

Research project

Title: “State workaholism as a predictor of day level fluctuations in blood pressure, emotional exhaustion and sleep quality”

Theoretical background

Workaholism or work addiction may be defined as a dysfunctional form of heavy work investment where the individual feels compelled to work because of an uncontrollable inner drive and works excessively hard and for very long hours (Clark et al., 2016). Studies have shown that workaholism is related to psychological (i.e., anxiety, depression, burnout) as well as physiological negative stress-related outcomes (e.g., Balducci et al., 2018).

The available research has been based on the idea that workaholism is an enduring personal characteristic, a *trait-like phenomenon*. As a consequence, the standard study in this area have adopted a between-person approach, investigating how individual differences in workaholism are related to outcomes such as burnout. Such an approach completely neglects the potential within individual variance in workaholism, the study of which may be useful for elucidating micro-processual (e.g., day-level) aspects related to the health impairment effects of workaholism. Such within individual variation may be substantial: There is evidence that even for stable characteristics such as attachment style, the typical individual contains as much variation as there is variation across individuals (Haak, Keller, & DeWall, 2017). Thus, the present study will focus on daily workaholic cognition and behavior, which we define *state workaholism*, and will link its within individual fluctuations to parallel fluctuations in daily blood pressure level, daily emotional exhaustion, and sleep quality.

Additionally, research on the moderators of the workaholism-health outcomes relationships has lagged behind (Clark et al., 2016). Thus, we will focus on the following potential moderators:

- Gender: Women experiencing higher state workaholism may face extra stress as compared to men, since their heavy investment in work clashes with societal norms according to which women should invest more heavily in their families rather than work.
- Recovery: When recovery activities facilitating psychological detachment from work (Sonnentag & Fritz, 2007) are carried out after work (i.e., in the evening), the stress of workaholism is reduced, leading to better sleep quality.
- Smart working and ICT use: Given the current changes in working arrangements and conditions following the COVID-19 pandemic (i.e., increase of smart working and heavy use of ICT) we will explore whether smart working and intensive ICT use – with the latter possibly causing technostress – may magnify the negative effects of workaholism.

Aims and Hypotheses

The main aim of the project is to study the short term-effects of workaholism by adopting a within individual perspective and targeting daily blood pressure, emotional exhaustion and sleep quality as health outcomes, and exploring the role of potential moderators of these relationships. We expect that state workaholism (i.e., the level of workaholism experienced in a specific day) is able to activate the stress response leading to higher levels of blood pressure (H1) and emotional exhaustion (H2) as assessed at the end of the working day and, through these, to poorer sleep quality (H3) as reported the following morning. This is in line with the idea that when the work-related effort is higher, such as when individuals experience more workaholism signs and symptoms, the psychophysiological activation is sustained and manifests itself at the end of the working day with delayed cardiovascular recovery, exhaustion symptoms and poorer sleep quality. Additionally, gender (H4) and smart working and intensive ICT use (H5) will strengthen, and recovery will weaken (H6), the negative effects of state workaholism.

Method

Participants and sample

We will focus on employees (N=100) with a high responsibility position in their organization (e.g., managers), since workaholism has a higher prevalence among these workers (Taris et al., 2012). They will be followed for 10 consecutive working days, leading to a total of 1000 participant-by-day observations, which will ensure adequate power for the analyses (see Gabriel et al., 2019).

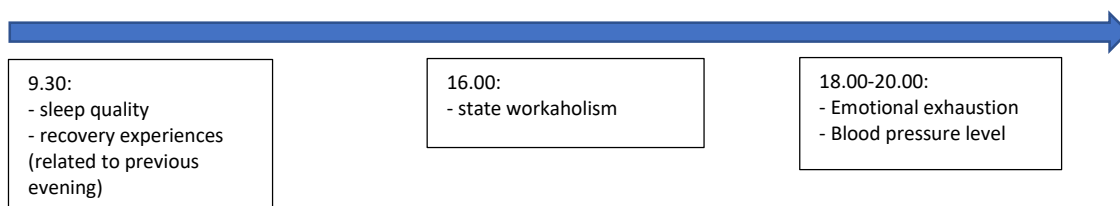
Tools

Participants will fill in a preliminary online questionnaire with which information on their personal (e.g., gender, age, personality [including trait workaholism]) and job-related (e.g., job demand, control, smart working) characteristics will be collected. Participants will also be equipped with a digital blood pressure monitor device and instructed on how to measure their blood pressure. The device will provide time stamps of when the measure is actually taken. Additionally, participants will fill in daily surveys at different times of the day via their smartphone for ten consecutive working days. The daily surveys will include the crucial study measures:

- State workaholism: 5 items adapted from Schaufeli et al. (2009)
- Emotional exhaustion: 3 items adapted from Kristensen et al. (2005)
- Sleep quality: 3/4 items adapted from a sleep quality measure (e.g., Soldatos et al., 2000)
- Recovery experiences: 4 items adapted from Sonnentag and Fritz (2007)
- Control variables at the day level (e.g., n. of hours worked in the day; daily job demand)

Procedure

The preliminary questionnaire will be administered before the 10-day observation period to derive a general profile of the participant. This is useful to collect potentially relevant person-level control variables. The daily measures will be taken according to the following schedule (only the main measures are represented):



Statistical analyses

Since daily observations will be nested within individuals, multilevel regression models will be implemented with SPSS and Mplus. Main independent variable: state workaholism. Dependent variables: blood pressure, emotional exhaustion, sleep quality. Main, mediating, and moderating effects models will be tested according to the postulated hypotheses.

