later. This positive association between workaholism and changes in well-being is surprising, given that a negative association is well-established in the literature (Clark et al., 2016; Andreassen et al., 2011). One explanation for this unexpected finding might be that the majority of the sample in Study 1 had lower workaholism scores, and only around 28% would be categorised as high in workaholism based on the norm values provided by Schaufeli and Taris (2023). However, particularly those with extremely high workaholism scores can be considered workaholics who suffer from poorer recovery, experience more negative emotions when not working and are more likely to continue working in the evenings or over the weekends (van Wijhe et al., 2013). For this group, recovery is also less effective in reducing chronic strain (Molino et al., 2018). Therefore, future research may attempt to replicate the present findings in a sample higher in workaholism—or larger samples with a sizable proportion of participants scoring very high on the scale.

At the same time, this positive association between workaholism and changes in well-being is in line with some research showing a positive—or constructive—side of workaholism. Specifically, Clark et al.'s (2016) meta-analysis found positive associations between workaholism and, amongst others, organisational commitment, work

enjoyment and career prospects—besides poorer mental and physical health and more work-home interference. Students have a specific goal in mind (obtaining a good degree), which is why they might feel the need to immerse themselves more strongly into their studies and work beyond what is expected, thus feeling a stronger sense of accomplishment and—in turn—more well-being (cf., Shimazu & de Jonge, 2009; Siegrist et al., 2004; see also Baruch et al., 2011). Importantly, we found this positive association over time, which contradicts Ng et al.'s (2007) proposition that workaholism might be beneficial in the short term but not in the long term. Feelings of personal accomplishment and potentially better grades are rewarding and constitute resources. These (potential) achievements may prevent feelings of resource loss by making newly gained resources visible (Hobfoll et al., 1989). Moreover, compared to employees, students' workload is not as constant and entails more and less intense phases during the week and over the study term (e.g. students' workload increases before deadlines; Kärner et al., 2015). Therefore, the structure of their studies might entail that they can sufficiently recover between peak times, thus benefitting rather than suffering from more workaholism.

We identified group identification as a boundary condition of when workaholism related to (decreases in) self-care (and, in turn, decreases in well-being). Thereby, we only found a significant negative association between these two constructs at high levels of peer identification in Study 1. In contrast, the main effect of workaholism on self-care was strengthened by group identification in Study 2. Overall, this finding aligns with COR theory (Hobfoll et al., 1989, 2001) in that individuals higher in workaholism emphasise their work role by investing their energy and time resources into this role. As a result, they have less energy and time available to spend in non-work roles and leisure time, which is essential to replenish these depleted resources and improve well-being (Meijman & Mulder, 1998; Sonnentag & Fritz, 2015).

The difference in when the detrimental consequences of workaholism for self-care emerged (namely in Study 1 only for those with

high group identification versus in Study 2 also for individuals with relatively low levels of group identification) might be due to variation in the two samples. In particular, and building on the argument above, the students in Study 1 likely had more possibilities to recover as part of their studies, which followed natural higher and lower demand phases on any given day (i.e. regular breaks between classes) and over time (i.e. lecture-free time). Conversely, the employees in Study 2 likely experienced more steady demands with fewer 'naturally built-in' recovery opportunities and more autonomy to, for instance, take shorter or longer breaks. In addition, many employees were parents (i.e. 43% in Study 2), and having children comes with more family demands while providing less time to be spent on leisure activities. Overall, the results suggest that these individuals were more prone to sacrifice dedicated self-care time to meet their drive to work excessively and compulsively, particularly if they identified with their workgroup.

That a higher group identification amplified the link between workaholism and self-care in both samples contributes to an emerging stream of research showing that social identification not only represents a 'social cure'—as also shown in the positive correlation between team identification and self-care/well-being in Study 1—which improves health and well-being (Steffens et al., 2017) but may, under specific conditions, become a 'social curse' with opposite effects (Wakefield et al., 2019; see also Junker et al., 2022).

Implicit in our argument was that individuals higher in workaholism self-select themselves into groups with a similar high drive to work more intensively and longer hours than expected (Snir & Harpaz, 2012) and that individuals who more strongly identify with their peers are more apt to adopt the group's (unhealthy) norms (Haslam et al., 2018; Jetten et al., 2017). Although initial studies (Afota et al., 2021; Mazzetti et al., 2014) support a positive association between workaholism and overwork climate, and thus, a self-selection process, the causality of this association is unclear. One idea to test this causality could be to sample job beginners across the whole spectrum of workaholism, observe their decision-making process in selecting potential employers and assess how these differ in (performance) norms (for instance, by asking job beginners about their perception of such norms). One example to test the introjection assumption would be to sample workaholics and experimentally manipulate their social identification and the work devotion norms in their work group to test whether those in the congruent condition (i.e. in groups with high work devotion) are more likely to adopt this group's norms when social identification is high compared with those in the incongruent condition (i.e. in groups with low work devotion).

