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Original Article

Mental Health Ingenuities and the Role of Computer Technology on Employees' Mental Health: A Systematic Review

Dr. Ann Gaceri Kaaria, PhD[1] & Dr. Selerina Samba Mwaruta, PhD[2]*

[1] Kiriri Womens' University of Science and Technology P. O. Box 49274 – 00100. Nairobi, Kenya.
[2] Machakos University P. O. Box 136 – 90100, Machakos, Kenya.
*Author for correspondence Email: ann.gaceri.k@gmail.com

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ABSTRACT

Upholding and protecting sustainable competitive advantages is crucial to achieving firms'/enterprises' goals in today's overburdened, erratic, and fast-paced global work environment. Business stakeholders place a high value on actions that help employees achieve their own goals as well as those of the company in the modern, thriving business/work ecosystem. The general objective of this study was to examine the relationship between mental health ingenuities, computer technology and employee mental health. The specific objectives are to examine the relationship between counselling, computer technology, and the mental health of employees, to determine the relationship between mental health promotion, computer technology and the mental health of employees as well as the moderating effect of computer technology on the relationship between mental health ingenuities and employee mental health to assess the relationship between stress management, computer technology, and mental health of employees and to assess the relationship between work-life balance, computer technology, and mental health of employees. The anchor theory of the study was the Job Demands-Resources (JD-R) Model with a focus on computer application in the management of mental health initiatives at the workplace. The study employed a systematic review of the literature. The findings from the systematic review depicted that internet-based cognitive-behavioural therapy (CBT) interventions have shown effectiveness in reducing symptoms of anxiety and depression among employees, indicating their potential as a form of computer-based counselling. In addition, Web-based psychotherapy interventions have been effective in reducing posttraumatic stress disorder (PTSD) symptoms among employees who have experienced trauma. Moreover, it was found that Internet and computer-based self-help interventions have demonstrated positive outcomes in reducing depressive symptoms and improving coping skills among employees. Computer-based counselling, delivered through mobile apps or internet-based platforms, has shown promise in improving mental health outcomes, including reducing symptoms of depression, anxiety, and stress among employees. It was recommended that HR managers should raise awareness among employees about the availability and benefits of work-stress management apps. They

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can conduct informational sessions, share success stories, and provide resources to educate employees about the app's features and how it can help in stress management. Organizations should also provide a range of technological resources, such as meditation or relaxation apps, stress-tracking apps, virtual wellness programs, or online counselling platforms. By offering a diverse selection, employees can choose the tools that resonate best with their personal preferences and needs.

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INTRODUCTION

Due to their significant financial cost, mental health disorders in the workplace are becoming more widely recognised as a concern in the majority of nations. But little study has been done on how mental health and employee productivity are related. Mental health issues including depression and work-related anxiety are increasingly recognized as problems in most countries (Howard, Follmer, Smith, Tucker, & Van, 2021). The vast majority of economies and societies are progressively acknowledging the prevalence of mental health illnesses at work, such as anxiety and mood disorders. A human, as well as the social capital approach, was used to estimate the worldwide economic impact of mental illness, which increased from US$2.5 trillion in 2010 to US$6.1 trillion in 2030. Much of this economic burden was attributable to the reduction in employee efficiency, which can be described as absenteeism and presenteeism (Saka, Bone &Jacob, 2022). Workplaces that encourage mental health and offer assistance to those who need it are more likely to decrease absenteeism (defined as fewer days away from work) and presenteeism (defined as decreased productivity while at work), which will boost employee productivity (Priya, Thomas, Diane & Katelyn 2022). The majority of the studies reviewed indicated a positive link between the occurrence of mental health disorders and absenteeism (especially short-term disability absences), with depressive disorders being the most prevalent mental health condition in most workplaces. Additionally, they found that rules at work that enable access to evidence-based care lower absenteeism, disability, and lost productivity (Kim, Lee, Chung, & Lee, 2017).

