



## THE INTERPLAY AMONG WORK OVERLOAD AND TIME MANAGEMENT IN PREDICTING JOB PERFORMANCE AND WORK–LIFE BALANCE

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### **Abstract**

*Work overload and time management are becoming increasingly important as demands increase in both professional and personal life, which relates to work–life balance. Work overload and time management also have serious implications for individual work performance. This study examined how time management moderates the effect of job overload on job performance, as well as the relationship between work overload and work–life balance. The results show that work overload has a negative impact on job performance and work–life balance. This study also shows that time management moderates the relationship between work overload and job performance, making the relationship between these two factors less negative. These findings suggest that it is important for both individuals and organizations to pay more attention to time management because it can improve work–life balance and work performance.*

**Keywords:** *work overload, time management, job performance, work–life balance*

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### **1 INTRODUCTION**

The subject of work–life balance (WLB) connected with the role of work overload is extremely relevant nowadays (Aggarwal, 2018). As workplace expectations rise, employees struggle to manage their time and juggle work and personal lives, as well as to achieve high results at work (Kossek et al., 2010). Managing the time or time management can be viewed as a way of monitoring and controlling time (Eilam & Aharon, 2003). In essence, what people gain from time management is not more time, but better work–life balance (Misra & McKean, 2000;

Britton & Tesser, 1991). According to Valcour (2007) work–life balance is of huge importance for organizations, employees, and societies across the world. It improves organizational efficiency, reduces stress, and improves employee well-being and health. (Sánchez-Hernández, González-López, Buenadicha-Mateos, & Tato-Jiménez, 2019). Furthermore, control over work hours or quality time management also has been associated with lower work family conflict (Jansen, Kant, Nijhuis, Swaen, & Kristensen, 2004).

In modern organizational settings, more and more employees report work overload, complex work demands, and longer working hours (Vogel,

2012). Employees often feel overloaded with work because of an excessive number of performance requirements (Lewis, 1998). Virick, Lilly, and Casper (2007) found that employees with increased workload have lower perceived work–life balance. Poulouse and Dhal (2020) demonstrated that individuals with high workload face difficulties in balancing work and life. Other findings suggest that positive time management is associated with self-rated academic performance (Macan, Shahani, Dipboye, & Phillips, 1990), job satisfaction (Landy, Rastegary, Thayer, & Colvin, 1991), self-perceived organizational performance (Lim & Seers, 1993), and lower perceived job overload.

As far as we are aware, there currently are no studies that discussed a clear relationship between time management as a moderator and WLB, work overload, and job performance. However, there are some studies of time management as a moderator between different constructs, which we discuss subsequently. Numerous studies have focused on work–life balance and its importance in today’s world (Fleetwood, 2007; Crompton & Lyonette, 2006; Hjálmsdóttir & Bjarnadóttir, 2021). However, despite the increasing interest of researchers in studying work–life balance, to our knowledge there is little research describing a clear relationship between work–life balance and time management skills. Fener and Renn (2010) showed that individuals who practice time management are able to separate their work behaviors from their family behaviors and establish a better work–life balance. Jex & Elacqua (1999) demonstrated that the relationship between work–family conflict and mental health was strongest among respondents who reported practicing more time management. In addition, Khatib (2014) found a negative correlation between time management and perceived stress. This means that better time management skills lead to lower stress levels, which is associated with better performance. With our research, we hope to gain new insights into this relationship between time management and work performance. However, several studies have shown a strong correlation between work–life balance and employee job performance, implying that they are connected (Kim, 2014; Smith, Smith, & Brower, 2016), yet represent two different but related aspects of desirable work outcomes.

When talking about job performance, it is important to bring work overload into the picture. Job performance can be increased and decreased by work overload (Bazillai, 2021). Brown & Benson (2005) showed a positive correlation between workload and job performance, whereas Ladebo & Awotunde (2007) showed that overload leads to employee exhaustion when they find it impossible to meet the resource demands of job requirements. The present study adds another contribution to this not fully clarified correlation between overload and job performance. When discussing work overload, another area needs to be addressed, namely WLB. Virick et al. (2007) found that employees with increased workload have a lower perceived work–life balance. Poulouse & Dhal (2020) showed that individuals with high workloads have difficulty balancing work and life. We clarified and further examined these connections between the two domains.

This study examined how time management moderates the effects of work overload on job performance, which is crucial for organizations and their productivity, and how time management moderates the relationships between work overload and work–life balance. Firstly, we predicted that time management would be related positively to job performance and work–life balance. Secondly, we predicted that higher perceived work overload leads to poorer work–life balance, and lower perceived work overload leads to higher job performance. According to Johari, Ridzoan, & Zarefar (2019), work overload does not have a significant impact on job performance; however, people usually react differently to workload. Some embrace it and take it as a challenge, whereas others show frustration. We investigated this further under specific boundary conditions of time management.

Recently, many employees changed their job occupation due to COVID-19 (25% more than usual), and many employees work from home (McKinsey, 2021). COVID-19 has led to a rapid change in the workplace. Many people began working from home, which has become the new normal (Kirby, 2020). This can be a problem for some, because the boundaries between work and leisure can become blurred. Work and private life easily threaten to merge when people live and work in the same rooms, leading to poorer work–life balance if an em-

employee's perceived workload is higher (Telser, 2021). Therefore, we investigated whether a higher perceived workload leads to a worse work–life balance in this changed work environment. Skinner and Pocock (2008) found that work overload has two effects on work–life balance. Moreover, increased workload often leads to longer working hours, and this contributes to feelings of strain. This research evaluated this on a different sample of individuals whose work environment had recently changed.

