DOI: 10.18290/pepsi-2025-0020

Paweł Kot*

Technostressors and Work-Life Fit: The Mediating Role of Technostress Inhibitors and Job Satisfaction

ABSTRACT

Using information and communication technologies has become one of the main sources of stress in the contemporary workplace. Technostressors affect not only employees' functioning within the organization but can also have impact on their private life. This study analyses the impact of technostressors on work-life fit and examines the role of technostress inhibitors and job satisfaction as mediating factors in this relationship. A total of 533 employees (50.1% women), aged 18–65 years (M = 39.74, SD = 14.25), who used ICT daily, were surveyed. In the current study, data were collected using the Technostress Creators and Technostress Inhibitors Scale, the Work–Family Fit Questionnaire, and the Job Satisfaction Scale. The obtained results have revealed a positive relationship of technostress with work-life facilitation and work-life conflict. The mediating effect of technostress inhibitors on the relationship of technostress with work-life facilitation and work-life conflict has not been confirmed. Notably, our analyses show that inhibitors are effective in reducing work–life conflict and enhancing work–life facilitation only when they also increase job satisfaction.

* Correspondence regarding this paper should be sent to Paweł Kot (ORCID: 0000-0003-1471-1228), Institute of Psychology, John Paul II Catholic University of Lublin, e-mail: pawel.kot@kul.pl.

This highlights the important role of job satisfaction as a mediator in improving work–life fit.

KEYWORDS: work-life fit; work-life facilitation; work-life conflict; technostress; technostress inhibitors; job satisfaction

INTRODUCTION

The increasing number of employees are reporting difficulties keeping the work-life balance (Adah et al., 2025). According to Eurofound data, approximately 30% of employees in EU countries experience problems with the so-called work-life balance (Eurofound, 2025). In Poland, this phenomenon is even more widespread, since as many as 58% of employees have reported that professional duties interfere with their private lives on a regular basis (Sienkiewicz et al., 2023). Despite the growing scale of the problem, this topic still tends to be marginalized in the Polish public debate. This can be manifested by the fact that Poland was one of the last European Union member states to implement the EU work-life balance directive, aimed to help employees in their daily professional and family functioning (Godlewska-Bujok, 2023). In our study, we focus on a less widely recognized yet closely related phenomenon—life–work fit. This concept emphasizes the dynamic and individualized alignment between professional and personal domains, rather than the static equilibrium implied by the traditional work–life balance perspective (Grzywacz & Bass, 2003).

The introduction of information and communication technologies (ICT) in the workplace was meant to be an organisational element that would relieve employees of many tedious tasks (Böckerman et al., 2018). ICT are a set of various technological tools and resources used to transmit, store, create, share, or exchange information (UNESCO, 2022). These technologies include, among others, computers and software (e.g., word processors, databases), the Internet and ICT networks (websites, e-mail), mobile devices,

communication technologies and AI-based work-supporting tools (e.g., Microsoft Copilot, ChatGPT, Google Gemini, Grammarly, Notion AI), broadcast media (radio, podcasts, streaming), and mass storage systems, including cloud solutions (Babashahi et al., 2024; Santos et al., 2023). Indeed, employees and organisations have benefited greatly from their gradual introduction with higher productivity and efficiency, reduced time of performing tasks, better access to information, quicker response and availability, improved team work, reduced operating costs, and better data management (Ayyagari et al., 2011; Bolińska et al., 2023; Marecki, 2021; Obasi & Benson, 2025; Santos et al., 2023). However, it has been observed that the use of ICT can also have negative consequences. These include, among others, increased technostress, blurred boundaries between work and private life, information overload, addiction to instant communication and the need to be "always online" (Marecki, 2021; Obasi & Benson, 2025; Wontorczyk & Rożnowski, 2022).

In particular, the invasiveness of technology into the home environment (e.g., mobile phones, the Internet), which allows organisations to contact their employees at any time, can put pressure on employees, forcing them to be constantly available for work, even after working hours (Ma et al., 2021; Tarafdar et al., 2019). This can lead to violating boundaries between professional and non-professional roles (Lachowska et al., 2018; Santos et al., 2023). Work-life fit is an important category describing how individuals combine their professional and personal roles and how they shape the level of satisfaction resulting from their fulfilment (Casper et al., 2018; Grzywacz & Bass, 2003; Lachowska et al., 2018; Santos et al., 2023). Achieving this fit is an important goal and a desirable state from the perspective of both employees and organisations (Anwar et al., 2013; Bottaro et al., 2024; Casper et al., 2018; Marecki, 2023). However, in the era of digitalization and widespread use of ICT, keeping this fit is becoming more and more difficult (Bottaro et al., 2024; Ma et al., 2021). These effects

are not only limited to the organisational dimension, including decreased productivity or lesser employee involvement, increased counter-productive behaviours or increased staff turnover (Casper et al., 2018; Kot, 2022b; Marecki, 2023; Tarafdar et al., 2011), but they also affect the personal dimension, e.g. by decreasing job satisfaction and shifting burdens to other areas of life (Bencsik & Juhasz, 2023; Ma et al., 2021; Saim et al., 2021; Santos et al., 2023). Hence, organisations and employees alike are striving to find resources that help reduce the negative impact of these demands (Bakker & Demerouti, 2017).

Thus, the aim of this study is to identify the impact of technostress on the work-life fit. In particular, the study focuses on the role of resources protecting individuals from the negative effects of technostressors. Both individual resources (such as job satisfaction) and organisational resources (technostress inhibitors) are taken into account, which can play a mediating role in the relationship of technostress with work-life facilitation and work-life conflict. The present study seeks to address a gap in the national literature. In Poland, research on technostress remains scarce, and the topic of work–life fit in a digital context is still in an early stage of development. The results can provide guidance for organisations striving to create an environment facilitating employee satisfaction in the contemporary, technology-filled work environment reality.

Work-life fit

The contemporary world of work, dominated by a fast-paced lifestyle and growing professional demands, including constant development of digital technologies, presents employees with numerous challenges related to keeping the work-life fit (Adah et al., 2025; Bottaro et al., 2024; Marecki, 2021; Obasi & Benson, 2025; Santos et al., 2023). In the era of remote work, flexible forms of employment, and constant on-line access, the boundaries between professional and personal spheres are becoming blurred, increas-

ing the risk of overload, stress, and burnout (Chong et al., 2022; Ma et al., 2021; Wang et al., 2023). This fit is not only a matter of mental comfort, but also a significant factor influencing employees' health, productivity, and long-term engagement (Allen et al., 2020; Casper et al., 2018). Therefore, the concern for work-life fit is particularly important from both an individual and organisational perspective (Godlewska-Bujok, 2023; Greenhaus & Allen, 2011; Grzywacz & Bass, 2003; Haar et al., 2014; Lachowska et al., 2018; Sienkiewicz et al., 2023; Wang et al., 2023).

In the traditional sense work-life balance is the state of equilibrium where an individual successfully manages the demands of their professional life and personal life (including family, social activities, hobbies, leisure, education), achieving a sense of harmony, satisfaction, and functionality in both spheres (Greenhaus & Allen, 2011). Maintaining a balance between these spheres occurs when work does not undermine one's private life, and one's private life does not affect performance at work (Godlewska-Bujok, 2023). Balance between work and non-work activities occurs when the former does not limit the latter (Bondanini et al., 2020; Haar et al., 2014).

An evolution of the traditional approach to the work–life balance concept was proposed by Grzywacz (Grzywacz & Bass, 2003). His notion of work-life fit moves away from the pursuit of a static equilibrium toward the idea of a flexible alignment between the demands and resources associated with work and non-work life. In this framework, the essence of fit lies in the extent to which different life domains are mutually compatible and enable an individual to effectively fulfill their values, goals, and responsibilities. This implies that there is no single universal model of balance that allows for a clear separation between the two spheres (Grzywacz & Carlson, 2007). What matters instead is the subjective sense of adequacy in the relationship between these domains, rather than their objective equality.

Work-life fit is dynamic in nature, as it changes depending on the stage of life and the family, occupational, or cultural context. Grzywacz and colleagues (2008) emphasize that work and private life are not separate domains but systems in constant interaction. Their interrelations can be either positive (mutual enrichment of roles) or negative (role conflict), reflecting the complexity of contemporary employees' experiences. The potential to achieve fit depends on organizational, cultural, and social conditions – such as job flexibility, supervisory support, family-friendly policies, or gender roles within a given society (Grzywacz & Carlson, 2007). Work-life fit does not mean a complete absence of difficulties in managing the tasks and challenges required in each of these spheres, but an individual's ability to effectively manage their work in a way consistent with their values, needs and life goals (Bondanini et al., 2020; Grzywacz et al., 2008; Haar et al., 2014). This allows people to combine their activities in various aspects of life and achieve a subjective sense of satisfaction with the integration or separation of life roles (Allen et al., 2020). Researchers such as Greenhaus and Powell (2006), Grzywacz & Bass (2003), Lachowska et al. (2018), or Lavigne and Grawitch (2023) speak of work-life facilitation (WLF), where these two spheres can support and reinforce each other. Skills, knowledge, and experiences gained in one of these areas can bring benefits to the other, leading to a more satisfying and productive life as a whole.

