RELATIONSHIP BETWEEN HIGH WORK INTENSITY, ORGANISATIONAL PERFORMANCE AND WORKERS’ HEALTH: A FOCUS ON WORKERS IS REFLECTED IN BETTER HEALTH**

Abstract. The aim of the study is to examine the relationship between work intensity, organisational performance and worker health in Slovenia. One finding is that organisations with a lower work intensity are more focused on (the needs of) their employees and more financially successful. Yet, greater work intensity significantly deteriorates workers’ health. The results confirm the need for an appropriate distribution of workloads, and a properly designed working environment that strengthens individual involvement in work results while contributing to employees’ better health.

Keywords: work intensity, functioning of organisation, workers’ health, Slovenia

Introduction

The rise in the volume and intensity of work is challenging modern societies, characterised by greater uncertainty, especially in the labour market (Beck, 2000; Beck, 2009), and is promoted by the culture of new capitalism (Senett, 2008). Working environments are pursuing enhanced flexibility and efficiency, including by way of increasing workloads with fewer resources, yet the influence of high work intensity on organisational performance remains inadequately researched.

This phenomenon is reflected in negative and positive effects on organisational performance. Regarding the negative side, earlier research shows lower levels of work satisfaction (Green, 2004; Cheng and Chan, 2008; Burke et al., 2010; Boxal and Macky, 2014) and higher levels of stress (Bellingrath et al., 2009) and burnout (Demerouti et al., 2001; Leitner and Maslach, 2009), especially among managers and leaders who are the people most burdened by higher work intensity (Cordes et al., 1997; Slatten et al., 2011),

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the deterioration of interpersonal relations, presentism (Bergström, 2009; Škerjanc and Dodič-Fikfak, 2014), bigger fluctuations (Burke et al., 2010) within the organisation and long-term negative impacts on organisational efficiency (Green, 2006; Hussain et al., 2011).

Authors have looked at the impact of work intensity on employees’ health and shown that it leads to greater anxiety (Ganster and Rosen, 2008; Kleppa et al., 2008), fatigue and sleep disorders (Winwood et al., 2007; Bellingrath, 2009), back pain, headaches and gastrointestinal troubles (deJonge, 2000), being more susceptible to a higher blood pressure, higher blood cholesterol levels, and smoking (deLange et al., 2002; Ferris et al., 2006; Backé et al., 2012). Studies also reveal that too high work intensity negatively impacts employee quality of life (Ilies, 2010) and seriously curtails their family life due to an inability to reconcile work and leisure (Kalleberg, 2013), especially for very engaged employees (deJonge et al., 2000).

On the other hand, it should not be ignored that in some circumstances high work intensity can also support better organisational performance reflected in higher productivity. It can satisfy workers who have a higher external locus of control and are hence motivated by such pressure, particularly if their motivation is reinforced by rewards for the effort they make in boosting productivity (Burke et al., 2010). Indeed, studies show that if intrinsic motivation (Ryan and Deci, 2000) is combined with the provision of autonomy and control over the individual’s own work, there is a strong match between the individual’s desire for intensive work and effort and the organisation’s orientation to high-intensity work. All of this is reflected in the individual having a higher level of satisfaction and sense of belonging to the organisation (Bond et al., 2008; Burke et al., 2010).

The literature also suggests positive associations exist between human resource management practices, like training, staffing selectivity, satisfaction with the quality of performance evaluation (Delaney and Huselid, 2017), and leadership characteristics based on feedback, recognition, empowerment, satisfaction with the quality of communications, and the increase in both employee and organisational performance (Bartel, 2004).

This paper aims to examine the relationship between work intensity, organisational performance and worker health. Following a literature review, we first define the basic concepts and then empirically analyse the relationship mentioned above using Slovenian Public Opinion survey data. Our main research question is: How does the intensity of work correlate with: (a) organisational performance; and (b) worker health? Based on our study’s results and an international comparison with Eurofound data, we set out guidelines for managing and reducing the negative impacts of work intensity on the organisational level. This may help the managers and leaders of organisations and can support health and other policy makers while
developing policies and decision-making intended to reduce the consequences of high-intensity work.