Finally, we studied whether lower perceived workload leads to higher job performance. Previous research found inconsistencies with these two constructs. Overload may increase job performance in some cases and decrease it in others. Brown & Benson (2005) showed a positive correlation between workload and job performance, whereas some other studies showed that overload is associated with the outcome of lower job performance. Ladebo & Awotunde (2007) showed that overload leads to employee exhaustion when it is impossible for them to meet the resource requirements of job demands. However, a moderate workload can lead to performance gains.

Our research has the potential to contribute to the literature in several ways. Firstly, we investigated whether negative effects of work overload can be tamed through better time management. Secondly, we investigated how work overload affects job performance and work–life balance, adding time management as a moderator. To our knowledge, this has not been studied before, and therefore is of great value to future researchers. In addition, we investigated how work overload and time management alone affect job performance and work–life balance. Kumar, Kumar, Aggarwal, & Yeap (2021) found that job performance is affected by different factors such as family distractions, distress, and discomfort. They found that role overload does not negatively affect job performance when working from home. We tested this finding on a different sample and investigated specific boundary conditions related to time management. These findings may be of practical use to organizations and individuals who wonder if overload when working from home can be tamed through better time management, leading to better productivity. Organizations can assess whether it is beneficial to train their employees to be more productive in

order to learn better time management. In addition, Jex & Elacqua (1999) found that engagement in time management activities had a positive feedback effect on employee mental health, but their research also showed that time management behaviors did not moderate the effect on overwork. We tested these results in a modern setting in which technology plays an important role in time management activities.

Finally, our research also could provide practical benefits to organizations to better understand employee health and performance in the workplace. Nowadays, with more and more tasks to complete, we can feel greater strain, which can translate into poorer mental health and consequently poorer job performance. The findings on time management as a moderator between work overload and job performance may be of use to organizations as feelings of overload can be prevented through time management training. However, people tend to struggle in the search for perfect work–life balance, so our research may be of practical use to managers responsible for employee job satisfaction and efficiency.

## **2 THEORETICAL BACKGROUND**

### **2.1 Work–Life Balance and Work Overload**

Work–life balance is a relatively modern expression (Warren, 2015). The concept might give an impression that it is a new problem, but there is no novelty in the core concept (Phipps & Prieto, 2016). The WLB metaphor is a social construct that has emerged in recent years, but the dilemmas associated with managing paid work alongside other areas of life, particularly family, have been the subject of research for several decades (Lewis, Gables, & Rapoport, 2007; Sirgy & Lee, 2017; Peeters, Jonge, & Taris, 2014; Warren, 2015).

Work–life balance is defined as a person's ability to meet his or her work and family obligations as well as other nonwork activities and responsibilities. All definitions of work–life balance can be categorized based on two key dimensions. The first can be defined as role engagement in multiple roles in work and nonwork life (Sirgy & Lee, 2017). The second can be understood as minimal conflict between work and nonwork roles (Sirgy & Lee, 2017). Sirgy & Lee (2017) also stated that WLB equilibrium is achieved

through effective management of role conflict, in which conflict or disruption occurs when resources to meet role demand are threatened or lost

Work or workplace environments of employees can strongly influence their non-work life situations and vice versa, which is often referred to as “work–family interference” (Mache, Bernburg, Groneberg, Klapp, & Danzer, 2016). Over the last two decades, the line between a person’s work life and nonwork life has become increasingly blurred (Peeters et al., 2014). This largely is due to changes in family structures, the increasing participation of women in the workforce, and technological changes that have altered the nature of work through the introduction of remote working practices (Peeters et al., 2005).

Work overload refers to the inability to complete tasks in the allotted time, which can lead to impairment of social and private life (Kirch, 2008). It can result from additional workload, but it does not have to. It also can be caused by mistakes someone makes at work, poor time management, or organizational problems (Daniels, 2017).

It is believed that massive work overload can deplete workers’ existing resources, resulting in fewer resources available to cope with tasks or demands outside of work (Karatepe, 2013). Vogel (2012) pointed out that workers who are given too many work tasks are more likely to experience stress and fatigue, leading to an imbalance between work and life domains. Chawla & Sondhi (2011) examined the relationships between perceived work overload and WLB among Indian women and found that WLB was negatively predicted by perceived work overload. This is because WLB provides benefits in the form of a combination of increased job satisfaction and loyalty; promotion of job performance; reduction of costs due to turnover, absenteeism, recruitment, and selection; and increased organizational productivity (Lazar, Osoian, & Ratiu, 2010). To adapt organizational structures to the needs of employees or to respond to government regulations on gender equality and family protection, many companies allocate resources to work–life balance initiatives (Pasamar & Cabrera, 2013).

**H1a:** *Perceived work overload is negatively related to work–life balance.*

## 2.2 Work Overload and Job Performance

Work overload can also occur when a person is exposed to a higher-than-normal workload (Daniels, 2017). Kirch (2008) defined work overload as a situation in which the demands of the job exceed the individual’s ability (time or resources) to cope with them.

Job performance is one of the most important criteria for determining the efficiency of an organization (Vathanophas, 2007). It is a function of the application of a person’s skills, abilities, and inclinations in performing a job in an organization (Hackman & Oldham 1976; Steers & Rhodes 1978). Performance is influenced by the complexity of the job, and is defined in different ways depending on the many phases and complications of the job (June & Mahmood, 2011). There seem to be so many variables that affect job performance that it is almost impossible to make sense of them (Pushpakumari, 2008).

According to Johari et al. (2019), people react differently to their workloads at the workplace. Some embrace it and take it as a challenge, whereas others show frustration. As people are promoted and climb the corporate ladder, their workload increases. This can affect their job performance, because they have to handle more pressure at their workplace (Johari et al., 2019). Chadegani, Mohamed, & Iskandar (2015) found that when employees are exposed to more work than they can handle, they begin to perform the work with less effort, which means that the tasks are completed with lower quality. Ali & Farooqi (2014) also supported this in their research, which found that work overload leads to poor employee performance, which also leads to job dissatisfaction. Furthermore Johari et al. (2019) suggested that the relationship between workload and job performance is not always linear. Employee productivity increases up to a certain point, after which it begins to decline. Therefore, these results indicate that job performance is highest when workload is moderate (Johari et al., 2019). However, if an incentive plan and proper training are given to employees, their performance can increase and they can become more satisfied with their jobs (Tahir et al., 2012).