However, sometimes maintaining a positive fit is impossible. In a situation where the demands of professional and personal roles are mutually incompatible, making participation in one role difficult or fulfilling the other impossible (Greenhaus & Beutell, 1985; Grzywacz & Bass, 2003), we can speak of work-life conflict (WLC). This conflict can be manifested in various ways, including time-based conflict (when there is insufficient time to fulfil responsibilities in one of the roles), strain-based conflict (when stress from one sphere impacts the other) and behaviour-based conflict (when the norms and behaviours required in one role are

incompatible with the expectations in the other) (Greenhaus & Allen, 2011; Lavigne & Grawitch, 2023). Work-life conflict leads to negative effects, such as lower job satisfaction, worse mental well-being, burnout, and family conflicts (Allen et al., 2020; Frone, 2018; Grzywacz & Bass, 2003).

The concept of work-life fit similarly to the Job Demands–Resources Theory, is based on the skilful management of resources (Bakker & Demerouti, 2017). Limited resources, such as time and energy, invested in one domain will be unavailable in the other (Bottaro et al., 2024; Ma et al., 2021). Therefore, work-life fit depends on the assessment of the demands and resources in the work environment (Demerouti et al., 2001). An increasing workload or reduced social support can undermine an individual's sense of fit, which may result in negative consequences in their personal or professional lives (Bakker & Oerlemans, 2019; Grzywacz & Bass, 2003).

Technostress

As already mentioned, in the era of dynamic development of ICT (Böckerman et al., 2018; Santos et al., 2023), more and more attention is being given to the notion of technostress, which constitutes a significant problem both in the work environment and in everyday life (Bencsik & Juhasz, 2023; Casper et al., 2018; García-Salirrosas et al., 2023; Kot, 2022a; Marecki, 2023; Saim et al., 2021; Tarafdar et al., 2011).

Although it is only in recent years that we have observed a particularly intense interference of ICT in various spheres of our lives (Santos et al., 2023), the concept of technostress is not entirely new as one might expect. The first definition was introduced by Brod in 1984 who described technostress as a condition resulting from the inability of an individual or organisation to adapt to the introduction and operation of new technologies. Since then, this definition has been developed and clarified. Tarafdar et al. (2011) proposed a more detailed approach, defining technostress as the

stress experienced by employees as a result of multi-tasking, constant connectivity, information overload, frequent system updates and the resulting uncertainty, the need for continuous learning and the resulting uncertainty related to work, and technical problems related to the use of ICT by an organisation.

Based on that, they identified five key stressors, referred to as *technostress creators* (Tarafdar et al., 2007). The first one is *techno-overload*, which occurs when ICT forces employees to work faster and longer. The next one is *techno-invasion*, resulting from the expectation to be constantly accessible for work-related matters and blurring the boundaries of free time by means of technologies. The third factor is *techno-complexity*, referring to the difficulties connected with the need to learn and operate more and more complex systems and digital tools. Number four is *techno-uncertainty*, that is the need to constantly adapt to dynamic changes and updates within the technologies used. The last one is *techno-insecurity*, characterised by the fear of losing one's job or professional status due to the automation and digitization of processes. These technostressors constitute significant adaptive challenges in modern work environments.

As Ragu-Nathan et al. (2008) note, in the conditions of intensive development of information technologies, employees are forced to make continuous efforts in order to maintain adequate technological skills and adapt to the dynamically changing work environment. Experiencing chronic technostress may lead to serious consequences for both employees and organisations (Ayyagari et al., 2011; Bencsik & Juhasz, 2023; Kot, 2022b; Ragu-Nathan et al., 2008; Tarafdar et al., 2007). Employees experience an increase in mental health problems (such as burnout and anxiety), physical health problems (e.g., chronic fatigue, headaches, neck pain, migraines, hypertension), and emotional-cognitive problems (e.g., irritability, frustration, job satisfaction). From the organisational perspective, these consequences include, among others, a higher number of accidents at work, low level of involvement,

increased number of absences, decreased productivity and increasing employee turnover (Hang et al., 2022; Kot, 2022b; Kumar, 2024; Tarafdar et al., 2011).

The literature dealing with technostress (Hang et al., 2022; Kot, 2022b; Ragu-Nathan et al., 2008; Tarafdar et al., 2007; Tarafdar et al., 2011) is paying increasing attention to identifying the so-called technostress inhibitors, which means factors that limit the negative impact of information technologies on employees' mental well-being and productivity. Their identification and implementation are crucial not only from the perspective of an individual but also the entire organisation. Tarafdar et al. (2011) have pointed out that these elements help technology users better cope with its demands, reducing the level of stress connected with its use. Basic organisational support has been identified as a key technostress inhibitor. It includes literacy facilitation (developing employees' ICT knowledge and skills), technical support provision (ensuring timely assistance with technical issues), and involvement facilitation (engaging employees in technology implementation and communication about organisational changes).

Implementing these inhibitors may significantly contribute to improving employee satisfaction and increasing organisational effectiveness by minimising the negative consequences of technostress (Hang et al., 2022; Nisafani et al., 2020). Modern organisations that invest in the development of digital competencies and systemic support in the area of ICT demonstrate greater resilience to the challenges related to the dynamic technological progress (Böckerman et al., 2018).

Using the assumptions of the Job Demands–Resources Theory (JD-R) as a universal model explaining employee functioning in the work environment (Bakker & Demerouti, 2017), the relationships between technostress, life-work fit, and job satisfaction can be related to it. According to this theory, each job position can be described in terms of two basic components: demands and resources (Demerouti et al., 2001). Technostressors can be included

among job demands, as they have become a characteristic element required in numerous workplaces in the contemporary work environment (Kumar, 2024). Thus, technostressors can be interpreted as a specific form of job demands, the presence of which is linked with numerous psychological and organisational consequences (Ma et al., 2021; Tarafdar et al., 2019). Job resources, in turn, are elements of the work environment and personal resources that help mitigate the negative impact of job demands, enabling employees to achieve their career goals, reducing demands, and supporting their personal and professional development (Bakker & Demerouti, 2017). In relation to this study, resources such as technostress inhibitors offered by the organisation can limit the negative effects of job demands, such as technostress, on the work-life fit. A possible personal resource that can also constitute such protection is a positive work perception, that is job satisfaction.

Job satisfaction

Job satisfaction is a key issue in occupational and organisational psychology, serving not only as an indicator of the quality of an individual's professional life but also as a predictor of their functioning outside of the organisational structures (Judge et al., 2017). Traditionally, this concept is usually defined as a positive emotional state resulting from a subjective assessment of work and its aspects (Locke, 1976). It refers to how much employees enjoy their work, which is a consequence of their professional experiences and the subjective assessment of the work's compatibility with their expectations, values, and needs, reflected in factors such as remuneration, management style, co-workers, working conditions or development opportunities (Spector, 1997).

Contemporary concepts emphasize not only the emotional relationship to work but also its importance for mental well-being, the sense of meaning, and professional identity (Lysova et al., 2019). It is increasingly emphasized that job satisfaction is not limited to the assessment of working and employment conditions,

but also depends on the ability to fulfil personal values and internal psychological needs, such as autonomy, competences or social relationships (Deci & Ryan, 2000; Lo Presti et al., 2025). In the context of organisational changes, digitalization, and the growing importance of remote work, attention is drawn to the role of flexibility, the sense of having influence and the ability to individually shape one's career path (Clark, 2020). Therefore, job satisfaction is not only an assessment of employment conditions but also a reflection on the extent to which work aligns with one's personal values, enables development, and promotes overall well-being, alongside aspects such as the sense of meaning and work-life facilitation (Deng & Gao, 2017; Ma et al., 2021; Warr, 2007).

High level of job satisfaction is connected with positive consequences for both the individual and the organisation. Literature shows such effects as higher organisational commitment (Lysova et al., 2019), better individual and team performance (Judge et al., 2017), lower risk of burnout (Wontorczyk & Rożnowski, 2022), greater innovation and proactivity (Bowling et al., 2010) and a lower intention to leave work (Turel & Gaudioso, 2018a). In turn, job dissatisfaction – understood as chronic dissatisfaction, sense of frustration, non-fulfilment, or being unappreciated—can lead to negative consequences for both the individual and the organisation (Judge et al., 2017; Spector, 1997). Studies stress its relationship with, e.g., increased level of occupational stress and work-life conflict (García-Salirrosas et al., 2023). Studies indicate that a high level of technostress is linked with reduced job satisfaction, emotional exhaustion, and lower engagement (Kot, 2022b; Salanova et al., 2013; Turel & Gaudioso, 2018b), decreased motivation and productivity (Bowling et al., 2010), increased absenteeism and employee turnover (García-Salirrosas et al., 2023), and the risk of depression and psychosomatic symptoms (Faragher et al., 2005). The literature indicates that a high level of job satisfaction can buffer the negative effects of occupational stressors (Bakker & Demerouti, 2017),

including technostress – a phenomenon resulting from the information and communication technology overload (Salanova et al., 2013; Tarafdar et al., 2007; Turel & Gaudioso, 2018a).