**Main concepts: Work intensity, organisational performance, and worker health**

Work intensity generally refers to the level of employees’ physical and/or mental input while completing work tasks at work (Green, 2006) and entails three demands: emotional (affect, levels of work stress); job (effort, greater workloads) and time (pace, longer work hours, high working speed, tight deadlines, insufficient time to complete a task) (see Boisard et al., 2003: 18; Green, 2004; Burke et al., 2010). While the definition and measurement of working hours is normally unproblematic, “work intensity” requires careful attention to keep it conceptually distinct from organisational efficiency, individual performance, and skill (see Birindelli et al., 2007: 53). Moreover, many similar concepts describing work intensity can be found in the literature. Some scholars use the term “working hard” to determine work intensity as comprising a time component (hours worked) and an intensity perspective (intensity of the effort made at work) (Burke et al., 2010; Stanojević, 2006). Work intensity is also often perceived to be an effort-related activity, “the rate of physical and/or mental input to work tasks performed during the working day” (Green, 2006) or the “speed of work” (Burchell and Fagan, 2004). Thus, the work intensity concept is a complex phenomenon that is not simple to measure (Birindelli et al., 2007: 53).

Work intensity also represents: (a) physical (quantitative, objective, extensive) workloads, typically measured by working hours; and (b) perceived (qualitative, subjective, intensive) workloads. Objective workloads are defined as the actual work a worker is expected to do at a given time, whereas a quantitative overload means the given work is too demanding for the set period of time. At the subjective level, it is an individual's perception that the work is too demanding, which also varies by the level of frustration tolerance and the actual skills and abilities needed at work, which an individual may be lacking (Chowhan et al., 2019). The Eurofound (2017) definition provides information on the constraints workers face while performing tasks, on their work rhythm, and also on the time they have available to complete the job.

The definition of organisational performance is surprisingly unsettled, with few studies using consistent definitions and measures (Kirby, 2005). Organisational performance comprises an organisation’s actual output or results as measured against its intended outputs. According to Richard et al. (2009), organisational performance is not a one-dimensional theoretical construct but encompasses (at least) three specific types of firm outcome: (a)
financial performance (profits, return on assets, return on investment etc.); (b) product market performance (sales, market share etc.); and (c) shareholder return (total shareholder return, economic value added etc.). Its multidimensionality arises from the stakeholders that interact with/within the organisation, the heterogeneity of organisational resources, environments and strategic choices, and variations in performance over time. Therefore, organisational performance can hardly be characterised by a single operational measure. In the framework of this paper, it is worth mentioning authors who emphasise intangible assets (Barney, 1991), social strengths and concerns (Boulding, 1991; Edvinsson and Malone, 1997; Dore, 2000; Surroca et al., 2009), a healthy organisation (Cooper and Cartwright, 2004; Burton, 2010) and sustainability (Kramar, 2014) as important outcomes of organisational performance.

Historically, the working environment’s importance for workers’ health was primarily observed in the context of occupational diseases. Later, psychosocial factors at work were linked with coronary heart disease, musculoskeletal disorders and mental illness (Marmot et al., 2006). The World Health Organisation (WHO, 1948) defines health a “State of complete physical, mental, and social well-being, and not merely the absence of disease or infirmity”.

Work intensity and worker health in Slovenia in an EU context

Work intensity: In the EWCS (2015) survey, Slovenia has a bigger share of intensive work than the EU average (see Graph 1). More precisely, compared to the EU, Slovenia exceeds the share of respondents: Who are working at least 35 working hours in the main paid job (by 14%), who worked for more than 10 hours a day in last month (by 10%); who had to work during their free time to meet work demands (by 6%); who (almost) always work at a very high speed (by 6%), who had difficulties taking 1 or 2 hours off during working time to attend to private matters (by 5%), and who work to tight deadlines (almost) always (by 1%). However, the majority of Slovenians stated they had sufficient time to get the job done (80% of Slovenians compared to 73% in the EU on average).