Declaration of commitment to request ethical approval

Ethical approval will be sought from the Ethic Committee of the Department of Psychology. Permission from the employer of the study participant (when necessary) will also be sought.

Expected results and implications

The short term (i.e., day level) within-individual health impairment process activated by workaholism has not received attention in the literature. Investigating such a process may advance our understanding of the path through which workaholism may lead, in the long run, to allostatic overload states and outcomes such as overwork-related disorders (e.g., depression). Understanding the moderators of the health impairment process activated by workaholism may lead to better targeting organization-, as well as individual-level, preventive interventions on workaholism-related problems.

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References

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Plan of activities

Project activities and timing of activities: The post-doc will: a) study the literature (*month 1*); b) develop the research tools and upload them on Qualtrics (*month 2*); c) pilot test of the surveys (*month 3*); d) recruit participants and supervise data collection (with tutor and cotutor) (*months 4-5*); e) carry out statistical analyses and provide feedback to participants upon request (*months 6-8*); f) develop an article for submission to a high impact journal and participate to national and international conferences to present the study results (*months 7-12*).

Training activities: Training will be focused on the use of Qualtrics for survey administration and on developing skills on multilevel data analysis both with SPSS and Mplus. Training on how to conduct a diary-study will also be given. Additionally, the post-doc will participate to the meetings of our research group and contribute to write and review papers in the area of workaholism and related topics (i.e., occupational health psychology) under the supervision of the tutor and cotutor.

Feasibility of the project: The proponent has experience in conducting diary studies such as the one included in this project. He has also successfully used blood pressure monitoring devices in past research (Balducci et al., 2018). Similarly, I have already used a short measure to assess *state workaholism* and investigated its daily variation and psychometric properties, obtaining good results. Thus, I do not anticipate any issue that could threaten the feasibility of the project.

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Coherence of the proposed project with the themes of the Department of Psychology project of excellence

The main aim of the proposed project is to understand the short-term process through which workaholism may lead to transient perturbations of health and well-being indicators constituting primary mediators of the stress process (see Ganster & Rosen, 2013). It is well known that chronic perturbations of primary mediators of stress (e.g., blood pressure, fatigue) may affect secondary mediators (hypertension, burnout) and lead in the long run to compromised health (e.g., frank cardiovascular problems, depression). Thus, the proposed project has to do with work-related health and well-being issues and health and well-being is one of the two key thematic areas of the Department of Psychology (DPsy) project of excellence (see p. 7 of the DPsy project, “Scientific Objectives and Socio Economic Impact”). As a consequence, the proposed project on workaholism is fully coherent with the themes of the DPsy project of excellence.

The DPsy project (see pp. 7-8) further emphasizes the importance of studying “basic and developmental processes of individuals in changing situations and contexts, protective factors and preventive and treatment strategies for psychological unwell-being and disorders” and that “the scientific inquiry will be directed towards the acquisition of new knowledge and intervention possibilities on [...] C) stress factors, coping strategies and resilience [...] in clinical and non clinical contexts [...]”. In line with these sub-themes, the proposed project focuses on a stress factor (i.e., workaholism) which may be strictly related to common aspects of the modern work contexts, such as strenuous competition, intensive work, accelerated change and instability. Thus, reaching a better understanding of workaholism and its effects may lead to the acquisition of new knowledge on how modern working contexts influence the trajectories of individuals’ health and well-being in their adult life, which is absolutely coherent with the DPsy project of excellence lines of research.

Additionally, although treatment options for workaholism have already been proposed, these have a main focus on tertiary prevention (Sussman, 2012; see also <http://www.workaholics-anonymous.org/>). By investigating the role of recovery experiences (i.e., undertaking evening pleasurable non-work activities) as a buffering factor in the relationship between workaholism and health and well-being (e.g., sleep), the present study will also advance knowledge on secondary and primary prevention strategies limiting the effects of workaholism. Such knowledge could inform individual and organizational interventions, such as training activities on the importance of limiting workaholic behavior, and the development of organizational policies emphasizing the value of finding a balance between work and extra-work activities. This is also fully in line with one of the objectives of the DPsy project, that is, transferring academic knowledge to real life contexts.

Ganster, D. C., & Rosen, C. C. (2013). Work stress and employee health: A multidisciplinary review. *Journal of Management*, 39(5), 1085-1122.

Sussman, S. (2012). Workaholism: A review. *Journal of Addiction Research and Therapy*, S6(1), 4120.