Present study

The contemporary work environment, strongly dominated by digital technologies, poses new challenges for employees' functioning both within and outside organisational settings (Ayyagari et al., 2011; Bolińska et al., 2023; Marecki, 2021; Obasi & Benson, 2025; Santos et al., 2023). The undeniable expansion of new technologies is evident in the performance of work in most contemporary workplaces, but it is also an integral element of fulfilling other life roles (Bondanini et al., 2020). Despite their obvious benefits in facilitating the performance of professional duties, the constant presence of new technologies in the workplace poses additional demands on employees (Demerouti et al., 2001), which can lead to experiencing technostress. The presence of stress caused by excessive use of ICT can affect other life roles (Bencsik & Juhasz, 2023; Santos et al., 2023), which in turn can lead to a number of negative consequences for both employees and the entire organisation (Lachowska et al., 2018). Long-term exposure to stressful work conditions is connected with mental problems, health disorders, and negative emotional and cognitive reactions (Faragher et al., 2005; Ma et al., 2021; Salanova et al., 2013; Tarafdar et al., 2019; Turel & Gaudioso, 2018b). Experiencing such negative aspects of technostress is most often not limited only to the work environment but can escalate to other life roles (Saim et al., 2021; Saleem & Malik, 2023). In this context, technostressors, which are a specific form of job demands related to the use of information technologies, can significantly violate the work-life facilitation. Therefore, following Hypothesis 1, it can be assumed that: Technostress has a negative relationship with work-life facilitation.

Contemporary approaches promote the integration of work and personal life, maintaining balance between the two, and creating

work environments that facilitate meaningfulness, flexibility, and sense of community (Ma et al., 2021). Unfortunately, the excessive presence of technostressors and the use of new technologies to require employees to work from home do not lead to a balance between various roles (Bencsik & Juhasz, 2023; Demerouti et al., 2001) but on the contrary, may hinder consistent performance of these roles. That being so, Hypothesis 2 assumes that: Technostress has a positive relationship with work-life conflict.

Most organisations are aware of the risk of technostress among their employees who use new technologies on a daily basis and therefore they strive to mitigate the severity of technostressors whenever possible on the one hand, and to ensure the presence of technostress inhibitors on the other (Nisafani et al., 2020; Ragu-Nathan et al., 2008). Technostress inhibitors can mitigate the negative impact of technology on employees and performing not only work (Kot, 2022; Obasi & Benson, 2025) but also activities in other life roles (Salanova et al., 2013; Santos et al., 2023). Stress protective factors may play a mediating role (partially or completely) in the relationship between technostress and better work-life facilitation (Nisafani et al., 2020; Ward & Harunavamwe, 2025). Therefore, it can be assumed, following Hypothesis 3, that: Technostress inhibitors mediate the negative relationship between technostress and work–life facilitation.

Similarly, using good practices by organisations, such as the ability to independently manage work technologies, continuous improvement of digital skills, organisational and social support in implementing new technologies, and developing skills to cope with technostress (Maier et al., 2015; Nisafani et al., 2020; Pirkkalainen et al., 2019) will constitute a significant factor mitigating the escalation of difficulties at work into other life roles. Research by Harunavamwe and Ward (2022) indicates that the presence of technostress inhibitors can mitigate some of the effects of technostress through good organizational practices and technical support, which reduces the negative impact of technostress on

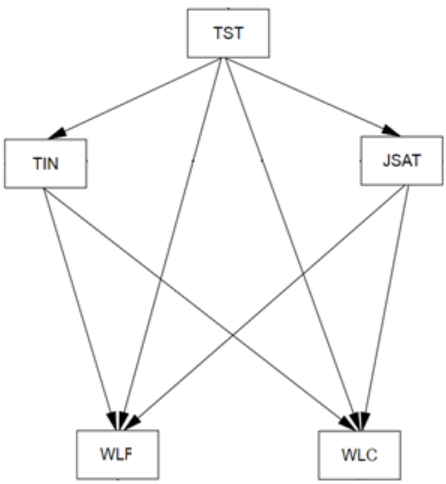
work-family conflict. Therefore, in line with Hypothesis 4, it can be assumed that: Technostress inhibitors mediate the positive relationship between technostress and work–life conflict.

Employees who have organisational support and personal resources are able to adapt more effectively to digital environments (Bakker & Demerouti, 2017), which helps maintain job satisfaction despite intense exposure to new technologies. Previous studies show that a high level of technostress is linked with reduced job satisfaction, emotional exhaustion and lower engagement (Salanova et al., 2013; Turel & Gaudioso, 2018a). According to the Job Demands and Resources (JD-R) model, personal resources—such as job satisfaction—can protect employees from burnout while supporting their engagement and well-being (Demerouti et al., 2001). Employees who are satisfied with their jobs have greater mental and emotional resources, allowing them to more effectively cope with the pressure caused by intensive use of technology at work (Bakker & Demerouti, 2017). This can manifest itself in better management of the boundaries between work and private life, higher levels of self-regulation, and greater resistance to disruptions caused by technostressors (Ma et al., 2021; Turel & Gaudioso, 2018a). Technostress can negatively impact well-being at work by reducing satisfaction, resulting in lower engagement and a lack of positive energy to be channeled into personal life. As a result, the ability to derive benefits from work to support personal life is limited. Job satisfaction, as a positive emotional state, smooths this transition (Deng & Gao, 2017; Grzywacz & Carlson, 2007; Ma et al., 2021). Thus, Hypothesis 5 assumes that: Job satisfaction mediates the negative relationship between technostress and work–life facilitation.

The classic job characteristics model by Hackman and Oldham (1976) indicates the importance of job design for job satisfaction. The more autonomous, meaningful, and feedback-providing work is, the greater the chance of high employee satisfaction. Because technostressors are job demands (Demerouti et al., 2001), they

trigger a process of resource depletion not only in professional roles but also in other roles, while the provision of such organisational and personal resources mitigates this process (Saleem & Malik, 2023; Turel & Gaudioso, 2018b). Therefore, if an organisation provides adequate support in coping with the challenges posed by new technologies at work, and if additionally the level of support is perceived as satisfactory by employees (Nisafani et al., 2020, Obasi & Benson, 2025). Technostress reduces satisfaction, which leads to a decrease in engagement and sense of control, which in turn intensifies negative feelings associated with role conflict (Ayyagari et al., 2011; Grzywacz et al., 2008; Kot, 2022b). It can be assumed that, in line with Hypothesis 6: Job satisfaction mediates the positive relationship between technostress and work-life conflict. A theoretical model illustrating the expected relationships among the variables in Figure 1.

Figure 1. Theoretical model illustrating the relationships between technostress, work–life facilitation, work–life conflict, technostress inhibitors, and job satisfaction.



Aberrations: Work-life facilitation – WLF, Work-life conflict – WLC; Technostress – TST; Technostress inhibitors – TIN; Job satisfaction – JSAT

METHODS

Participants

The sample consisted of 533 participants, with a uniform gender distribution [$\chi^2(1, N = 533) = 0.002$, $p = .965$] (women: n = 267; 50.1%). The age of the respondents ranged from 18 to 65 years, with a mean age of M = 39.74 years (SD = 14.25). This age range corresponds to the legislated labor force participation range in Poland. The respondents were economically active individuals who regularly used technology in their daily work (e.g., computers, the Internet, mobile phones). The average length of work experience with ICT in the study group was 16.72 years (SD = 12.11). Participants represented a variety of residential settings, including villages (n = 186; 34.9%), small and medium-sized towns (n = 222; 41.7%), and large cities (n = 125; 23.5%). Previous analyses did not reveal statistically significant differences in the severity of technostress by age or work experience in the study group (Kot, 2022a). Therefore, all analyses were conducted on the full sample without subgroup stratification.

Measures

The needed data was collected by means of 3 questionnaires and a metric to collect demographic data such as age, gender, work experience with ICT. The Technostress Creators and Technostress Inhibitors Scale (Tarafdar et al., 2007) in its Polish version developed by Kot (2022a) was used to measure technostress and technostress inhibitors. The questionnaire consists of 36 statements, 23 of which refer to technostress creators and 13 to technostress inhibitors. Technostress Creators part includes statements concerning situations where, for example, technology forces the user to work faster and more intensely, disrupts work-life balance, brings constant changes and updates, and creates a sense of anxiety that new technologies may threaten the user's professional position. An example statement is: "This technology

forces me to work to very tight schedules." The Technostress Inhibitors part includes statements describing organisational mechanisms that mitigate the negative effects of technology use. These mechanisms include facilitating the development of digital skills, providing technical support, and ensuring access to assistance in case of technology-related problems. An example statement is: "Our organisation ensures good relations between the IT department and technology users." Both scales are further divided into more detailed sub-scales, but for the purposes of this study, only overall scores were calculated. The answers were provided on a 5-point rating scale ranging from 0 = not applicable through 1 = strongly disagree to 5 = strongly agree. Cronbach's alpha for the Technostress Creators scale in this study was .83, and for the Technostress Inhibitors scale it was .76, which proves high reliability.