However, Johari et al. (2019) showed that work overload has no significant effect on the job performance of government auditors. When auditors’ cur-

rent workload exceeds their usual workload, they experience stress. When this situation occurs, they usually make extra effort to cope with this high demand. They often view work overload as a challenge, and this means that it can have a positive effect on job performance in this situation. Johari et al. showed that there is a positive correlation between work overload and job performance, which is not always the case. Furthermore, Brown & Benson (2005) also showed a positive correlation between work overload and job performance. On the other hand, other studies showed that work overload is associated with lower job performance of individuals. Ladebo & Awotunde (2007) stated that overload leads to employee exhaustion when it is impossible for them to meet the resource requirements of job demands. However, moderate workload also can lead to performance gains.

**H1b:** *Perceived overload is positively related to job performance.*

### 2.3 Time Management and Work–Life Balance

Individuals who excel at time management often overestimate the passage of time, set deadlines for themselves, and consistently monitor time use. These individuals typically get more work done, which increases their efficiency and often lowers their perception of work overload. When working from home, these improvements in efficiently managing work demands through time management often lead to a reduction in work–family conflict (Fenner & Renn, 2010).

Time management is the process of planning and consciously controlling the time spent on certain activities with the aim of increasing efficiency or productivity (Ahmad, Ahmad, Wahab, & Shobri, 2012). This is very important because if one does not develop skills for better time management, one's life can become very stressful and unproductive (Size, 2004). To avoid this, it is crucial that a person creates a good work–life balance in addition to good time management skills (Anwar, Hasnu, & Janjua, 2013). WLB is about people having some degree of control over when, where, and how they work. The results of a good WLB strategy include higher productivity; better recruitment and retention;

lower absenteeism; lower overhead costs; a better customer experience; and a more motivated, satisfied, and equitable workforce (Anwar et al., 2013).

Nowadays, there are more and more interruptions in the workday because people must switch between professional and personal texts, emails, and websites, which often leads to fragmented and short attention spans and loss of process because they cannot focus on their work or nonwork role for longer periods (Kosseck, 2016). Therefore, time management skills need to be used to balance work and leisure (Grissom, Loeb, & Mitani, 2015). Although there are many ways to organize and manage time, the fundamental basis for any time management process is linked to the planning process (Farrell, 2017). In setting and planning individual and organizational priorities, an organization's vision and purpose help employees determine their work and what is most important to accomplish. Plans help to avoid wasted tasks and underproductive time (Fittsimmons, 2008).

In addition to planning, goal setting is important. If one is juggling a variety of tasks and responsibilities, one will have a better sense of what is important if one knows the vision and goals of the organization or one's personal goals so one can focus on priority projects (Farrell, 2017).

Jex & Elacqua (1999) provided evidence of the positive relationship between time management and employee health mediated by other factors such as perceived control and conflict between work and family demands. The relationship between work–family conflict and mental health was strongest among respondents who reported using more time management. Fenner & Renn (2010) found that individuals who practice time management behaviors, specifically setting goals and priorities on a daily basis, can separate their work behaviors from their family behaviors. Those who do not practice this time management often actively switch between family and work activities while at home, resulting in higher levels of reported work–family conflict. Time management practices have been shown to mitigate the effects of work–family conflict.

**H2:** *Time management is positively related to work–life balance.*

## 2.4 Time Management and Job Performance

Green & Skinner (2005) showed that time management training programs can lead to an understanding of the key principles of time management, which leads to improvements in relevant skill areas, which also are encouraged by their line managers. They found that the key factor leading individuals to experience the environment as stressful was related to control over workload and individuals' perceptions of their ability to meet the demands placed on them. Green & Skinner suggested that time management training has a potential role in stress management that positively affects the effectiveness of individuals and organizations. However, Macan (1994) found that time management behaviors are not directly associated with positive outcomes for individuals, but work through perceptions of control over time, which has positive impact on job performance. If a person thinks they have control over time, those outcomes will manifest.

Benefits of effective time management may result in improved job satisfaction and lower stress levels (Chase et al., 2013). Furthermore, Khatib (2014) found a negative correlation between time management and perceived stress. Individuals who have better time management and consequently experience lower levels of stress were associated with better academic performance. However, time management does not always have positive effects on individuals. Macan (1994) found that certain time management behaviors can have a positive effect on tension and job satisfaction, but not on job performance. Macan (1994) concluded that the use of time management behaviors, such as making to-do lists, is not beneficial for everyone. Making a list of tasks that individuals need to complete gives them objective feedback on their progress on projects or tasks that they need to complete. If they do not complete these listed activities, the perception of having little control over time can be a deterrent.

Campbell & Wiernik (2015) stated that job performance must be explained from two perspectives: the behavioral perspective, and the outcome perspective. From the behavioral perspective, job performance refers to what employees do or how their behavior is visible at work. From the outcome perspective, performance refers to the results of em-

ployees' behavior. The behavioral and outcome aspects of performance are interrelated (Campbell et al., 1993). In addition, job performance also can be divided into the dimensions of effectiveness and productivity (Pritchard, 1995). There is a significant difference between productivity and effectiveness. Whereas effectiveness refers to the degree to which something successfully produces a desired result, productivity is explained as the effectiveness of productive efforts (Darvishmotevali & Ali, 2020).