Upholding and protecting sustainable competitive advantages is crucial to achieving firms'/enterprises' goals in today's overburdened, erratic, and fast-paced global work environment. In the modern and dynamic business/work ecosystem, business stakeholders strongly

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appreciate behaviours that support employee well-being in their desire to achieve both their own personal goals and those of the company (Bakker, & Van, 2018). The health and wellbeing of everyone at the national and international levels is a subject of significant concern in today's society. Situations of volatility, uncertainty, complexity, and ambiguity (VUCA), which are increasingly common on a global scale, may be stressful and are most certainly one of the causes of the rise in mental diseases. According to Howard, Follmer, Smith, Tucker, and Van (2020), mental health issues can be caused by a variety of workplace circumstances, including poor management practices, a lack of social support, ineffective information and communication delivery, an excessive workload, time restraints, challenging tasks, interpersonal conflict, job insecurity, professional self-sufficiency, and organizational changes.

Choi, & Kim, (2017), agree that there is a growing societal concern is the challenges brought on by mental illness at work. The interacting factors that affect counselling and a supporting attitude, such as employee relations confessions and support discernments that are based on the organization's or institution's strategic hybrid work model, are, however, not adequately studied (Priya et al., 2022). Although human-computer interaction (HCI) was first developed in the 1950s, its psychological components were not fully realized until the 1970s, when research and technology on engineering the mind coincided with advances in computer technology. The creation and development of effective, user-friendly, reasonably priced, and adaptable digital mental health solutions have benefitted greatly from the investigation of the relationship between people and computers. Regrettably, an association between people and technology has not been fully integrated into technological innovations, voicing concerns about safety and reliability. Working remotely has its significant problems, as some commercial establishments advocate for it while metaverse adoption in the future may be a central underwriting aspect to stress due to inadequacy of information on the same (Titov, et.al, 2015).

Digital platforms and robotic intelligence can be used to improve mental health interventions' capacity for prediction, identification, coordination, and service. In addition to careful monitoring of cognitive behavioural treatment (CBT), web-based and telephone apps powered by computer intelligence would primarily be utilized for seeking help for depression and anxiety problems. Interactive computerized or robotic intelligence may be beneficial for authentic diagnosis and therapy in outdated, overburdened, or atrophied psychosomatic medical practices (Müller et al., 2016). Mobile applications, real-time cloud-based intelligence algorithms, interactive technologies, and cloud-based morphological characteristics have a high chance of success. However, more adaptable, potent, tenacious, functionality, security, dependability, etiquette, and socially constructed adaptability are some of the barriers to the use of artificial intelligence in psychological therapies (Calvo, Dinakar, Picard, & Maes, 2016)

The HCI prediction model may help in the development of a cloud-based counselling connection in addition to assisting in the quick identification, acknowledgement, and resolution of inequities in mental health care and suicide prevention (Balcombe, L. & De Leo, 2022). Computer technology developments have created new avenues for tackling workplace mental health issues. Computer technology is used by mental health ingenuities, which include a variety of creative interventions and tactics, to advance mental health, offer support, and improve worker performance. These innovations may include a range of computer-based therapies such as wearable tech, virtual reality, teletherapy, and online counselling (Calvo et al., 2016).

The need for a comprehensive analysis of the interaction between employee performance, computer technology, and developments in mental health is multidimensional. First, there is a need to specifically explore computer-based therapies' effects on outcomes linked to employee performance, despite the fact that a growing body of research is examining their effectiveness on outcomes related to mental health. Understanding

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how mental health advances utilizing computer technology affect workplace performance, productivity, job satisfaction, and work-related stress can be highly valuable for businesses aiming to establish a mentally healthy and high-performing workforce. The results of this systematic review can assist in guiding organizational policy creation and decision-making with regard to the incorporation of computer technology-based mental health innovations. Organizations may learn more about the possible advantages, difficulties, and best practices for putting such interventions into practice at work, which will eventually improve employee wellbeing, boost productivity, and improve overall performance (Brenninkmeijer, Lagerveld, Blonk, Schaufeli, & Wijngaards-de Meij, 2018).