Overall, future research is needed to understand better when and why workaholism has positive or negative consequences for individuals' health and well-being. For instance, building on the above idea that individuals higher in workaholism might experience a stronger sense of personal accomplishment, it is plausible that whether workaholism improves or decreases health and well-being depends on the rewards—such as better grades, a promotion, or positive recognition—which one gains from investments (cf., Siegrist et al., 2004). Thus, it may be essential for workaholism to have no negative or even positive effects to experience that heavy work investment 'pays off'.

## 5.2 | Practical implications

The present research also has important practical implications. First, as workaholism was negatively associated with self-care (particularly for those more highly identifying with their group), employers should emphasise individuals' successes but simultaneously try not to amplify working compulsively and excessively. They could implement regularly held feedback discussions, focusing on successes and linking these to specific behaviours (e.g. employees' heavy work investment). Nevertheless, one should also use these discussions to monitor work investments and set adequate limits. One way would be to develop and formulate specific and clear sub-goals that are less abstract than higher-order goals and better visualise successes that have already been achieved (Locke & Latham, 2002). By doing so, those higher in workaholism may not permanently strive to reach unreachable goals and, consequently, reduce their work investment.

Second, employers should increase individuals' self-care to prevent these negative downward consequences. For instance, individuals' mindfulness, a construct related to health awareness (Franke et al., 2014), could be trained. Being 'attentive to the here and now in a non-judgmental way' (Kabat-Zinn et al., 2015) might improve individuals' ability to recognise early health-related warning signals and notice signs of stress. Moreover, individuals should be encouraged to show self-care behaviours at work (e.g. taking regular breaks or setting explicit limits) and during leisure time (e.g. being physically active after work) to protect their well-being (Fritz et al., 2013; Sanchez-Reilly et al., 2013). Leaders can support their employees by role-modelling healthy workplace behaviours, caring for their employees' health and shaping the work environment in a health-oriented manner (Franke et al., 2014). As such, leaders' health-oriented behaviours can effectively foster employee self-care (Kaluza & Junker, 2022).

Third, because of the moderating role of group identification, it is essential that leaders shape healthy group norms. One way to do so would be by adopting the 5R program, a leadership training that emphasises leaders' roles from a social identity perspective (Haslam et al., 2017).

## 5.3 | Limitations

Despite its strengths, including two samples and using a three-wave longitudinal study design, some study limitations should be acknowledged. First, only Study 1 used a longitudinal study design, whereas we only had a time-lagged study design in Study 2, precluding capturing changes over time in that study (Shadish et al., 2002).

Second, both studies relied on self-report data with the potential risk of common method bias (Podsakoff et al., 2003; 2012). However, the temporal separation of the independent, mediator and dependent variables and controlling for Time 1 values in Study 1 reduced this risk. The CFA results further support the assumption that the results obtained in the present studies were not due to common-method bias. Moreover, moderation results are unlikely to be explained by

common-method bias (Podsakoff et al., 2003). Nevertheless, future research might use other reports or objective measures for some of the study variables to reduce this risk further. For instance, physical complaints, facial expressions, or medical records might be used to operationalise well-being.

## 5.4 | Conclusion

Despite the considerable interest in workaholism, previous studies have mainly focused on examining (negative) consequences of workaholism but have largely ignored the mechanisms through which workaholism impacts well-being. Drawing on COR theory (Hobfoll et al., 1989) and the social identity approach (Tajfel & Turner, 1979; Turner et al., 1987), the current study establishes self-care as a mechanism through which workaholism is negatively associated with lower well-being—particularly for those higher in group identification.

## CONFLICT OF INTEREST STATEMENT

The authors declare no conflicts of interest.

## DATA AVAILABILITY STATEMENT

Data are publicly available at [https://osf.io/uecf4/?view\\_only=ad01efa3db0149bcba44abda53f7c007](https://osf.io/uecf4/?view_only=ad01efa3db0149bcba44abda53f7c007)

## ETHICS STATEMENT

The last author's institution declared the study exempt from ethics approval.

## TRANSPARENCY STATEMENT

Data and code are publicly available at [https://osf.io/uecf4/?view\\_only=ad01efa3db0149bcba44abda53f7c007](https://osf.io/uecf4/?view_only=ad01efa3db0149bcba44abda53f7c007)

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