For more than 20 years, stressful working conditions have been shown to be associated with poor mental health in workers (Jex & Elacqua, 1999). This has been shown to affect work performance. However, these effects can be tamed by better time management, because it has a positive impact on stress and consequently on the effectiveness of the individual (Green & Skinner, 2005). Therefore, it is important for every individual, especially managers, to know the benefits of time management behaviors. Chase et al. (2013) divided time management into three different categories: time estimation behaviors, planning behaviors, and monitoring behaviors. Understanding and incorporating certain parts of time management could be beneficial to individuals because it could increase their work performance. Chase et al (2013) stated that time management allows researchers to focus on their work. Time management activities can help individuals eliminate distractions that affect their productivity. After scheduling activities, an individual can monitor which task needs to be completed at a given time and can focus fully on that task, knowing that other work is due at another time (Chase et al., 2013).

**H2b:** *Time management is positively related to job performance.*

## 2.5 Time Management as a Moderator between Work Overload and Work–Life Balance

A high workload often leads to an increase in work hours, which in turn contributes to feelings of overload (Skinner & Pocock, 2008). Frone, Yardley, & Markel (1997) found that work overload was positively correlated with hours worked, and both were positively related to work–life conflict. Skinner & Pocock (2008) confirmed that work overload was the

strongest predictor of work–life conflict. Moreover, work–life conflict was found to increase with higher perceived workload. In general, researchers have found a negative relationship between time management and burnout or work overload, meaning that those who engage in less time management may experience higher levels of burnout than those who manage their time better (Peeters & Rutte, 2005).

A recent study (Daniels, 2017) found that more than 200,000 respondents reported being overworked and having difficulty balancing their personal and professional lives. For these individuals, working more than 39 hours per week seems to make it too difficult to balance their personal and professional lives (Daniels, 2017). Kirch (2008) found that work overload also often leads to work-related stress, which in turn can cause burnout syndrome. Furthermore, according to Taylor, Repetti, & Seeman (1997), employees who feel they have to work too long and too much on too many tasks report more stress, poorer health habits, and more health complaints than employees who do not suffer from work overload. As mentioned previously, Jex & Elacqua (1999) found that the relationship between work–family conflict and health was strongest among respondents who reported using more time management. Specifically, regarding time management as a moderator between work–family conflict and strain, Jex & Elacqua’s results showed that time management behaviors did not moderate the effects on strain. Furthermore, strain was positively associated with overload, implying that time management may have had an influence as a moderator between work–family conflict and overload, although the links are not direct.

However, all dimensions of time management were negatively related to workload, implying that those who engage in more time management are less likely to suffer from work overload and consequently are better able to balance work and life, according to Skinner & Pocock (2008). Fenner & Renn (2010) highlighted the fact that individuals who practice time management are able to separate their work behaviors from their family behaviors. Macan (1994) also found that practicing time management behaviors was associated with lower levels of work–related tension, and thus of overload, and

higher levels of job satisfaction. Moreover, the effects of work overload can be minimized through time management (Macan, 1994). Previous studies and numerous guidebooks suggest that one can use and improve time efficiently and productively by setting short- and long-term goals, keeping time logs, prioritizing tasks, making to-do lists and schedules, while also organizing one’s workspace (Claessens, van Eerde, Rutte, & Roe, 2007; Macan, 1994). The purpose of time management is to increase the nature of activities to be carried out within a limited period, which means that activities are planned wisely and one can limit the effects of overload (Karakose, 2015). Additionally, effective time management provides an individual with the opportunity to devote more time to his/her family and relatives despite being loaded with work, and enjoy life nonetheless (Karakose and Kocabas 2009). Consequently, by minimizing the effects of work overload and improving time management skills, one can establish a better work–life balance (Karatepe, 2013; Aryee, Srinivas, & Tan, 2005; Vogel, 2012; Chawla and Sondhi, 2011).

**H3a:** *Time management moderates the relationship between overload and work life balance. For high levels of time management, the relationship is less negative.*

## **2.6 Time Management as Moderator between Work Overload and Job Performance**

Time management can be helpful in avoiding work overload and possibly improving an individual’s work performance. Karatepe (2013) stated that work overload often leads to ineffective work performance; therefore, limiting work overload would benefit the individual’s job performance. Employees who are overworked in terms of the number of tasks to be completed report more stress, practice poorer health habits, and report more health complaints (Taylor et al., 1997). These causes of overwork lead to employee dissatisfaction at work, which has been shown to reduce an individual’s job performance (Ali & Farooqi, 2014). Brown & Benson (2005) suggested that stress not only causes employees not to perform at their best, but s also can cause high performers in an organization to take shortcuts in their work

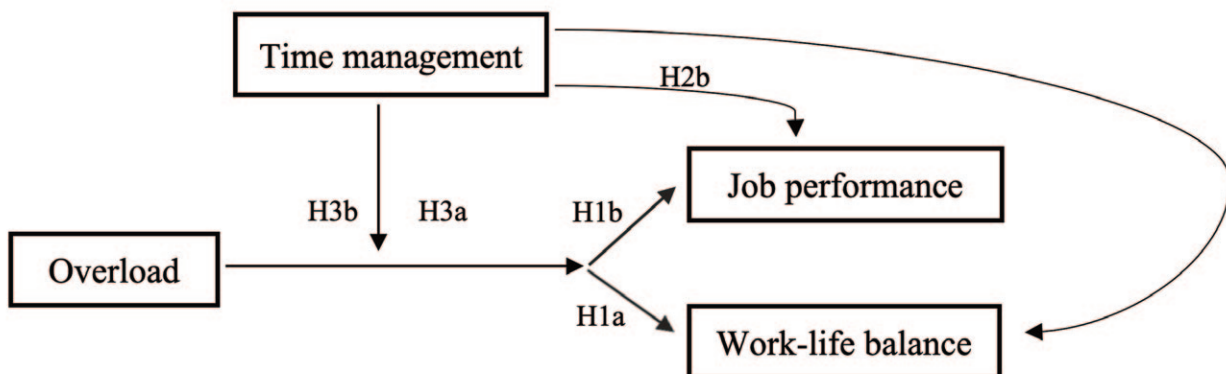
or even be tempted to leave the organization because they feel pressured at work. Daniel (2020) found that when time management is high, individuals are better able to cope with pressure at work and their work performance also increases. The value of time management lies in identifying and managing tasks according to their importance and coordinating them with other resources. Time management keeps things in order, which allows one to be more productive and fulfilled. This positive or negative time management is reflected in the performance of the organization, which is why it is so important for managers (Daniel, 2020).