The intensity of work–life facilitation and work–life conflict was assessed using the Work–Family Fit Questionnaire (Grzywacz & Bass, 2003; Wayne et al., 2004) in the Polish adaptation developed by Lachowska (2008). This tool is based on an approach that integrates both cognitive and emotional aspects of work-life fit. The authors assume that work-life fit is a state where an employee successfully manages the demands of both roles while experiencing a sense of meaning, satisfaction, and harmony. The questionnaire consists of 16 statements. This study used scores from two general sub-scales measuring Work-life facilitation (WLF) and Work-life conflict (WLC). Eight statements refer to Work-life facilitation, where respondents evaluate the extent to which a relative independence between these roles is maintained, the extent to which work facilitates better functioning in family life, and the extent to which family life helps them better perform their professional duties. An example statement is: "What you do at work makes you a more interesting and attractive person at home." The next 8 statements concern Work-family conflict, where respondents evaluate the extent to which work interferes

with functioning at home and how their family life interferes with their professional success. An example statement is: "Your professional work limits the energy you can devote to activities at home." Respondents provide their answers using a scale from 1 (never) to 5 (never), and then the scores are summed up. Cronbach's alpha for the Work-life facilitation scale in this study was .75, and for the Work-life conflict scale .85, which proves high reliability.

The Job Satisfaction Survey (JSS) by Zalewska (2003) was used to measure overall job satisfaction. This tool was developed based on Diener et al.'s (1985) Satisfaction with Life Scale and is used to assess the cognitive aspect of job satisfaction as a whole. The scale consists of five statements, ranked by respondents using a 7-point Likert scale, where 1 means "strongly disagree" and 7 "strongly agree." An example statement is: "In many aspects, my job is close to perfect." In this study the scale demonstrated good internal reliability, achieving a Cronbach's alpha of .72.

Procedure

Data for the study was collected on-line. Employees of organisations whose job responsibilities require the use of ICT were invited to participate. Employers were first contacted and asked to distribute an invitation to participate in the study through their internal organisational communication channels. Interested persons were given access to the electronic version of the questionnaire via a link included in the invitation. This ensured that all participants frequently used information technologies (IT) in their work.

Ethical considerations

The study was conducted for scientific purposes and received approval from the Commission for the Ethics in Scientific Research of the Institute of Psychology at the John Paul II Catholic University of Lublin. All procedures were conducted observing

applicable ethical standards. Although company employees were surveyed with the consent of their supervisors, their participation was voluntary, and respondents' answers were anonymous and confidential. In accordance with the principles of the Declaration of Helsinki, special attention was given to maintaining the highest standards at every stage of the research process – from design, through data collection, to analysis and interpretation.

Data analysis

Basic statistical analyses used to calculate descriptive statistics for the collected data have been conducted using the IBM SPSS Statistics (v. 29). Descriptive analyses included measures of central tendency (e.g. mean, median) and variability (e.g. standard deviation, range), as well as assessments of data distribution and reliability of the applied scales (Cronbach's α). To verify the research hypotheses, Pearson's r correlation analyses were performed to examine the relationships between variables. For the purposes of verifying the theoretical model and assessing its fit, Structural Equation Modeling (SEM) was performed using IBM SPSS AMOS (v. 29). The data are archived and publicly available (Kot, 2025).

RESULTS

Both the Work-Family Fit Questionnaire (Lachowska, 2008) and the Technostress Creators and Technostress Inhibitors Scale (Kot, 2022a) allow for the calculation of scores for specific sub-scales, however, for the purposes of building structural models, only the overall scale scores were calculated and all analyses were conducted thereon. Table 1 presents descriptive statistics for the analyzed indicators. Although the distributions appear approximately symmetric in terms of skewness and kurtosis, the Kolmogorov-Smirnov test revealed statistically significant devia-

tions from normality for most variables. This suggests that the assumption of normal distribution should be approached with caution in subsequent analyses. The central tendency measures (means and medians) remain relatively close, indicating that the data are not strongly skewed.

Table 1. Descriptive Statistics for Work-Life Facilitation, Work-Life Conflict, Technostress, Technostress Inhibitors, and Job Satisfaction (N = 533).

	Abr	R	M	SD	Mdn	Sk	Kurt	D
Work-life facilitation	WLF	8.00-40	25.20	4.92	25.00	-.17	.47	.10**
Work-life conflict	WLC	8.00-40	22.06	5.62	23.00	-.04	-.11	.08**
Technostress	TST	.65-25	11.62	4.14	11.70	.17	-.04	.03
Technostress inhibitors	TIN	.40-15	8.09	3.42	8.40	-.05	-.50	.05*
Job satisfaction	JSAT	5.00-35	21.48	6.16	22.00	-.27	-.04	.09**

* $p < .05$, ** $p < .01$, Abr - abbreviation of the dimension name used in some tables and figures.

To provide an initial overview of associations among the key constructs, Pearson's rank-order correlations were calculated (due to non-normal distributions observed in several variables) (Table 2). The analysis revealed positive associations between work-life facilitation, technostress inhibitors, and job satisfaction, while technostress and work-life conflict were negatively related to job satisfaction. Technostress correlated positively with work-life conflict and negatively with technostress inhibitors. No meaningful association was found between work-life conflict and either work-life facilitation or technostress inhibitors.

To examine the theoretical structure underlying the observed relationships, a structural equation modeling (SEM) analysis was conducted using the Asymptotically Distribution-Free (ADF) estimation method (Kline, 2023). This approach was selected due to the relatively high multivariate kurtosis (CR = 7.63), which can compromise the robustness of maximum likelihood estimation. The analysis was performed on the full sample ($N = 533$), with no

Table 2. Pearson Correlation Matrix for Key Study Variables (N = 533).

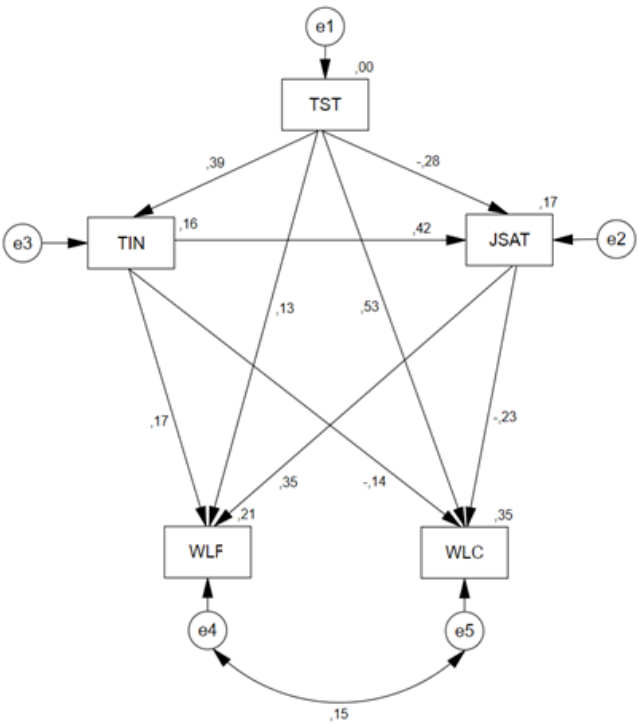
	Work-life facilitation	Work life conflict	Technostress	Technostress inhibitors	Job satisfaction
Work-life facilitation					
Work life conflict	.05				
Technostress	.16**	.52**			
Technostress inhibitors	.33**	.02	.38**		
Job satisfaction	.39**	-.34**	-.12**	.32**	

* p <.05,** p <.01

missing data. The tested structural model is presented in Figure 2 and Table 3. As the practical model was fully saturated, model fit indices were not estimated (Raykov & Marcoulides, 2006). In the saturated model, all possible paths between variables were included, even those not originally specified in the theoretical model. Therefore, the direct relationship between technostress inhibitors and job satisfaction was analyzed, as well as the indirect effects of the inhibitors on work–life facilitation and work–life conflict mediated by job satisfaction. Finally, the model after modification included a single covariance between the residuals of work-life facilitation (WLF) and work-life conflict (WLC), which was positive and statistically significant (β = .153, p = .005). Although these two variables were not significantly correlated at the bivariate level, they conceptually represent closely related but distinct aspects of the work-life interface. To account for their shared variance not explained by other constructs in the model, their residual covariance was freely estimated. This adjustment captures unexplained overlap between WLF and WLC, improving the model's representation of real-world complexity in work-life fit. Such residual covariance may reflect shared method variance, measurement proximity, or other latent influences not explicitly

included in the model (Cole et al., 2007; Kline, 2023). In this context, it acknowledges that even after accounting for all modeled predictors, some interconnectedness between work-life balance and conflict remains statistically meaningful.