Employees' total productivity and performance are greatly impacted by their mental health and well-being in today's demanding, fast-paced work situations that are complicated by the business climate. Innovative tactics—often referred to as mental health ingenuities—need to be put into practice by forward-thinking organizations and business establishments in order to promote a supportive and reassuring work environment that places a high priority on employee mental wellness (Golden, Veiga, & Simsek, 2016). Numerous cutting-edge tactics have been demonstrated to increase productivity and employee well-being. Redefining work-life balance is one of them, with organizations adopting flexible work arrangements that allow greater work-life balance in response to employees' evolving requirements. By providing remote work options, flexible working hours, and shorter workweeks, employers may help their staff members better juggle their personal and professional obligations (Paganin, & Simbula, 2021). By reducing stress, increasing workplace satisfaction, and improving overall employee mental wellbeing, these advances help employees perform better. Incorporating mental health programmes into all employee development activities, where innovative organizations sponsor projects and programmes linked to mental health, is another mental health innovation that has to be adopted at work. These initiatives offer training sessions, seminars, and workshops aimed at strengthening skills for stress management, resilience development, and mental health awareness. When working in a welcoming environment where mental illness is not stigmatized, employees are more likely to seek help, which results in improved psychological health and productivity (Mesmer-Magnus, & DeChurch, 2019).

Furthermore, technology-based mental health solutions offer fresh chances to improve workplace mental health. Online platforms, mobile apps, and virtual therapy services are being used by businesses to provide their staff with simple access to mental health care. These technological solutions can encourage early intervention and better mental health outcomes by giving employees access to resources, self-help tools, and professional treatment. Additionally, peer support networks and employee resource groups support the formation of employee resource groups with a focus on mental health because they recognize the value of peer support. These networks provide a safe environment for workers to communicate, share experiences, and inspire one another (David, Cristea, & Hofmann, 2018).

Through the creation of a sense of community, these activities foster mental wellness and enhance overall employee performance and enjoyment. Manager Support and Training are essential in the endeavour to offer employees personalized mental health solutions. Organizations invest funds in management training programmes to provide them with the necessary resources to properly support their team members (Stinson, Lauterbach & Napolitano,2016). By encouraging open communication, promoting a good work-life balance, and seeing early warning signs of mental health concerns, managers may also positively affect the wellness and productivity of their employees. Contrarily, mindfulness and meditation techniques urge staff to incorporate them into their daily routines, in addition to

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companies designating spaces or hosting workshops. By reducing stress, increasing focus, and boosting emotional wellbeing, these programmes promote productivity and improve overall employee performance (Brucker & Sundar, 2020).

Specific Objectives

- To examine the relationship between counselling, computer technology, and the mental health of employees
- To assess the relationship between stress management, computer technology, and the mental health of employees
- To assess the relationship between work-life balance, computer technology, and the mental health of employees

Theoretical Framework

Job Demands-Resources (JD-R) Model

The Job Demands-Resources Model, developed by Bakker and Demerouti (2007) suggests that job demands and job resources have different effects on employee well-being and performance. According to the JD-R Model, job demands refer to the aspects of the job that require sustained physical, cognitive, or emotional efforts and can lead to strain and burnout if they exceed an individual's capacity. On the other hand, job resources are the factors that facilitate the achievement of work goals, reduce job demands, and stimulate personal growth and development. According to the JD-R Model, job demands and job resources have independent and interactive effects on employee well-being and performance outcomes. High job demands, when not sufficiently offset by job resources, can lead to negative outcomes such as increased stress, burnout, decreased job satisfaction, and lower performance. On the other hand, the presence of job resources can buffer the negative impact of job demands on well-being and facilitate positive outcomes. When employees have access to adequate job resources, they are more likely to experience higher levels of engagement, well-being, job satisfaction, and performance (Choi, & Kim, 2017).