Jex & Elacqua (1999) found overload to be positively related to strain, and time management behaviors were positively related to feelings of control over time. Moreover, individuals who have a feeling of control over time experience lower levels of strain. Thus, feelings of control over time were negatively related to overload, implying that individuals who engage in more time management behaviors are less likely to be affected by overload (Jex & Elacqua, 1999). In addition, Macan (1994) found that time management behavior operates through perceptions of control over time. If a person believes that he or she has control over time, his or her work performance will increase. Using these two studies, we can conclude that with high time management, the relationship between overload and job performance is less negative, which means that when overload is higher, the use of time management can increase an individual’s job performance, because they have a feeling of control over time.

In addition, Ahmad et al. (2012) found that job performance is affected significantly by time management. They also pointed out that it is crucial for organizations to train their employees in the proper management of their time, because this is an important factor in achieving high employee performance, which then is reflected in organizational performance. Specifically, employees pointed out that time management can be extremely beneficial for them to maintain their job performance when they do not have enough time to complete all their tasks (Ahmad et al., 2012). Ahmad et al. (2012) suggested that by analyzing and prioritizing tasks and making to-do lists, employees can structure and distribute their workload, and consequently improve their performance. Employees also can save time through the use of technology, which also was recommended by Packard (2016), who emphasized the positive effects of the use of various apps to organize everything from work to personal life. Technology in conjunction with scheduled breaks can help an employee clear their mind and fully focus on current scheduled activities (Packard, 2016). Specifically, the use of the Evernote application was suggested, because it proved to be the most efficient (Packard, 2016). However, nowadays there are numerous applications on the market that can help employees improve their time management and performance, such as Trello, Asana, and ClickUp.

**H3b:** *Time management moderates the relationship between overload and job performance. For high levels of time management, the relationship is less negative.*

Figure 1: Research model





The relationships between work overload, work–life balance, time management, job performance, and time management as a moderator between work overload and job performance and between work overload and work–life balance are expressed by the six formulated hypotheses visualized in Figure 1.

### 3 METHODOLOGY

#### 3.1 Sample and collection of data

To test the hypothesized relationships between overload, job performance, work–life balance, and how time management moderates these relationships, we surveyed 127 working professionals. Of these respondents, 41% were students, 33% were full-time employees, and 3% were self-employed individuals. Percentages of individuals who were retired, out of work or looking for work, unable to work, and other were negligible. This study was quantitative in nature, based on questionnaire survey technique. The survey method was used for data collection; a questionnaire was used as an instrument of the survey method, and the questionnaire was distributed to a sample of the population.

#### 3.2 Measurement

Our sampling type was convenience sampling, which is a nonprobability sampling method and includes individuals who are most accessible to the researcher (McCombes, 2019). Participants in convenience sampling are selected based on their availability and willingness to take part in research (Barratt & Shantikumar, 2010).

The survey was distributed through social media sites, emails, direct contact with persons, and direct messages. Our constructs in the survey consisted of workload, work–life balance satisfaction, time management (assessment of time management skills), well-being/stress scale, and job performance. Work mode (before, during, and after COVID-19, and preference for work mode in the future) and demographic-based questions were also assessed. The questionnaire contained a total of 20 questions, including seven demographic questions; four questions about work mode before, during,

and after COVID-19 (physical location, hybrid, or work from home; if it has changed; do respondents like it; and what will they prefer in the future); four scales from another group we worked with; and five scales of our own. The first scale, workload, consisted of nine items or statements to which respondents selected responses ranging from “strongly disagree” to “strongly agree.” The second scale, time management, consisted of 15 items. The third scale, well-being or overload, consisted of six items. The fourth scale, work–life balance satisfaction, consisted of seven items. The fifth scale, job performance, consisted of six items. This was followed by questions about work mode, demographic questions, and work experience.

The survey was open for 26 days and was sent to 421 individuals, from whom 260 questionnaires were incomplete and 34 were partially finished, leaving us with 127 usable questionnaires (30% response rate). These 127 questionnaires were used for the final analysis of the study.

Matrix questions were used for well-being, job performance, time management, work–life balance, and workload. Respondents selected responses ranging from “strongly disagree” to “strongly agree” with the statement that was part of the question on a particular construct. All constructs were measured using 7-point Likert scales ranging from 1 = strongly disagree to 7 = strongly agree. Multiple-choice, open-ended questions were used for work mode and demographic data.

The questionnaire was based on previously validated scales. For workload, we followed questions used by De Bruin & Taylor (2006) (Cronbach’s alpha = 0.137). When creating the work–life balance questionnaire, we used Omar, Mohd, & Ariffin’s (2015) Satisfaction with Work-Life Balance scale (2013) (Cronbach’s alpha = 0.922). For time management, we applied the questionnaire by White, Riley, & Flom (2013) (Cronbach’s alpha = 0.591). For well-being, work overload and for examining the impact on work performance, we used the study by Rodwell, Kienzle, & Shadur (1998) (Cronbach’s alpha = 0.717). The questions on demographics were based roughly on the questionnaire of Omar, Mohd & Ariffin (2015), with adaptations for our research constructs and our target group of respondents.