Figure 2. Structural Model Illustrating the Relationships Between Technostress, Work-Life Facilitation, Work-Life Conflict, Technostress Inhibitors, and Job Satisfaction.



The pattern of direct effects observed in the structural model (Figure 2 and Table 3) is largely consistent with the previously reported zero-order correlations (Table 2). For example, the negative association between technostress and job satisfaction, as well as the positive links between technostress inhibitors and both job

satisfaction and work-life balance, were reflected in both the correlation matrix and the path coefficients. Similarly, job satisfaction showed a comparable pattern, positively predicting work-life facilitation and negatively predicting work-life conflict in both analyses.

Within the structural model, technostress inhibitors were positively predicted by technostress, indicating that individuals experiencing higher levels of technostress also reported greater access to or perception of technostress-reducing resources. At the same time, technostress negatively predicted job satisfaction, suggesting that increased technostress was associated with lower satisfaction at work. In contrast, technostress inhibitors had a positive direct effect on job satisfaction, highlighting their potential protective role.

Job satisfaction, in turn, positively predicted work-life facilitation and negatively predicted work-life conflict. Technostress directly increased work-life conflict, suggesting that greater technostress is associated with more frequent interference between work and private life. Additionally, technostress inhibitors positively predicted work-life facilitation and negatively predicted work-life conflict. Lastly, a small but significant positive path was observed from technostress to work-life facilitation.

The remaining two indirect effects, from technostress (TST) to work-life facilitation and to work-life conflict, were not statistically significant. These results indicate that there is no meaningful indirect pathway from technostress to work-life outcomes via job satisfaction or other included mediators in the model. No additional indirect effects were observed.

Also there were two significant indirect effects observed in the model involved technostress inhibitors (TIN) as the predictor and job satisfaction (JSAT) as the mediator, influencing both work-life facilitation (WLF) and work-life conflict (WLC). In both cases, the indirect effects (β = .150 for WLF and β = -.098 for WLC) mirrored the direction of the corresponding direct effects (β = .166

Table 3. Direct and Indirect Effects in the Structural Model Linking Technostress, Technostress Inhibitors, Job Satisfaction, Work-Life Facilitation, and Work-Life Conflict.

path	*B*	*β*	*p*
direct effect			
TIN<---TST	0,325	0,395	< 0,001
JSAT<---TST	-0,421	-0,283	< 0,001
JSAT<---TIN	0,765	0,424	< 0,001
WLF<---JSAT	0,282	0,353	< 0,001
WLC<---JSAT	-0,211	-0,231	< 0,001
WLC<---TST	0,723	0,533	< 0,001
WLF<---TIN	0,240	0,166	< 0,001
WLC<---TIN	-0,234	-0,142	< 0,001
WLB<---TST	0,158	0,133	0,006
covariance			
e4<-->e5	3,035	0,153	0,005
indirect effect			
JSAT<<---TST	0,249	0,167	< 0,001
WLC<<---TST	-0,040	-0,029	0,218
WLF<<---TST	0,030	0,025	0,408
WLC<<---TIN	-0,161	-0,098	< 0,001
WLF<<---TIN	0,216	0,150	< 0,001

Note. B – unstandardized coefficient, β – standardized coefficient, p – path significance; statistical significance of indirect effects was estimated using bootstrap modeling with a 95% confidence interval; <--- direct effect; <<--- indirect effect; <---> covariance

and β = -.142, respectively). This alignment of direct and indirect effects is indicative of complementary mediation, a form of mediation in which the mediator reinforces, rather than masks, the effect of the independent variable on the outcome (Zhao et al., 2010).

DISCUSSION

The aim of this study was to verify whether job satisfaction and technostress inhibitors act as mediators in the relationship of technostress with work-life facilitation and work-life conflict among employees using ICT on a daily basis.

The conducted analyses revealed a weak but positive relationship between technostress and work-life facilitation. This result is completely different from that assumed in Hypothesis 1. Therefore, the hypothesis that technostress has a negative relationship with work-life facilitation has not been confirmed. However, the majority of previous studies have revealed a negative relationship between technostress and work-life facilitation (Bencsik & Juhasz, 2023; Bondani et al., 2020; Bottaro et al., 2024; Saim et al., 2021). Rather, the constant presence of new technologies at work and outside work, manifested by the expectation to be constantly accessible for work-related issues, forces employees to perform their professional duties outside of standard working hours, which is most often negatively related to work-life facilitation in studies (Ma et al., 2021; Santos et al., 2023; Turner & Lingard, 2016). Meanwhile, the result obtained in this study may suggest that the expansion of new ICT facilitates performance of professional duties, thus allowing for maintaining work-life facilitation. ICT in the work environment were popularised precisely to achieve this goal – to relieve employees of their workload and give them greater space and freedom to fulfil other life roles (Böckerman et al., 2018; Galinsky & Matos, 2011). In addition, ICT available at work are sometimes used—though not always in accordance with applicable rules—to keep in contact with family members or handle matters important to employees' private lives. From an organisational point of view, such practices may be considered counterproductive behaviours that reduce work efficiency (Khedhaouria & Cucchi, 2019; Kot, 2022b). However, from the employee's perspective, they represent a positive use of new

technologies to support work–life facilitation (Califf & Brooks, 2020).

The results of another analysis revealed a positive relationship between technostress and work-life conflict. This result confirmed Hypothesis 2 and is consistent with most previous research (Bakker & Demerouti, 2017; Ragu-Nathan et al., 2008; Tarafdar et al., 2011; Turel & Gaudioso, 2018a). The excessive presence of technostressors and the use of new technologies to require employees to work from home hinder the harmonious performance of various life roles (Bencsik & Juhasz, 2023). The presence of stress caused by excessive use of ICT is connected with limited opportunities for recovery and involvement in family and social life, and consequently leads to frustration and tensions at home (Ma et al., 2021). Also, the high dynamics of changes in the ICT industry requires employees to constantly learn to operate new tools and adapt to the evolving digital environment, can consume time and cognitive resources, having a negative impact on effective functioning in the personal role (Saim et al., 2021). Tensions between individual roles may lead to the need to prioritise one sphere of life over another (Lachowska et al., 2018). Moreover, adequate social support is not always available, which can make the demands of the work environment appear overwhelming (Bakker & Demerouti, 2017). Technostress, like any other form of stress, has a multifaceted impact on the human body; therefore, its negative effects are not limited to the work environment but also hinder the fulfilment of other life roles (Khedhaouria & Cucchi, 2019; Tarafdar et al., 2019).

Analyses did not reveal an indirect effect of technostress inhibitors on the relationship between technostress and work-life facilitation. Therefore, Hypothesis 3 was not confirmed. Not only was the protective effect of technostress inhibitors on work-life facilitation not revealed here, but other somewhat surprising results were also observed. The positive correlation between technostress and work-life facilitation has already been discussed

while analysing hypothesis 1, but another surprising result is the positive relationship between technostress and technostress inhibitors. This means that individuals experiencing higher levels of technostress were more likely to report access to resources that mitigate its effects or a stronger perception of them. Therefore, this relationship is only seemingly irrational. Most organisations where employees use ICT intensively and are exposed to or already experience technostress try to provide them with various solutions to reduce the burden of technostressors (Hang et al., 2022; Kot, 2022b; Ma et al., 2021; Tarafdar et al., 2011), therefore the positive relationship between the increased occurrence of technostress inhibitors and technostress creators is a manifestation of a well-thought-out organisational preventive policy aimed at ensuring access to protective resources in the work environment (Bakker & Demerouti, 2017; Hang et al., 2022; Tarafdar et al., 2019). Although technostress inhibitors, such as technical support, ICT training, and co-worker support play a significant role in reducing the negative impact of technological stressors (Tarafdar et al., 2011; Turel & Gaudioso, 2018b), they do not act as mediators in the relationship between technostress and work-life facilitation. Only a direct effect is observed – the presence of technostress inhibitors is positively related to work-life facilitation, meaning that the organisational policy that ensures the presence of technostress inhibitor resources facilitates keeping a balance between work and out-of-work roles by employees (Demerouti et al., 2001; Ma et al., 2021).

As with the previous hypothesis, the analyses conducted did not reveal an indirect effect of technostress inhibitors on the relationship between technostress and work-life conflict. Thus, hypothesis 4 was not confirmed. The main effects and relationships between variables are significant, and the presence of technostress inhibitors is directly linked to lower levels of work-life conflict, and indirectly through technostress reduction. Therefore, it is crucial to care for employees by providing them with the appropriate

level of resources in the form of social and technical support to cope with the challenges of their ICT work environment (Demerouti et al., 2001; Nisafani et al., 2020). This will protect them not only from the negative consequences of technostress (Pirkkalainen et al., 2019) but will also help avoid negative interactions between work and out-of-work roles.