The JD-R model of workplace involvement was developed and introduced by Evangelia Demerouti and Arnold B. Bakker at the beginning of the new millennium. The words "JD-R" stand for Job Demands-Resources, the two main parts of the concept. According to the JD-R paradigm, the relationship between job demands and job resources affects how motivated employees are at work. The physical, psychological, social, or organizational facets of the job that call for consistent effort and are linked to specific costs or energy expenditures are referred to as job demands (Balcombe, & De Leo, 2022). The physical, psychological, social, or organizational elements of the job that are useful in attaining work goals, lower working demands, and promoting individual growth, learning, and development are known as job resources, in contrast. The JD-R Model acknowledges that overly demanding jobs, such as those with a lot of work to do, tight deadlines, and emotional expectations, can make people more stressed out and under strain.

Ebert, Lehr, Heber, Riper, Cuijpers, & Berking, (2016), affirmed that these expectations can significantly affect psychological health in terms of mental health, sometimes resulting in symptoms of anxiety, depression, and burnout. By offering tools and interventions that assist staff in managing their mental health, coping with stress, and improving their general well-being, computer technology can be used to meet these demands. The model also stresses the significance of job resources in reducing the detrimental impacts of job demands on wellbeing. Computer technology can be a useful tool in the context of mental health innovations by giving staff members access to mental health support networks and interventions. This can include apps for mindfulness and stress reduction, online therapy or counselling services, and virtual support groups in addition to digital platforms for psycho-education. These tools can help workers be more resilient and better able to handle the demands of their jobs (Greenhaus, & Powell, 2016).

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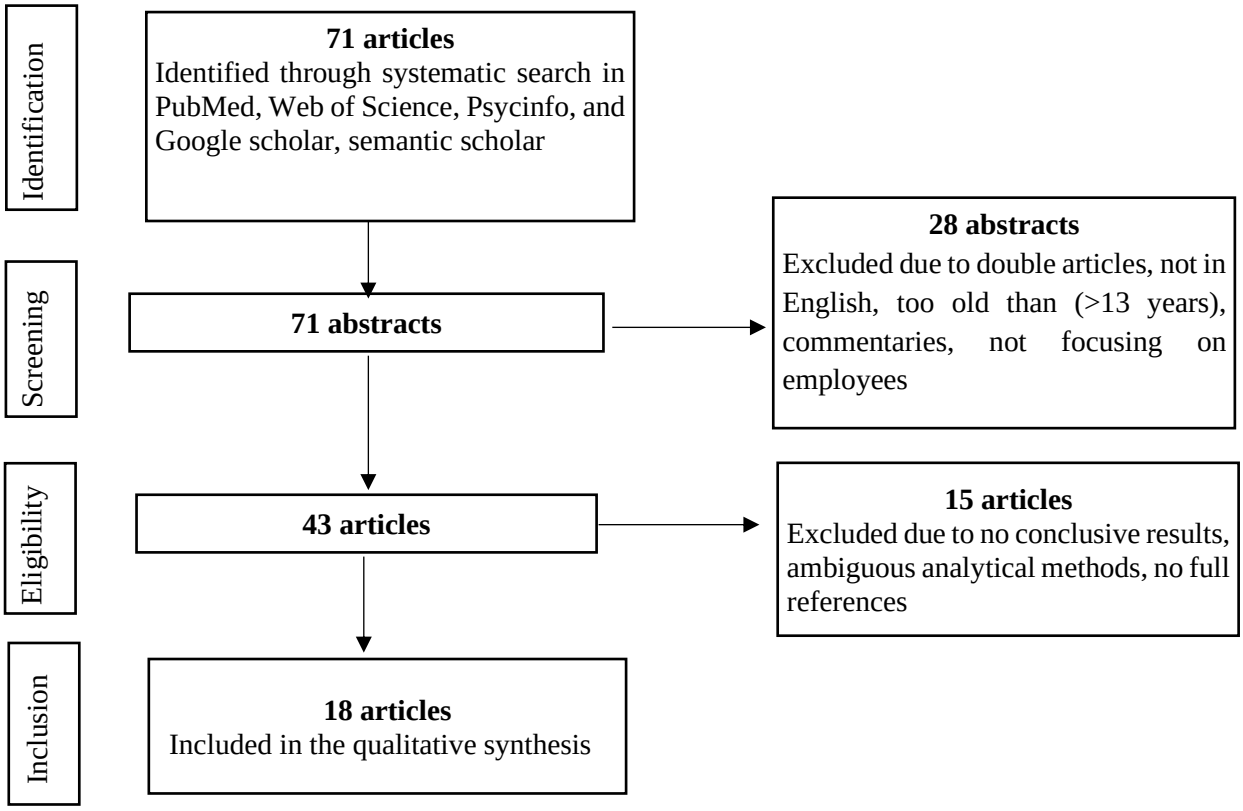
The JD-R Model emphasizes how crucial feedback is in affecting employee performance and motivation. Feedback mechanisms are essential in the context of computer-based innovations in mental health because they increase the efficacy and usefulness of these interventions (Bakker & Van, 2018). Organizations may help employees become more self-aware, drive behaviour change, and continuously enhance the mental health support they receive by gathering data and giving them real-time feedback on their wellbeing. The JD-R Model provides a framework for organizations to develop strategies and policies that prioritize mental health support using computer technology. By understanding the interplay between job demands, resources, and employee performance, organizations can design digital interventions that effectively address mental health challenges, reduce job stress, and promote overall well-being (Ebert, et.al, 2016).