## 4 RESULTS

Table 1 summarizes the respondents' age, mean, and standard deviation for our constructs. For age, we asked a multiple-choice question with response options of 17 and younger, 18 to 24 years, 25 to 34 years, 35 to 44 years, 45 to 54 years, and 54 or older. The mean was 3.02, which means that the average age of the respondents was between 25 and 34 years old, with a standard deviation of 1.198, which means that the responses were between 18 and 44 years old. The average age of 25–34 years indicates that the respondents on average probably already were working or studying at some point in time, which was consistent with our target group. In response to our question about employment, 41% of respondents answered that they were students and 33% answered that they were full-time employees, which was consistent with our desired sample, because these two groups were the most affected by the change due to COVID-19 in terms of work. This means that their work–life balance was challenged, and that their perceived overload had changed, which may lead to a different work performance. Our study also investigated whether these effects could be tamed through time management.

Table 1 lists the means, standard deviations, and Pearson correlation coefficients for the main variables. Interestingly, the correlation between work–life balance and overload is moderate, negative, and statistically significant. This implies that the

work–life balance of individuals with higher levels of overload worsens. Another interesting finding is that the linear relationship between time management and work–life balance is positive and of moderate to high strength. This means that, on average, the higher the level of time management, the better was the work–life balance. Therefore we can conclude that, on average, time management has a positive impact on our lives.

The mean values for workload show that, on average, respondents are not exposed to excessive workload or that their workload is in line with their expectations. The standard deviation shows that a small number of respondents' answers were far from the global mean, which means that they had similar answers.

Analysis of the results for time management indicated that, on average, respondents agreed that they managed their time well (mean = 4.84), but they disagreed, on average, that they could correctly estimate how much time they need to complete a task (mean = 3.16). However, on average, respondents tended to agree (mean = 5.29) that they made to-do lists, which shows that although respondents felt that they controlled time, their time management was not necessarily effective.

Based on our hypotheses, when we examined overload and well-being, we found that respondents who planned their daily activities (mean = 5.13) or engaged in time management answered, on average,

Table 1: Descriptive statistics and correlations

| No. | Variable          | Mean  | SD    | 1       | 2        | 3       | 4        | 5       | 6 |
|-----|-------------------|-------|-------|---------|----------|---------|----------|---------|---|
| 1   | Age               | 3.02  | 1.198 | 1       |          |         |          |         |   |
| 2   | Workload          | 3.922 | 0.627 | -0.057  | 1        |         |          |         |   |
| 3   | Time management   | 4.588 | 0.605 | -0.119  | -0.014   | 1       |          |         |   |
| 4   | Well-being        | 4.379 | 1.157 | 0.183*  | -0.227** | -0.205* | 1        |         |   |
| 5   | Work–life balance | 4.963 | 1.143 | -0.024  | 0.155    | 0.453** | -0.484** | 1       |   |
| 6   | Job performance   | 5.178 | 0.873 | 0.250** | -0.182*  | 0.406** | 0.005    | 0.247** | 1 |

\* denotes correlation significant at the 0.05 level (2-tailed)

\*\* denotes correlation significant at the 0.01 level (2-tailed)

that they had enough time to do their work properly (mean = 5.13). Interestingly, when asked if most people feel overwhelmed by work at their job, respondents answered that they agreed with this statement (mean = 4.7), but, on average, they tended to disagree that work overwhelmed them (mean = 3.8).

The overall mean scores for work–life balance show that, on average, most respondents were successful in balancing their work and personal lives and had a good work–life balance (mean = 4.96). However, the standard deviation for all work–life balance scores is somewhat high (standard deviation = 1.14), which means that the responses were more scattered around the mean. When asked if respondents were satisfied with their work–life balance, on average they tended to somewhat agree (mean = 5), with 34% of responses rated as agree.

Interestingly, 23% of respondents indicated that they felt that they run out of time before getting important things done, the mean for which was 4.3 (neither agree nor disagree = 4), but they also indicated that they felt they were among the slowest at work (mean = 5.36; 31% agree and 20% strongly agree). This shows that it is not necessarily poor time management that causes them to run out of time to do their work; it also could be the speed of the work that the respondents are doing.

#### 4.1 Hypotheses testing

To test Hypotheses 1a, 1b, 2a, and 2b, we used linear regression. For Hypotheses 3a and 3b, we used the process method with linear regression. Linear regression is used when the value of one variable

is to be predicted based on the value of another variable (Isobe & Feigelson, n.d.). First, we tested the relationship between work overload and work–life balance resulting from Hypothesis 1a. Work–life balance is the dependent variable, and the constant is represented by work overload. The model summary of Hypothesis 1a is presented in Table 2.

The values of  $R$  and  $R^2$  are given. The  $R$  value indicates the simple correlation, which is 0.155 for Hypothesis 1a, which does not indicate a high degree of correlation. The  $R^2$  value indicates how much of the total variation in the WLB variable can be explained by the workload variable; in this case, only 2.4% of the total variation can be explained, which is not very much. Significance indicates how well the regression model predicts the dependent variable. In our case, the statistical significance of the regression performed was not sufficient:  $p = 0.072$ , which is more than 0.05, and means that the regression model did not predict the outcome variable statistically significantly. We found that the empirical results do not support Hypothesis 1a.