As with the previous hypotheses, job satisfaction did not prove either to be the mediator of the relationship between technostress, work-life facilitation and work-life conflict, as assumed in research hypotheses 5 and 6. Although job satisfaction is an important aspect of professional functioning and is related to both technostress and work-life balance, the mediating effect of job satisfaction on the relationship between technostress and work-life facilitation was not statistically significant. Therefore, research hypothesis 5 was not confirmed. Technostress may at the same time reduce job satisfaction and disrupt work-life facilitation, but job satisfaction does not explain the mechanism of this effect. Job satisfaction and work-life balance often correlate positively in studies (Allen et al., 2020; Ma et al., 2021; Saleem & Malik, 2023; Shi et al., 2023) and are treated as manifestations of professional well-being (Clark, 2020; Lysova et al., 2019) or, more broadly, dimensions of general well-being (Bowling et al., 2010; Warr, 2007). However, the fact that they positively co-occur was not sufficient to treat them as elements of a causal model (Clark, 2020; Haar et al., 2014; Kot, 2022b). Subjective assessment of work performed or its conditions is important and relevant for employees (Lysova et al., 2019), but it does not directly translate into the essence of work-life facilitation, which involves maintaining the boundaries between the employee role and the private role (Ma et al., 2021).

Similarly, no significant mediating effect of job satisfaction on the relationship between technostress and work-life facilitation was revealed. Therefore, research hypothesis 5 was not confirmed either. The simple effects indicating direct relationships between job satisfaction and work-life conflict, or between job satisfaction

and technostress were statistically significant, confirming the relationships known from previous studies. Technostress was negatively related with job satisfaction (Kot, 2022b; Ma et al., 2021; Shi et al., 2023), but this relationship does not indirectly translate into relationships between various spheres of an employee's life. Technostress had a direct impact on daily functioning at work and outside of work by disrupting the boundaries between these spheres (Ayyagari et al., 2011; Tarafdar et al., 2011). Similarly, job satisfaction is negatively related to work-life conflict (Lavigne & Grawitch, 2023; Nisafani et al., 2020; Pirkkalainen et al., 2019), but it is not a key mechanism explaining the relationship between technological demands (Demerouti et al., 2001; Wayne et al., 2004) and the sense of work-life conflict.

Although the relevant literature review provided ample evidence for indicating technostress inhibitors and job satisfaction as mediators shielding the destructive effects of technostress on work-life facilitation, the analyses of indirect effects did not confirm this (lack of confirmation of hypotheses 3, 4, 5, and 6). Only an in-depth analysis of the structural model, going beyond the assumptions contained in the hypotheses, revealed significant indirect effects regarding the influence of technostress inhibitors on work-life facilitation and work-life conflict via job satisfaction. In both cases, complementary mediation was achieved, in which the a mediator strengthens the impact of an independent variable on a dependent variable (Zhao et al., 2010). Thus, the results suggest that technostress inhibitors influence the perception of work-life facilitation and work-life conflict not only directly but also indirectly—through their positive impact on job satisfaction. In this perspective, job satisfaction acts as a mechanism that enhances the protective role of technostress inhibitors on occupational well-being (Demerouti et al., 2001; Judge et al., 2017). From this perspective, job satisfaction acts as a mediating mechanism that promotes better work-life facilitation and reduced conflict between these spheres, which is supported by research indicating its

key role in mitigating the effects of occupational stressors (Bowling et al., 2010; García-Salirrosas et al., 2023; Greenhaus & Allen, 2011). Like other organisational and individual resources—such as social support or autonomy—technostress inhibitors can reduce the negative effects of technostress by promoting a more positive evaluation of the job situation, which translates into more favourable work–life facilitation experiences (Hakanen et al., 2006; Tarafdar et al., 2019). It is worth noting, however, that the indirect effect related to work–life conflict was relatively weak, although still statistically significant (Wang & Yao, 2025).

Limitations and Suggestions

A limitation of this study is that the tested structural model was fully saturated, meaning that it was impossible to estimate global fit indices. Although such models do not allow for assessing the fit with data at the level of the entire structure, they are acceptable in exploratory studies or in cases where the analysis of specific relationships between variables is crucial (Raykov & Marcoulides, 2006). As noted by Kline (2023) and Schermelleh-Engel et al. (2003), unsaturated models can be useful for testing complex indirect relationships, even if they do not allow for comparing the fit to the data in a traditional manner. Additionally, to capture causal relationships, a better solution would be a research design with multiple measurements.

A certain simplification used to facilitate the construction of structural models was to limit the analyses to only the general results obtained from the questionnaires used. In subsequent studies, the analyses could be expanded to include results collected in sub-scales. Furthermore, due to the lack of confirmation of some research hypotheses, further studies could be expanded to include other personality and organisational variables that constitute requirements and resources protecting against technostress in the context of work-life facilitation (Demerouti et al., 2001; Tarafdar et al., 2011). Furthermore, the concept of technostress

proposed by Tarafdar et al. (2011) is limited only to ICT, not taking into account the dynamic development and interference of artificial intelligence in everyday life (Bolińska et al., 2023), and therefore future studies should also consider this potential technostressor. Additionally, future studies could consider the effects of demographic variables such as age, gender, tenure, and length of experience working with ICT.

CONCLUSION

The use of ICT is crucial for achieving organisational and personal success in today's information society (Bolińska et al., 2023; Böckerman et al., 2018; Santos et al., 2023). Especially recently, these technologies have not only enabled effective work in the work environment, but are also increasingly being transferred to everyday life (Bondanini et al., 2020). However, the excess of new technologies can lead to the emergence of technostress, which is connected with the increased negative impact on various life roles (Tarafdar et al., 2011). Since it is now almost impossible to function at work and at home without the use of ICT, in order to ensure the appropriate fit between life roles and a high level of employee satisfaction, which are so important for every organisation but also for the comfort of personal life, measures should be taken to support mechanisms that inhibit technostress (Ma et al., 2021; Marecki, 2023; Wang et al., 2023). Technostress inhibitors that help cope with technostress can be developed or improved through training and development of employees' digital skills (Hang et al., 2022; Ma et al., 2021). It is also important to provide appropriate organisational, technical, and social support for the appropriate use of technology (Demerouti et al., 2001; Tarafdar et al., 2019), so that it is helpful to humans and does not pose a threat to their satisfaction at work or fulfilment of various life roles (Lachowska et al., 2018; Ma et al., 2021), given

that the contemporary technological development shows that its invasiveness in various spheres of our life will be more and more significant (Bolińska et al., 2023). Therefore, implementing organisational policies that support work-life fit, such as flexible working hours, remote work options, care leave, and a culture that supports employee privacy, should be helpful (Anwar et al., 2013; Godlewska-Bujok, 2023). Although the importance of this factor has been repeatedly confirmed in previous studies (e.g. Bakker & Demerouti, 2017; Bowling et al., 2010; Hackman & Oldham, 1976; Judge et al., 2017; Kot, 2022b), the present analyses also indicate that organizations can minimize the risk of work–life conflict by counteracting technostress and reinforcing those technostress inhibitors that contribute to higher job satisfaction.

REFERENCES

Adah, C. A., Aghimien, D. O., & Oshodi, O. (2025). Work–life balance in the construction industry: a bibliometric and narrative review. *Engineering, Construction and Architectural Management*, *32*(1), 38–58. https://doi.org/10.1108/ECAM-02-2023-0150

Allen, T. D., French, K. A., Dumani, S., & Shockley, K. M. (2020). A cross-national meta-analytic examination of predictors and outcomes associated with work–family conflict. *Journal of Applied Psychology*, *105*(6), 539–576. https://doi.org/10.1037/apl0000442

Anwar, J., Hansu, S. A. F., & Janjua, S. Y. (2013). Work-life balance: What organizations should do to create balance. *World Applied Sciences Journal*, *24*(10), 1348–1354.

Ayyagari, R., Grover, V., & Purvis, R. (2011). Technostress: Technological antecedents and implications. *MIS Quarterly*, *35*(4), 831–858. https://doi.org/10.2307/41409963

Babashahi, L., Barbosa, C. E., Lima, Y., Lyra, A., Salazar, H., Argôlo, M., Almeida, M. A., & Souza, J. M. (2024). AI in the workplace: A systematic review of skill transformation in the industry. *Administrative Sciences*, *14*(6), 127. https://doi.org/10.3390/admsci14060127

Bakker, A. B., & Demerouti, E. (2017). Job demands-resources theory: Taking stock and looking forward. *Journal of Occupational Health Psychology*, *22*(3), 273–285. https://doi.org/10.1037/ocp0000056

Bakker, A. B., & Oerlemans, W. (2019). Daily job crafting and momentary work engagement: A self-determination and self-regulation perspective. *Journal of Vocational Behavior*, *112*, 417–430. https://doi.org/10.1016/j.jvb.2018.12.005

Bencsik, A., & Juhasz, T. (2023). Impact of technostress on work-life balance. *Human Technology*, *19*(1), 41–61. https://doi.org/10.14254/1795-6889.2023.19-1.4

Böckerman, P., Laaksonen, S., & Vainiomäki, J. (2018). Does ICT usage erode routine occupations at the firm level? *Labour*, *33*(1), 26–47. https://doi.org/10.1111/labr.12137

Bolińska, M., Dykas, P., & Wisła, R. (2023). Metadata of patent information in the value assessment of new technology solutions. *Journal for Perspectives of Economic Political and Social Integration*, *29*(1), 7–29. https://doi.org/10.18290/pepsi-2023-0001

Bondanini, G., Giorgi, G., Ariza-Montes, A., Vega-Muñoz, A., & Andreucci-Annunziata, P. (2020). Technostress dark side of technology in the workplace: A scientometric analysis. *International Journal of Environmental Research and Public Health*, *17*(21), 8013. https://doi.org/10.3390/ijerph17218013

Bottaro, R., De Giovanni, K., & Faraci, P. (2024). The extent to which technostress is related to employees' work-life fit: a multilevel meta-analysis. *Workplace Health & Safety*, *72*(10), 421-430. https://doi.org/10.1177/21650799241264317

Bowling, N. A., Eschleman, K. J., & Wang, Q. (2010). A meta-analytic examination of the relationship between job satisfaction and subjective well-being. *Journal of Occupational and Organizational Psychology*, *83*(4), 915–934. https://doi.org/10.1348/096317909X478557

Brod, C. (1984). *Technostress: The human cost of the computer revolution*. Addison-Wesley.