METHODOLOGY

This was a systematic review where bibliographic databases (PubMed, Web of Science, PsycINFO, and Google Scholar, semantic scholar) were systematically searched by screening titles, abstracts, and topics, and applying keywords depending on the database as outlined in the flowchart above. Search terms included *information communication technology, computer, work, occupation, mental health, stress, work-life balance burnout, depression,* and *anxiety*. The review was open to a range of observational quantitative human research on ICT use, stress, depression, and mental health in working populations. Studies were disqualified if they concentrated on populations who did not work, were not published in English, or if the report was insufficient to fully evaluate the procedures and outcomes. Additionally, the scholars decided to restrict the review to more recent works, covering only research released between the years 2010 and 2022.

Figure 1: Flow chart for article identification and selection



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FINDINGS

Relationship between Counselling, Computer Technology, and Mental Health of Employees

The first cluster contained articles that focused on the relationship between counselling, computer technology, and the mental health of employees. The articles focused on the effectiveness of online based counselling interventions on employees' mental health. The relationship between counselling, computer technology, and the mental health of employees has been found to be multifaceted and has significant implications for employee well-being and organizational outcomes. According to Richardson et al., (2015), computer technology has made counselling and therapy more accessible and convenient for employees. Online counselling platforms and teletherapy allow individuals to receive mental health support from the comfort of their own homes or workplaces, eliminating the need for travel and reducing barriers to accessing care. This increased accessibility has the potential to encourage employees to seek help when they need it, potentially improving their mental health outcomes.

The study conducted by Titov et al. (2015) investigated the effectiveness of an online mental health clinic called MindSpot. The clinic offered internet-delivered cognitive-behavioural therapy (iCBT) as a treatment option for anxiety and depression. The researchers found that participants who received iCBT through MindSpot experienced significant improvements in their symptoms and functional impairment. This study highlighted that MindSpot Clinic has an advantage in its accessibility. Through it, individuals can receive treatment regardless of their location, eliminating barriers such as transportation or distance. This makes mental health support more readily available to individuals who may have limited access to traditional in-person services. The study further highlighted that iCBT allowed for greater flexibility in scheduling and reduced waiting times compared to traditional face-to-face therapy. This efficiency can be particularly beneficial for individuals who require timely interventions or have difficulty attending regular in-person sessions due to various reasons.