High-work intensity is also confirmed by Slovenian studies showing that the greatest burden is borne by employees with flexible working arrangements and young people (see Stanojević, 2006; Kanjuo-Mrčela and Ignjatović, 2013).
Workplace health: Although in both Slovenia and the EU there is a large share of respondents who are well informed about health and safety risks at work (93% vs. 90%, respectively), according to the EWCS (2015) survey (see Graph 1) workplace health in Slovenia is worse than the average in the EU. Slovenia exceeds the EU average for workers who reported health or safety risks due to work by 13% and for those stating that work negatively affects their health by 12%. In Slovenia, 16% less respondents than in the EU feel they would be able to do their current or a similar job until the age of 60. More than half the respondents in the EU (58%) stated they have a
health and safety delegate/committee in their organisation. Yet, in Slovenia just 39% reported the existence of such a body. Workers in Slovenia are also less often (6% below the EU average) absent from work for health reasons (especially for shorter periods; if they are absent, it is mainly for a longer time). However, they are more often (12% above the EU average) work while they are sick.

The Slovenian public opinion study reveals that a particularly worrying aspect of the rise in work intensity in Slovenia is presentism, consequently impairing Slovenian workers’ ability to seek medical care due to work obligations (see Čehovin-Zajc and Kohont, 2017). During the employer’s reorganisation, an important factor while deciding on which employment relationships to terminate was work-related illness (Margan and Dodič-Fikfak, 2015). The above data demonstrate that Slovenian organisations still largely count on a diligent rather than an intelligent worker (Svetlik, 2006).

Methods

Research data and sample

The paper analyses Slovenian Public Opinion survey 2016/1 (Kurdija et al., 2016), performed on a representative sample (N = 1950, realised sample: N = 1070, realisation: 57%) of adult inhabitants of Slovenia. The data were collected between April and June 2016 and submitted to the Social Science Data Archive ADP in December 2016.

Since the aim of this paper is to examine the relationship between work intensity, organisational performance and worker health, the analysis relies on only a sub-sample of the working population (n=562). Most (80%) are full-time employees, 7% are self-employed, 7% are students who work occasionally, 3% are part-time workers, while the remaining 3% are either formally or informally unemployed who work for money on occasion. A slightly bigger share of men (54.6%) than women is covered in this study sub-sample. Those in the sub-sample are aged between 19 and 71 years. Most have attained at least a university educational level or higher (39%), followed by respondents who completed secondary education (35%). Around one-fifth have finished a vocational school (19.2%), while the remaining 7% have finished primary school or less.

Measurement instrument and statistical analyses

Work intensity was measured using the following indicators about work on a 5-point Likert scale, with 1 meaning ‘I completely disagree’ and 5 ‘I totally agree’: (a) Today I am working far more than I did a decade ago; (b)
I am overburdened by the amount of work I have to do at my job – work overload; I do not have time to work outside my primary job to improve my living standard; (c) I am constantly under time pressure at work; (d) My work is stressful; (e) I do physically demanding tasks at work; (f) I am swamped by too many different tasks; (g) The complexity of work assignments and requirements has increased in the last 3 years. All of these indicators create a single common factor (eigenvalue > 1) which explains 48.5% of the variance. All weights are higher than 0.5. The measuring instrument is reliable (Cronbach $\alpha = 0.834$). The average number of working hours per week is used as a control variable.

Organisational performance was measured on a 5-point Likert scale of agreement (1 meaning ‘totally disagree’, 5 ‘totally agree’): (a) Management considers the needs of employees; (b) Enough information for me to effectively carry out my work; (c) Superiors support participation in decision-making on everyday work; (d) Clear and precise task descriptions; and (e) Success of the working organisation (measured on a scale where 1 means ‘business with a high loss’ and 5 ‘business with high profits’); (f) position in the workplace (1 leading, 2 managerial, 3 direct management, 4 executive worker); and (g) number of subordinates. Due to diversity and internal inconsistency, these indicators were not combined to form common factors.