Secondly, we tested the hypothesis that lower perceived overload leads to higher job performance. Job performance is the dependent variable, and the constant is represented by work overload. The model summary of Hypothesis 1b is presented in Table 2, with the  $R$  and  $R^2$  values. The  $R$  value was 0.182 and the  $R^2$  value is 0.033. This means that 3.3% of job performance can be explained by work overload, which is not much. We also can determine whether the regression model predicts the dependent variable significantly well. The significance value indicates the statistical significance of the re-

Table 2: Model summary of hypotheses

|     | $R$    | $R^2$  | $p$ -value (significance) | $b$ -value (coefficient) | $\beta$ | Standard error of the estimate |
|-----|--------|--------|---------------------------|--------------------------|---------|--------------------------------|
| H1a | 0.155  | 0.024  | 0.072                     | 0.283                    | 0.155   | 1.13380                        |
| H1b | 0.0182 | 0.033  | 0.037                     | 0.258                    | 0.182   | 0.86175                        |
| H2a | 0.406  | 0.165  | 0.000                     | 0.577                    | 0.406   | 0.80098                        |
| H2b | 0.453  | 0.205  | 0.112                     | 0.849                    | 0.453   | 1.02332                        |
| H3a | 0.1799 | 0.0324 | 0.9747                    | 0.0017                   | —       | 0.3872                         |
| H3b | 0.2695 | 0.0726 | 0.0247                    | -0.1434                  | —       | 0.3597                         |

gression model performed. The  $p$ -value is 0.037, which is less than 0.05 and indicates that the whole regression model does predict the outcome variable statistically significantly. On this basis, we can accept Hypothesis 1b.

The next hypothesis we tested states that better time management has a positive effect on work–life balance. In this case, the dependent variable is work performance and the independent variable is time management. The model summary of Hypothesis 2a is presented in Table 2, which gives the values of  $R$  and  $R^2$ . The  $R$  value, which indicates the simple correlation, is 0.406, which indicates a high degree of correlation. The  $R^2$  value in this case is 0.165, which is higher than that of other models. The  $p$ -value is less than 0.05. The  $p$ -value allows us to support Hypothesis 2a, which means that the regression model as a whole predicts the outcome variable statistically significantly.

Hypothesis 2b states that better time management leads to higher work performance. Table 2 summarizes this model. The dependent variable is WLB, and the independent variable again is time management. The  $R$ -value is 0.453, and the  $R^2$  value is 0.205, which is slightly higher than that of the previous models. To support or reject our hypothesis, the significance Value was determined. The  $p$ -value is 0.112, which is higher than 0.05. The overall regression model did not statistically significantly predict the outcome variable. Consequently, empirical data did not support Hypothesis 2b.

The last two hypotheses we tested involved time management as a moderator of the relationships between the other domains. Hypothesis 3a states that time management moderates the relationship between overload and work–life balance. When the level of time management is high, the relationship is less negative. In this case, the dependent variable is workload, and the independent variables are represented by work–life balance and time management. The summary of the model for this hypothesis is presented in Table 2. The  $R$  value or simple correlation is 0.1799, which is not very high and does not indicate a high degree of correlation. The  $R^2$  value, which indicates how much of the total variation in the workload variable can be explained by the WLB and time management vari-

ables, indicates in this case that only 3.24% of the total variation can be explained, which is significantly sufficient. The  $p$ -value is 0.9747, which is significantly higher than 0.05. Therefore, we cannot accept Hypothesis 3a.

Hypothesis 3b states that time management moderates the relationship between overload and job performance. When time management is high, the relationship is less negative. Again, we used linear regression, with work overload as the dependent variable and work performance and time management as the independent variables. The results are summarized in Table 2. The  $R$ -value is 0.2695, and the  $R^2$  is 0.0726, which is quite high compared to the other models. Most importantly, the  $p$ -value indicates how well the regression model predicts the dependent variable, and in this case, the statistical significance of the regression performed was sufficient, because the  $p$ -value is 0.0247 which is less than 0.05. This means that we can support Hypothesis 3b.

## 5 DISCUSSION AND CONCLUSION

### 5.1 Theoretical Contributions

Time management is becoming increasingly important due to the amount and variety of work to which people are exposed. As a result, people often are subject to overload, which affects their work–life balance and job performance. This issue is particularly important because people’s workspaces and locations have changed during the pandemic. From a theoretical perspective, our study investigated whether and how overwork affects work performance and work–life balance. We tested this on a different sample of individuals who were affected by the pandemic COVID-19.

We found that time management as a moderator can help reduce the negative relationship between work overload and work performance when time management is high. However, we cannot demonstrate this for the relationship between work overload and work–life balance. In this case, the relationship is not less negative even when time management is high. As far as we are aware, these relationships have not been studied before. Consequently, our study provides additional empirical ev-

idence of how focusing on time management can improve job performance even when work overload is present. Unfortunately, the same cannot be said for the relationship between work overload and work–life balance.

Contrary to the findings of Brown & Benson (2005), who showed a positive correlation between workload and job performance, our study found that lower perceived overload leads to higher job performance. This is in line with research by Ladebo & Awotunde (2007), who showed that overload leads to employee exhaustion when it is impossible for them to meet the resource requirements of job demands.

In line with the research of Chadegani et al. (2015), Ali & Farooqi (2014), and Karatepe (2013), all of whom found that work overload leads to poorer employee performance, our study showed that lower overload leads to higher work performance. Thus, we confirmed the findings in the literature. However, we cannot say the same for the relationship between overload and work–life balance. Although the previous studies by Frone et al. (1997) and Skinner & Pocock (2008) indicated a positive correlation between work hours and work–life conflict, our results refute the statement that higher overload leads to poorer work–life balance. This could be due to the change in workplace of the individuals whose work was shifted from office to home.

According to Jex & Elacqua (1999), time management actually leads to better work–life balance and satisfaction, which is consistent with our findings. We can confirm that better time management has a positive effect on work–life balance. In contrast, we cannot claim that time management leads to higher job performance. This is consistent with research by Macan (1994), who found that certain time management behaviors can have positive effects on tension and job satisfaction, but not on job performance.

We found that better time management is not necessarily associated with higher job performance. This is in contrast to Khatib (2014), who found that time management has a positive effect on perceived stress and that individuals with better time management and consequently lower stress also perform better academically.

Our study found that, on average, respondents agreed that they could manage their time well, but disagreed that they could correctly estimate how much time they need to complete a task. They also agreed, on average, that they tended to write to-do lists. All of this shows that although the respondents felt that they had control over time, their time management was not necessarily effective, which is contrary to Macan's (1994) research which showed that positive outcomes occur when a person feels that they have control over time. In our study, this was not the case, because, on average, respondents were confident that they could complete their daily tasks, but they also somewhat agreed that they often ran out of time before they could get important things done and that they did not manage their time well.