In a systematic review, Richardson et al., (2015) examined the effectiveness of computerized cognitive-behavioural therapy (cCBT) interventions for depression and anxiety among employees. The study found evidence supporting the efficacy of cCBT in reducing symptoms and improving outcomes, suggesting the potential of computer technology in delivering mental health interventions to younger populations. Kim et al. (2017) developed and evaluated an online workplace mental health intervention for employees. The intervention consisted of online psycho-education and self-help modules. The findings demonstrated improvements in mental health outcomes, job stress, and work engagement among the participants, highlighting the potential effectiveness of computer-based interventions in promoting employee mental health.

Moberg and Driscoll (2018) explored the use of technology-based interventions to improve mental health outcomes among construction workers. The intervention involved a mobile app that provided psycho-education, mindfulness exercises, and stress management tools. The results indicated positive feasibility and acceptability, suggesting the potential of computer-based interventions for promoting mental health in specific occupational settings. The study conducted by Ebert and Baumeister (2017) aimed to evaluate the effectiveness of internet-based self-help interventions for depression in routine care. A sample of employees with depression was recruited from routine care settings. Participants were provided with access to an internet-based self-help intervention specifically designed for treating depression. The intervention is likely to help, consisting of as psycho-educational materials, cognitive-behavioural therapy techniques, and self-monitoring tools. The findings showed significant

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reductions in depressive symptoms among participants who received internet-based interventions, indicating the potential of computer-based counselling as a self-help tool for improving employee mental health.

Chan et al. (2015) investigated whether computer-assisted cognitive remediation (CACR) could improve employment and productivity outcomes for individuals with severe mental illness (SMI). The focus of the study was on individuals with severe mental illness who experienced cognitive impairments that could impact their ability to maintain employment and productivity. The researchers specifically evaluated the effectiveness of CACR, which refers to cognitive remediation programs delivered through computer-based platforms and found that CACR can enhance productivity outcomes for patients with SMI, including higher employment rate, longer duration of work and higher income. It was concluded that the economic benefit of CACR can enhance the quality of life for patients with SMI, and may reduce financial burden on the health and welfare system.

Relationship between Stress Management, Computer Technology, and Mental Health of Employees

The second cluster contained articles that focused on the relationship between stress management, computer technology, and the mental health of employees. The articles focused on the effectiveness of technology-based stress management interventions on employees' mental health. The study conducted by Eisen, Allen, Bollash, and Pescatello (2018) compares the effectiveness of a computer-based stress management intervention with an in-person intervention in the workplace. The study aims to evaluate the impact of these two approaches on stress reduction and overall well-being. The participants were assigned to either the computer-based or in-person stress management program. Both interventions incorporated similar content and techniques, focusing on stress reduction strategies and coping skills. The findings indicated that both interventions led to significant improvements in stress management and reductions in perceived stress levels among the participants.

The study by Ebert et al. (2016) investigates the efficacy and mechanism of change of internet- and mobile-based stress management intervention for employees. The intervention included evidence-based stress management techniques delivered through a web-based platform and a mobile application, with adherence-focused guidance provided to enhance user engagement. The findings of the study demonstrated the efficacy of the internet- and mobile-based stress management intervention. Participants in the intervention group showed significant improvements in perceived stress, depressive symptoms, general mental health, work engagement, and workability compared to the control group. These improvements were sustained at the three-month follow-up assessment

Heber et al. (2016) focus on the effectiveness of a web-based and mobile stress management intervention (GET.ON Stress) for employees through a randomized controlled trial. The study involved 264 employees who reported experiencing elevated stress levels. The participants were randomly assigned to either the intervention group or a waitlist control group. The intervention group received access to a web-based and mobile stress management program, while the control group had delayed access. The researchers assessed various outcomes, including perceived stress, depressive symptoms, general mental health, work-related outcomes (e.g., work engagement, workability), and user satisfaction. The findings of the study indicated that the web-based and mobile stress management intervention was effective in reducing perceived stress, and depressive symptoms, and improving general mental health among employees.