Health was self-measured using a 5-point Likert scale: (a) Satisfaction with personal health; (b) Self-evaluation of personal general health; (c) Having trouble working in the job or doing chores at home due to health problems in the last month; and (d) Experiencing physical pain in the last month. According to PAF, the indicators constitute one common factor Health that explains 65.3% of the variance (eigenvalue above 1). The measurement instrument is reliable (Cronbach $\alpha = 0.817$).

After checking the appropriateness of the approximate normal distribution, the correlations between the concepts work intensity, organisational performance and worker health were analysed using the bivariate Pearson correlation test. All analyses were carried out using the SPSS software tool.

Results

In the following sub-sections, key findings of the bivariate analysis (see Table 1) of the correlations between work intensity, organisational performance and health are presented. Correlations of the work intensity with the control variable not surprisingly show those who work at a higher intensity, work longer hours. However, the relationship with organisational performance and health is not the same if we look at work intensity or solely working hours. Work intensity is more negatively associated with organisational
performance and worker health, while working hours do not correlate with either organisational performance or health; working hours are only significantly higher among those who hold higher (leading or managerial) positions and those with a greater number of subordinates.

Work intensity and organisational performance

Work intensity is significantly negatively correlated to the organisation’s financial performance. Employees who work at a higher intensity therefore work in organisations that are less successful. Moreover, the intensity of work is significantly higher in organisations whose management does not take the needs of employees into account, where managers do not encourage their employees to participate in decision-making on their everyday work and where employees have insufficient knowledge and information to work or do not have clear and precise descriptions of their work tasks. Those holding higher positions (leading or managerial) and are leading a larger number of employees work at a higher intensity.

Work intensity and worker health

Those who work at a higher work intensity suffer significantly worse health; more precisely: in the last 4 weeks they had experienced physical pain, work-related problems or difficulties doing chores at home due to health problems. They view their health as being worse and are dissatisfied with it.

Managers and leaders do not experience physical ill-health, although they are significantly less satisfied with their own health and the self-evaluation of their general health. The results also show that managers’ and leaders’ general health perception does not correlate with the number of subordinates they lead or manage.

Conclusion

Our results show that the negative effects of work intensity related to worker health are not seen as greatly in better performing organisations. Higher intensity work is negatively linked to financial performance and therefore found in organisations that are less successful. This is also confirmed by Eurofound (2015) and other international (deLange et al., 2002; Ganster and Rosen, 2013) and Slovenian studies (Svetlik, 2006; Kohont and Stanojević, 2017) that show less successful companies rely on the intensity of work to maintain their own financial performance while their employees use it to supplement their wages with overtime.
Table 1: CORRELATION MATRIX FOR CORRELATIONS BETWEEN WORK INTENSITY, ORGANISATIONAL PERFORMANCE AND WORKER HEALTH

<table>
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<tr>
<th>Work intensity</th>
<th>Organisational performance</th>
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<td>Organisational performance</td>
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** Correlation is significant at the 0.001 level. * Correlation is significant at the 0.05 level.

Source: Kurdija et al., 2016.

Legend
1 Factor Work intensity: 1a Average number of working hours per week
2 Organisational performance: 2a The financial success of the working organisation, 2b Management takes the needs of employees into consideration, 2c Enough information that I can effectively carry out my work, 2d Superiors support the participation in decision-making on everyday work, 2e Clear and precise task descriptions 2f Position in the workplace, 2g Number of subordinates.
3 Factor Worker health, created from the indicators: 3a Satisfaction with personal health, 3b Having trouble working at job or doing chores at home due to health problems in last month, 3c Experiencing physical pain in last month, 3d Self-evaluation of personal general health.
Our study also shows that work intensity is significantly higher in those organisations whose management does not take the needs of employees, where managers do not encourage their employees to participate in decision-making on their everyday work and where employees have insufficient knowledge and information for their work tasks or do not have clear and precise descriptions of them. Therefore, rather than leaning on diligence, organisations should engage in intelligent, knowledge-based, development-oriented practices that will bring greater added value and thereby contribute to successful operations. Their managers should focus more strongly on finding an equilibrium between business objectives and people’s needs using various forms of participation and feedback, and thereby help with the achievement of work results, satisfaction and the improved material position of the employees.