Califf, C. B., & Brooks, S. (2020). An empirical study of techno-stressors, literacy facilitation, burnout, and turnover intention as experienced by K-12 teachers. *Computers and Education*, *157*, 103971. https://doi.org/10.1016/j.compedu.2020.103971

Casper, W. J., Vaziri, H., Wayne, J. H., DeHauw, S., & Greenhaus, J. H. (2018). The jingle-jangle of work–nonwork balance: A comprehensive and meta-analytic review of its meaning and measurement. *Journal of Applied Psychology*, *103*(2), 182–214. https://doi.org/10.1037/apl0000259

Chong, S., Huang, Y., & Chang, C.-H. D. (2022). Supporting interrole balance: A review of work–family resources. *Journal of Organizational Behavior*, *43*(1), 74–94. https://doi.org/10.1002/job.2567

Clark, S. C. (2020). Remote work and the work–life interface: A review and research agenda. *International Journal of Management Reviews*, *22*(1), 1–22. https://doi.org/10.1111/ijmr.12235

Cole, D. A., Ciesla, J. A., & Steiger, J. H. (2007). The insidious effects of failing to include design-driven correlated residuals in latent-variable covariance structure analysis. *Psychological Methods*, *12*(4), 381–398. https://doi.org/10.1037/1082-989X.12.4.381

Deci, E. L., & Ryan, R. M. (2000). The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, *11*(4), 227–268. https://doi.org/10.1207/S15327965PLI1104_01

Demerouti, E., Bakker, A. B., Nachreiner, F., & Schaufeli, W. B. (2001). The Job Demands-Resources model of burnout. *Journal of Applied Psychology*, *86*(3), 499–512. https://doi.org/10.1037/0021-9010.86.3.499

Deng, S., & Gao, J. (2017). The mediating roles of work–family conflict and facilitation in the relations between leisure experience and job/life satisfaction among employees in Shanghai banking industry. *Journal of Happiness Studies*, *18*(6), 1641–1657. https://doi.org/10.1007/s10902-016-9771-8

Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The satisfaction with life scale. *Journal of Personality Assessment*, *49*(1), 71–75. https://doi.org/10.1207/s15327752jpa4901_13

Eurofound. (2025). *Opportunities for remote work decline despite workers' preferences, new survey finds*. Press Release.

Faragher, E. B., Cass, M., & Cooper, C. L. (2005). The relationship between job satisfaction and health: A meta-analysis. *Occupational and Environmental Medicine*, *62*(2), 105–112. https://doi.org/10.1136/oem.2002.006734

Frone, M. R. (2018). *Work–life balance: A psychological perspective*. Cambridge University Press.

Galinsky, E., & Matos, K. (2011). The future of work–life fit. *Organizational Dynamics*, *40*(4), 267–280. https://doi.org/10.1016/j.orgdyn.2011.07.004

García-Salirrosas, E. E., Rondon-Eusebio, R. F., Geraldo-Campos, L. A., & Acevedo-Duque, Á. (2023). Job satisfaction in remote work: The role of positive spillover from work to family and work–life balance. *Behavioral Sciences*, *13*(11), 916. https://doi.org/10.3390/bs13110916

Godlewska-Bujok, B. (2023). Work-life balance po polsku – najważniejsze refleksje po nowelizacji z 2023 r. *Radca Prawny. Zeszyty Naukowe*, (2), 11–26.

Greenhaus, J. H., & Allen, T. D. (2011). Work–family balance: A review and extension of the literature. In J. C. Quick & L. E. Tetrick (Eds.), *Handbook of Occupational Health Psychology* (pp. 165–183). American Psychological Association.

Greenhaus, J. H., & Beutell, N. J. (1985). Sources of conflict between work and family roles. *Academy of Management Review*, *10*(1), 76–88. https://doi.org/10.5465/amr.1985.4277352

Greenhaus, J. H., & Powell, G. N. (2006). When work and family are allies: A theory of work-family enrichment. *The Academy of Management Review*, *31*(1), 72–92. https://doi.org/10.2307/20159186

Grzywacz, J. G., & Bass, B. L. (2003). Work, family, and mental health: Testing different models from work-family fit. *Journal of Marriage and Family*, *65*(1), 248–261. https://doi.org/10.1111/j.1741-3737.2003.00248.x

Grzywacz, J. G., & Carlson, D. S. (2007). Conceptualizing work–family balance: Implications for practice and research. *Advances in Developing Human Resources*, *9*(4), 455–471. https://doi.org/10.1177/1523422307305487

Grzywacz, J. G., Butler, A. B., & Almeida, D. M. (2008). Work, family, and health: Work–family balance as a protective factor against stresses of daily life. In A. Marcus-Newhall, D. F. Halpern & S. J. Tan (Eds.), *The Changing Realities of Work and Family: A Multidisciplinary Approach* (pp. 194–215). Blackwell Publishing Ltd.

Haar, J. M., Russo, M., Sune, A., & Ollier-Malaterre, A. (2014). Outcomes of work–life balance on job satisfaction, life satisfaction and mental health: A study across seven cultures. *Journal of Vocational Behavior*, *85*(3), 361–373. https://doi.org/10.1016/j.jvb.2014.08.010

Hackman, J. R., & Oldham, G. R. (1976). Motivation through the design of work: Test of a theory. *Organizational Behavior and Human Performance*, *16*(2), 250–279. https://doi.org/10.1016/0030-5073(76)90016-7

Hakanen, J. J., Bakker, A. B., & Schaufeli, W. B. (2006). Burnout and work engagement among teachers. *Journal of School Psychology*, *43*(6), 495–513. https://doi.org/10.1016/j.jsp.2005.11.001

Hang, Y., Hussain, G., Amin, A., & Abdullah, M. I. (2022). The moderating effects of technostress inhibitors on techno-stressors and employee's well-being. *Frontiers in Psychology, 12*, Article 821446. https://doi.org/10.3389/fpsyg.2021.821446

Harunavamwe, M., & Ward, C. (2022). The influence of technostress, work–family conflict, and perceived organisational support on workplace flourishing amidst COVID-19. *Frontiers in Psychology*, *13*, Article 921211. https://doi.org/10.3389/fpsyg.2022.921211

Judge, T. A., Weiss, H. M., Kammeyer-Mueller, J. D., & Hulin, C. L. (2017). Job attitudes, job satisfaction, and job affect: A century of continuity and of change. *Journal of Applied Psychology*, *102*(3), 356–374. https://doi.org/10.1037/apl0000181

Khedhaouria, A., & Cucchi, A. (2019). Technostress creators, personality traits, and job burnout: A fuzzy-set configurational analysis. *Journal of Business Research*, *101*, 349–361. https://doi.org/10.1016/j.jbusres.2019.04.029

Kline, R. B. (2023). *Principles and Practice of Structural Equation Modeling*. Guilford Press.