Relationship between Work-life Balance, Computer Technology, and Mental Health of Employees

The third cluster contained articles that focused on the relationship between work-life balance,

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computer technology, and the mental health of employees. The articles focused on the effectiveness of technology-based work-life balance on employees' mental health. Allen, Golden and Shockley (2015) examined the impact of telecommuting, facilitated by computer technology, on work-life balance and mental health. The findings indicated that telecommuting had a positive influence on work-life balance and reduced work-related stress, leading to improved mental well-being among employees. Algesheimer, Dholakia and Gurău (2011) studied the effects of technological mediation on team performance. This study investigated the impact of computer-mediated communication in virtual teams on work-life balance and mental health outcomes. The findings indicated that when technology was used effectively to facilitate communication and collaboration, employees experienced better work-life balance and reduced psychological strain, leading to enhanced mental well-being.

Derks et al., (2014) examined the influence of smartphone use on work-life balance and mental health. The results showed that excessive use of smartphones for work-related activities during non-work time interfered with recovery experiences, leading to higher levels of exhaustion and lower well-being among employees. Golden, Veiga and Simsek (2016) examined the impact of telecommuting on work-family conflict and mental health outcomes. The findings revealed that telecommuting reduced work-family conflict and subsequently improved mental health, suggesting that the use of computer technology to work remotely can contribute to a better work-life balance and enhanced well-being.

Park, Fritz and Jex (2011) investigated how the use of communication technology at home influenced work-home segmentation and psychological detachment from work. The results revealed that excessive use of technology for work-related purposes at home hindered psychological detachment, leading to increased stress, and reduced mental well-being. Setting boundaries between work and personal life was found to be important for maintaining a healthy work-life balance and preserving mental health. In Contrast Choi and Kim (2017) examined the impact of information and communication technology (ICT) use on work-life balance and mental health among South Korean employees. The findings revealed that excessive use of ICT was associated with higher work-family conflict and reduced work-life balance, leading to increased psychological distress and poorer mental health outcomes

Gajendran and Harrison (2017) explored the psychological mediators and individual consequences of telecommuting. It found that telecommuting had positive effects on work-life balance, job satisfaction, and employee mental health. It was found that technology-enabled flexible work arrangements, such as flexible scheduling and remote work, positively influence work-life balance. They provide employees with more control over their work schedules, reduce commuting time, and allow for better integration of work and personal responsibilities. The study also highlighted the importance of factors such as autonomy, control, and supportive work environments in maximizing the benefits of telecommuting on work-life balance. A study by Greenhaus and Powell (2016) proposed a theoretical framework called work-family enrichment, which explores the positive interplay between work and family roles. It suggests that technology can facilitate work-family enrichment by enabling flexibility, efficient communication, and remote work options, thereby improving work-life balance. Mesmer-Magnus and DeChurch (2019) examined the relationship between information sharing facilitated by technology and team performance. The findings indicated that technology-mediated information sharing positively influenced team performance. Effective sharing of information through technology can enhance coordination, collaboration, and productivity, potentially contributing to a better work-life balance by reducing task-related stress.