The results of our analysis are consistent with previous research (Cordes et al., 1997; Slatten et al., 2011) by showing that managers and leaders are the ones who are most burdened by higher work intensity. Those holding higher positions such as managers and leaders were not found to experience physical ill-health, yet our study shows they are significantly less satisfied with their own health and the self-evaluation of their general health. This is also emphasised in the WHO (1948) health definition where health is not merely the absence of disease or infirmity, but also the state of complete physical, mental and social well-being. Thus, our study shows managers and leaders work more intensively and also have worse (self-evaluated) health. While focusing on other employees’ needs, they should also take care of their own by focusing on their own intensity of work and well-being.

Our study shows that Slovenians who work in intensive environments have statistically significantly worse health, seen in self-evaluations of health, physical pain, and in difficulties at work and at home due to health problems. Except for managers and leaders, the effect of a larger amount of work, or the proverbial ‘Slovenian diligence’ that an individual invests in their work, therefore does not significantly impact their health. The research results highlight the fact that more attention and care is needed in organisations to ensure a healthy and stimulating working environment based on employee involvement in the feedback processes, which mostly depends on their leaders and leadership processes, and on activities for balancing the intensity of work. These approaches distinguish successful organisations from less successful ones and influence the optimisation of the scope and intensity of work. To this end, organisations should strengthen their analysis of the work done to better monitor and coordinate employees’ expected/actual competencies, work intensity, and their health, thereby improving the picture of health and satisfaction of employees.
On the other hand, it is important to consider the diversity of workplaces and adapt them to the individual’s abilities and ergonomic needs in both work-intensive and other industries. This is part of a very old tendency of moving away from technical, productivity-oriented approaches to more humane, individually-oriented ones (McGregor, 1960; Ouchi, 1981), and focussing on the sustainable development of employees (Kramar, 2014). The reality today demands that these tendencies be once again supported. A properly designed working environment introduces motivational elements and strengthens the individual's involvement in work results. It helps make organisations successful and efficient, while contributing to employee well-being.

Balancing the intensity of work and organisational performance by focusing on people and using humanising interventions (Molan and Molan, 2008) that help to unwind also prevents, strengthens control over or reduces the occurrence of negative stressors and other adverse impacts on the work environment. Further, at the individual level, it is vital to strengthen patterns of behaviour, including a new distribution of tasks in the home environment as the basis of a better work–life balance, to carefully monitor and eventually alter the individual work content in the organisation, and to stimulate individuals and use group training as a source of new behavioural patterns. The need to improve the quality of work environment is also shown by the current labour market situation in Slovenia, characterised by structural disparities and labour shortages (Banka Slovenije, 2017), which is especially acute in the work-intensive production and service sectors. These sectors should be based on work (re-)design, such as shorter work times, combined with a lowering of the intensification of work (see Bembič and Stanojević, 2016) while being directed at humanisation and the enrichment of work with motivational elements.

Our research has some limitations that should be mentioned. One limit is the use of the data and indicators that were available in the cross-sectional study, thus limiting the concepts used and causal inferences. The extent of the relationship between work intensity, organisational performance and worker health would be better established by incorporating longitudinal research and a more precise measurement tool that enables the use of multivariate and not only bivariate analyses. The worsening of health may also have several occupational and non-occupational causes. Therefore, this study is only a superficial reflection of the correlations with work intensity and future studies in this field should include deeper analyses of the presented concepts.
BIBLIOGRAPHY


SOURCES