Kot, P. (2022a). Psychometric properties of the Polish adaptation of technostress creators and technostress inhibitors scale. *Medycyna Pracy*, *73*(4), 277–293, https://doi.org/10.13075/mp.5893.01236

Kot, P. (2022b). Role of technostress in job satisfaction and work engagement in people working with information and communication technologies. *Pakistan Journal of Psychological Research*, *37*(3), 331–349. https://doi.org/10.33824/PJPR.2022.37.3.20

Kot, P. (2025). *Technostressors and work–life balance.* https://repozytorium.kul.pl/handle/20.500.12153/9067

Kumar, P. S. (2024). Technostress: A comprehensive literature review on dimensions, impacts, and management strategies. *Computers in Human Behavior Reports*, *16*, Article 100475. https://doi.org/10.1016/j.chbr.2024.100475

Lachowska, B. (2008). Mutual relations between work and family – the perspective of conflict and facilitation (report from pilot research). In L. Golińska & B. Dudek (Eds.), *Work and Family from the Perspective of Challenges and Threats* (pp. 431–453). University of Łódź Publishing

Lachowska, B., Szpringer, M., Lachowski, S., & Porydzaj, K. (2018). Conflict and facilitation between family and occupational roles versus work-related stress in the teachers' group. *Medical Studies*, *34*(1), 41–56. https://doi.org/10.5114/ms.2018.74820

Lavigne, K. N., & Grawitch, M. J. (2023). Work-life conflict and facilitation: Mostly indirect effects on domain-specific and work-life balance satisfaction over time. *International Journal of Psychology: Journal International de Psychologie*, *58*(6), 526–535. https://doi.org/10.1002/ijop.12927

Lo Presti, A., Callea, A., De Rosa, A., Urbini, F., & Chirumbolo, A. (2025). The reciprocal relationships between quantitative job insecurity, job satisfaction, and psychological distress during the Covid-19 pandemic: A three-wave cross-lagged panel study. *Economic and Industrial Democracy*, Article 0143831X251347153. https://doi.org/10.1177/0143831X251347153

Locke, E. A. (1976). The nature and causes of job satisfaction. In M. D. Dunnette (Ed.), *Handbook of Industrial and Organizational Psychology* (pp. 1297–1349). Rand McNally.

Lysova, E. I., Allan, B. A., Dik, B. J., Duffy, R. D., & Steger, M. F. (2019). Fostering meaningful work through a calling: A review of research and practices. *Journal of Vocational Behavior*, *110*, 374–389. https://doi.org/10.1016/j.jvb.2018.07.004

Ma, J., Ollier-Malaterre, A., & Lu, C. Q. (2021). The impact of techno-stressors on work–life balance: The moderation of job self-efficacy and the mediation of emotional exhaustion. *Computers in Human Behavior*, *122*, Article 106811. https://doi.org/10.1016/j.chb.2021.106811

Maier, C., Laumer, S., Eckhardt, A., & Weitzel, T. (2015). Technostress and the hierarchical levels of anxiety and burnout. *Information Systems Journal*, *25*(2), 193–232. https://doi.org/10.1111/isj.12042

Marecki, Ł. (2023). Impact of work-life balance on employee productivity and well-being. *Journal of Management and Financial Sciences*, *50*, 165–178.

Nisafani, A. S., Kiely, G., & Mahony, C. (2020). Workers' technostress: A review of its causes, strains, inhibitors, and impacts. *Journal of Decision Systems*, *29*(1), 243–258. https://doi.org/10.1080/12460125.2020.1796286

Obasi, I. C., & Benson, C. (2025). The impact of digitalization and information and communication technology on the nature and organization of work and the emerging challenges for occupational safety and health. *International Journal of Environmental Research and Public Health*, *22*(3), 362–390. https://doi.org/10.3390/ijerph22030362

Pirkkalainen, H., Salo, M., Tarafdar, M., & Makkonen, M. (2019). Deliberate or instinctive? Proactive and reactive coping for technostress. *Journal of Management Information Systems*, *36*(4), 1179–1212. https://doi.org/10.1080/07421222.2019.1661092

Ragu-Nathan, T. S., Tarafdar, M., Ragu-Nathan, B. S., & Tu, Q. (2008). The consequences of technostress for end users in organizations: Conceptual development and empirical validation. *Information Systems Research*, *19*(4), 417–433. https://doi.org/10.1287/isre.1070.0165

Raykov, T., & Marcoulides, G. A. (2006). *A First Course in Structural Equation Modeling*. Lawrence Erlbaum Associates.

Saim, M. A. S. M., Rashid, W. E. W., & Ma'on, S. N. (2021). Technostress creator and work life balance: a systematic literature review. *Romanian Journal of Information Technology & Automatic Control*, *31*(1), 77–88. https://doi.org/10.33436/v31i1y202106

Salanova, M., Llorens, S., & Cifre, E. (2013). The dark side of technologies: Technostress among users of information and communication technologies. *International Journal of Psychology*, *48*(3), 422–436. https://doi.org/10.1080/00207594.2012.680460

Saleem, F., & Malik, M. I. (2023). Technostress, quality of work life, and job performance: a moderated mediation model. *Behavioral Sciences*, *13*(12), Article 1014. https://doi.org/10.3390/bs13121014

Santos, A., Roberto, M. S., Camilo, C., & Chambel, M. J. (2023). Information and communication technologies-assisted after-hours work: A systematic literature review and meta-analysis of the relationships with work–family/life management variables. *Frontiers in Psychology*, *14*, Article 1101191. https://doi.org/10.3389/fpsyg.2023.1101191

Schermelleh-Engel, K., Moosbrugger, H., & Müller, H. (2003). Evaluating the fit of structural equation models: Tests of significance and descriptive goodness-of-fit measures. *Methods of Psychological Research Online*, *8*(2), 23–74.

Shi, S., Chen, Y., & Cheung, C. M. (2023). How technostressors influence job and family satisfaction: Exploring the role of work–family conflict. *Information Systems Journal*, *33*(4), 953–985. https://doi.org/10.1111/isj.12431

Sienkiewicz, Ł., Stankiewicz, K., Tomczak, M., Ziemiański, P. (2023). *Raport z badania satysfakcji zawodowej pracowników.* CENTRUM HR.

Spector, P. E. (1997). *Job satisfaction: Application, assessment, causes, and consequences*. Sage.

Tarafdar, M., Cooper, C. L., & Stich, J. F. (2019). The technostress trifecta-techno eustress, techno distress and design: Theoretical directions and an agenda for research. *Information Systems Journal*, *29*(1), 6–42. https://doi.org/10.1111/isj.12169

Tarafdar, M., Tu, Q., Ragu-Nathan, B. S., & Ragu-Nathan, T. S. (2011). Crossing to the dark side: Examining creators, outcomes, and inhibitors of technostress. *Communications of the ACM*, *54*(9), 113–120. https://doi.org/10.1145/1995376.1995403

Tarafdar, M., Tu, Q., Ragu-Nathan, B. S., & Ragu-Nathan, T. S. (2007). The impact of technostress on role stress and productivity. *Journal of Management Information Systems*, *24*(1), 301–328. https://doi.org/10.2753/MIS0742-1222240109

Turel, O. & Gaudioso, F. (2018a). Techno-stressors, distress and strain: the roles of leadership and competitive climates. *Cognition, Technology and Work*, *20*(2), 309–324, https://doi.org/10.1007/s10111-018-0461-7.

Turel, O., & Gaudioso, F. (2018b). Techno-stressors, exhaustion, and job outcomes: The moderating role of effort–reward imbalance. *Information Technology & People*, *31*(2), 545–569. https://doi.org/10.1108/ITP-10-2016-0231

Turner, M., & Lingard, H. (2016). Work–life fit: identification of demand and resource typologies within a systems framework. *Construction Mmanagement and Economics*, *34*(6), 377–392. https://doi.org/10.1080/01446193.2016.1200737

UNESCO. (2022). *Glossary: Information and communication technologies (ICT).* Institute for Statistics. Available at: https://uis.unesco.org/en/glossary-term/information-and-communication-technologies-ict (Accessed June 2025).

Wang, B., Liu, Y., Qian, J., & Parker, S. K. (2023). Achieving effective remote working during the COVID-19 pandemic: A work design perspective. *Applied Psychology: An International Review*, *72*(2), 508–534. https://doi.org/10.1111/apps.12434

Wang, Q., & Yao, N. (2025). Understanding the impact of technology usage at work on academics' psychological well-being: a perspective of technostress. *BMC Psychology*, *13*(1), 130. https://doi.org/10.1186/s40359-025-02461-1

Ward, C. E., & Harunavamwe, M. (2025). The role of perceived organisational support on technostress and work–family conflict. *SA Journal of Industrial Psychology*, *51*, Article 2218. https://hdl.handle.net/10520/ejc-psyc_v51_n1_a2218

Warr, P. (2007). *Work, Happiness, and Unhappiness*. Lawrence Erlbaum.

Wayne, J. H., Musisca, N., & Fleeson, W. (2004). Considering the role of personality in the work-family experience: Relationships of the Big Five to work-family conflict and facilitation. *Journal of Vocational Behavior*, *64*(1), 108–130. https://doi.org/10.1016/S0001-8791(03)00035-6

Wontorczyk, A., & Rożnowski, B. (2022). Remote, hybrid, and on-site work during the SARS-CoV-2 pandemic and the consequences for stress and work engagement. *International Journal of Environmental Research and Public Health*, *19*(4), Article 2400. https://doi.org/10.3390/ijerph19042400

Zalewska, A. (2003). The Satisfaction with Job Scale: A measure of cognitive aspect of overall job satisfaction. *Acta Universitatis Lodziensis, Folia Psychologica*, *7*(1), 49–61.

Zhao, X., Lynch, J. G., & Chen, Q. (2010). Reconsidering Baron and Kenny: Myths and truths about mediation analysis. *Journal of Consumer Research*, *37*(2), 197–206. https://doi.org/10.1086/651257