Summary of Findings

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Based on the reviewed literature, internet-based Cognitive-Behavioural Therapy (CBT) interventions have shown effectiveness in reducing symptoms of anxiety and depression among employees, indicating their potential as a form of computer-based counselling. In addition, Web-based psychotherapy interventions have been effective in reducing posttraumatic stress disorder (PTSD) symptoms among employees who have experienced trauma. Moreover, it was found that Internet and Computer-based self-help interventions have demonstrated positive outcomes in reducing depressive symptoms and improving coping skills among employees. Computer-based counselling, delivered through mobile apps or internet-based platforms, has shown promise in improving mental health outcomes, including reducing symptoms of depression, anxiety, and stress among employees.

Telecommuting, facilitated by technology, has positive effects on work-life balance by reducing work-family conflict and increasing flexibility. It can contribute to better job satisfaction and work-life balance. Technology-mediated information sharing and collaboration enhance team performance and coordination. Effective communication through technology can improve work-life balance by reducing task-related stress. The ability to separate work and personal life, facilitated by technology, is important for work-life balance. Employees who prefer clear boundaries between work and home domains tend to experience better work-life balance and psychological detachment. Improper or excessive use of technology can lead to techno-stress, which negatively affects work-life balance. Organizations should provide support, training, and awareness programs to mitigate techno-stress and promote a healthier work-life balance. However, it was also noted that constant connectivity through technology can lead to work overload and create an expectation of immediate response or availability. This can negatively impact work-life balance by blurring the distinction between work and non-work time and increasing perceived work-related responsibilities.

CONCLUSION

Employees' symptoms of anxiety, sadness, posttraumatic stress disorder (PTSD), and stress have been shown to be positively affected by computer-based counselling. Additionally, these therapies have the potential to enhance coping mechanisms, general wellbeing, and work-related outcomes like job stress and engagement. The accessibility and convenience offered by computer-based interventions make them an attractive option for providing mental health support to a larger population of employees. They have the potential to reach individuals who may face barriers to traditional in-person counselling, such as geographical constraints or stigma associated with seeking help. However, elements like adherence, instruction, and support may have an impact on how effective computer-based counselling interventions are. The relevance of employee involvement and dedication is shown by the association between higher adherence to the interventions and better mental health outcomes. Largely, the results point to the potential of computer-based counselling interventions as an effective strategy for fostering employee mental health.

The review has emphasized both the favourable and unfavourable implications of technology on work-life balance. Through increased flexibility, improved communication, and support for remote work arrangements, technology can improve work-life balance. Sharing information, working together, and being more productive are all made possible, which improves coordination and lowers stress from work-related activities. Technology, though, can make it difficult to maintain a healthy work-life balance. Utilizing technology improperly or excessively can cause friction between work and family life, increase job pressures, and blur the lines between work and personal life. Techno-stress, which results from the abuse or overuse of technology, can have a negative impact on the harmony between work and life and general wellbeing. To ensure that technology supports a healthy work-life balance rather than creating stress and overload, it is crucial to continually evaluate and change work

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practices, policies, and initiatives. In the modern digital era, people and organizations can strive for a harmonious fusion of work and life by utilizing the benefits of technology while encouraging personal well-being.

Recommendations

- Organizations should create guidelines that discourage employees from sending or receiving work-related emails or messages after hours, stress the necessity of turning off all work-related equipment during non-working hours, and encourage a work-life balance-friendly culture.
- Flexible work rules that give employees freedom over their schedules and locations should be adopted by organizations. Options for remote work, flexible work schedules, shortened workweeks, or job-sharing arrangements are a few examples. Employees can better combine their professional and personal obligations by being given flexibility.
- The issues of work-life balance and the effects of technology on employees' wellbeing should be discussed openly by HR management.
- Employees should be made aware of the availability and advantages of work-stress management apps by HR managers. To enlighten staff about the features of the app and how it can aid in stress management, they can hold instructional sessions, share success stories, and offer resources.
- Organizations could offer a variety of technological tools, such as apps for meditation or relaxation, stress monitoring, virtual wellness programmes, or platforms for online counselling. Employees can select the tools that best suit their individual needs and preferences by being given a wide range.

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