## 5.2 Practical Implications

From a practical perspective, we can say that our research has the potential to raise awareness of the importance of time management, job performance, work–life balance, and work overload in both corporate culture and personal life. The boundary between work and personal life slowly is disappearing, which has become one of the biggest problems today. In particular, during the COVID-19 pandemic, many people reported that they had difficulty juggling work and personal life. Our study found that time management has a positive effect on the relationship between overload and job performance, suggesting that organizations would benefit from time management training for their employees. Consequently, these findings can be very useful for managers if they want to increase the efficiency and job performance of their employees. It is of great importance for them to know that placing a heavy workload on their employees will not lead to the desired results. In contrast, if they impose only as much work on their employees as they can handle, the results are likely to be better than expected. One of the main aspects of this study is the concept of time management, which, if used properly, can be very useful for managers. As mentioned previously, by developing their employees' time management skills, managers can expect to have a positive impact on their employees' work–

life balance, which can benefit both the company and the employees themselves. With a better work–life balance, employees can focus fully on their work and give 100% because they are less preoccupied with non-work-related concerns. Time management is useful not only when it comes to work–life balance; as mentioned previously, it also can serve as a mediator between overload and job performance. Thus, when managers provide time management training to their employees, it can have a positive impact on the relationship between overload and job performance and make the relationship less negative, which ultimately can lead to better work outcomes and higher employee satisfaction.

### 5.3 Limitations and Future Research

This research was conducted with 127 respondents, which is a slightly smaller sample size than we expected. This could be due to the lack of time. We merged the survey with another group with similar topics, which resulted in a larger questionnaire and longer survey completion time. This could be why many respondents did not complete the survey. Furthermore, all the main variables were measured based on a single survey, which possibly could lead to bias in the common methodology.

For future research, we suggest conducting the questionnaire with a larger sample. We also recommend conducting some interviews with different selected respondents, e.g., full-time employees, students, self-employed people, managers, etc. This not only would provide a larger number of responses on which to base the analysis, but also would show whether the survey results are credible.

Our study was limited in time and resources; therefore, we did not examine the long-term effects of COVID-19 on perceived work overload and work–life balance. Therefore, for future research, it would be interesting to compare the perceived work overload and work–life balance of individuals who work in an office with those of individuals who work from home after the pandemic. According to Telser (2021), working from home could be a problem because the boundaries between work and leisure could become blurred. When people live and work in the same space, their home and work could

merge, leading to higher perceived work overload and consequently to a poorer work–life balance (Telser, 2021). In this context, future research could conduct a longitudinal study that would show the long-term effects of changes in the work environment on people.

For some people, working from home is better than working in an office; for others, it is the opposite. In a future study, we will investigate whether working from home has a positive or negative effect on work performance when it is associated with a higher workload. It could be that people who have a lighter workload to manage at home start to become preoccupied with their personal tasks, which can make them feel overworked and reduce their job performance. However, if they have more work to do, this could lead to better job performance because they do not have time for personal tasks during working hours. This would be contrary to the findings of Ladebo & Awotunde (2007), who showed that increased workload leads to employee exhaustion, which in turn leads to lower job performance.

### 5.4 Conclusion

In today's world, better time management is becoming increasingly important as demands increase in both professional and personal life, also known as work–life balance. Work–life balance often is affected by work overload. Especially in a corporate culture, many employees are overworked, which can lead to both poorer work–life balance and poorer job performance. It is important that companies figure out how to help their employees improve their time management skills, because this can increase the success of the company and the health of employees as they learn to better balance their work and personal lives. Our study confirms that companies can help their employees achieve a better work–life balance and increase their job performance through better time management. It also is important for managers to know that our research shows that business results are likely to be better when employees are less overworked. We also showed that advanced time management moderates the relationship between overload and work performance, making the relationship be-

tween the two less negative. The results are important for organizations, and especially for managers. If they provide sufficient time management training, they can increase employee satisfaction as well as work efficiency and company results. The results also can be very helpful for employees, who can learn that higher work pressure or overload usually does not lead to higher work performance. Employees also can understand how important mastering time management is to their career and performance, as well as to their health and family relationships.

One of the main objectives of this study was to analyze time management as a moderator between other domains in which, to our knowledge, there is a gap in the literature. Our research provided new insights into time management, which is becoming increasingly important in daily life. Given the fast pace of everyday life, it is important for both individuals and organizations to pay more attention to time management. As this study proved, employees can improve their work performance if they pay more attention to their time management skills, and this is extremely important for companies.

### EXTENDED SUMMARY/IZVLEČEK

Zahteve v poklicnem in zasebnem življenju se povečujejo, zato postajata delovna preobremenitev in upravljanje časa, v povezavi z ravnovesjem med delom in družino, vse pomembnejša. Oba imata prav tako lahko resne posledice na individualno delovno uspešnost, zato je ta študija proučila, kako uspešno upravljanje časa blaži učinek delovne preobremenitve na delovno uspešnost, in razmerje med delovno preobremenitvijo ter ravnovesjem med poklicnim in zasebnim življenjem. Rezultati kažejo, da delovna preobremenitev negativno vpliva tako na uspešnost pri delu kot tudi na ravnovesje med poklicnim in zasebnim življenjem. Ugotovljeno je bilo, da uspešno upravljanje časa ugodno vpliva na temeljno razmerje in ga naredi manj negativno. Te ugotovitve kažejo na pomembnost tega, da posamezniki in organizacije več pozornosti namenijo upravljanju časa, saj le-ta lahko izboljša delovno uspešnost in ravnovesje med poklicnim in zasebnim življenjem.

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