AI and Work-Life Balance: A Conceptual Framework for understanding the Role of Artificial Intelligence in Shaping Women's Work-Life Dynamics

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Abstract

The rapid advancement of Artificial Intelligence is transforming the way we live and work. AI has a potential to revolutionize various aspects of our lives, including work-life balance, which is a critical aspect of an individual's overall well-being. The increasing use of artificial intelligence in the workplace has significant implications for work life -balance, particularly for women, with a focus on women's empowerment. This conceptual paper explores the potential impact of AI on work-life balance from a gender perspective, highlighting the opportunities and challenges that AI presents for women in the workforce. We propose a conceptual framework for understanding the AI on work-life balance and provide recommendations for organizations to promote work-life balance and support women in the work place. The model highlights the opportunities and challenges that AI presents to the women in the workforce, including AI enabled flexibility, AI driven workload and job demands, AI facilitated caregiving support, and AI facilitated boundary management. The framework is based on five propositions that examine the impact of AI on work-life balance, boundary management and women empowerment, as well as the moderating effects of organizational and societal support. The framework provides a foundation for future research and practices, emphasising the need for organizations and policy makers to consider the implications of AI on work-life balance and women empowerment.

Keywords: Artificial Intelligence, Work-life Balance, Women Empowerment, Work-life Dynamics

1. Introduction

The rapid advancement of Artificial Intelligence (AI) is transforming work and life, presenting opportunities and challenges (Brynjolfsson & McAfee, 2014). AI's impact on

work-life balance is significant, as it affects individual's ability to manage individual work and personal life (Hill et al., 2010). AI can enhance flexibility and autonomy, improving work-life balance (Kosinski et al., 2015) but raises concerns about job design, workload and boundary management (Baird & Griffin, 2018).

Women's work-life balance is influenced by societal and organizational factors, including caregiving responsibilities and workplace policies (Eagly& Carli, 2007). In India, women often bear a disproportionate burden of caregiving responsibilities, making work-life balance a critical aspect of their lives (Gupta & Sarma, 2021). AI can potentially alleviate some of these challenges by providing flexible work arrangements and caregiving support (Kosinski et al., 2015).

This paper explores AI's relationship with work-life balance, focusing on women's empowerment in the Indian context and proposes a conceptual framework for understanding the AI on work-life balance and provides recommendations for organizations to promote work-life balance and support women in the workplace.

2. Literature Review

2.1.AI and Work-life Balance

The impact of Artificial Intelligence (AI) on work-life balance has been a growing area of research, with studies highlighting both opportunities and challenges. AI has been found to enhance work-life balance by providing flexibility and autonomy (AlOqaily et al., 2025; Capelli et al., 2023). For instance, AI-integrated applications can help financial engineers manage their work schedules and improve their work-life balance (Gao &Zamanpour, 2024). Similarly, AI-based shift scheduling has been found to promote fairness, transparency, and work-life balance among female nurses (Gerlach et al., 2025).

AI can also support women's empowerment and work-life balance in various industries, including education and healthcare (Rony et al., 2024; Meharunisa et al., 2024). For example, AI can help women surgeons manage their work and family responsibilities more effectively, thereby improving their work-life balance (Capelli et al., 2023).

Moreover, AI can reduce workplace stress and enhance work-life balance by automating routine tasks and providing personalized support (George, 2024; Begum & Mishra, 2025). According to Singla and Saxena (2024), AI can play a significant role in improving work-life balance by providing flexibility and autonomy.

2.2.AI and Boundary Management

The impact of Artificial Intelligence on women work-family boundary management has been a growing area of research, with studies highlighting both opportunities and challenges. AI blurs work and family boundaries, affecting work-life balance (Yeo & Li, 2022; Ollier-Malaterre et al., 2019). Women face challenges managing these boundaries due to societal expectations and caregiving responsibilities (Shen & Zamani, 2025; Ghislieri et al., 2017).

AI can increase work-family conflict by adding workload and expectations, particularly for women (Kamboj & A, E. 2025; Halinski et al., 2025). However, it can also offer flexible work arrangements and caregiving support, improving work-life balance (Kashive et al., 2023; Yue &Vejaratnam,).

Women's boundary management strategies differ from men's, often using technology to manage work-family boundaries (Shen & Zamani, 2025). AI can support women's empowerment and work-life balance by providing flexibility and caregiving support (Ollier-Malaterre et al., 2019).

2.3.AI and Women Empowerment

AI has been found to empower women by providing access to education, employment, and healthcare (Al Shehab & Hamdan, 2021; Shahbazi et al., 2024; Iqbal et al., 2025). AI can enhance women's economic empowerment by providing opportunities for entrepreneurship and skill development (Rahman, 2024; Geetha & Saranya, 2025; Alateeg & Al-Ayed, 2024).

AI can also support women's empowerment in various sectors, including education, healthcare, and technology (Ramchandani, 2024; Kaur, 2024; Patil et al., 2024). AI can enhance women's digital literacy, enabling them to participate in the digital economy (Shah,

2024; Abd Karim, 2025). Additionally, AI can be used to promote women's safety and empowerment through AI tools and wearable devices (Gandi et al., 2024; Sekar et al., 2025).

However, AI can also perpetuate gender biases and stereotypes, limiting women's empowerment (Shah, 2024). Women's work-life balance can be affected by AI, with both positive and negative impacts (Mahalakshmi & Jayanthiladevi, 2024; Meharunisa et al., 2024).

2.4.Moderating Role of Organizational Support

AI can enhance work-life balance by automating tasks, improving productivity, and providing flexible work arrangements (Soomro et al., 2024). However, it can also lead to work intensification, blur boundaries between work and personal life, and create job insecurity concerns. Perceived organizational support plays a crucial role in mitigating the negative effects of AI on employee well-being (Li & Khan, 2023). When employees feel supported, they are more likely to adapt to AI technologies and experience improved well-being.

AI can improve work-life balance by optimizing task allocation, reducing workload, and enabling remote work (Kant & Adula, 2024). But, on the other hand, AI adoption can lead to increased stress, anxiety, and decreased job satisfaction if not managed properly (Zeng et al., 2025). Thus, perceived organizational support is critical in ensuring AI adoption benefits both employees and the organization (Yang, 2025). Positive organisational support can reduce the AI anxiety of employees by providing support, resources and reassurance, thereby creating a stress-free work life (Ma et al., 2024). perceived organisational support has a positive moderating role between the competitive advantage and boundary spanning of the employees. However, it does not moderate the relation between employee resilience and competitive advantage (Elfar, 2025).

2.5.Moderating Role of Social Support

Research suggests that societal support plays a crucial role in moderating the relationship between Artificial Intelligence (AI) and work-life balance, ultimately empowering women. Studies have shown that perceived social support (PSS) significantly impacts work-life balance (WLB) in developing countries, with work-life policies acting as a moderator (Uddin et al., 2020).

AI can be a powerful tool for women's empowerment, enhancing work-life balance through personalized support, flexible work arrangements, and optimized time management (Mahalakshmi & Jayanthiladevi, 2024; Meharunisa et al., 2024). Flexible work arrangements, facilitated by AI, can promote sustainable work-life balance and reduce workload (Bellini et al., 2025).

Moreover, societal support can mitigate work-life conflict and burnout among working women, highlighting the importance of support systems in achieving a better balance (Gupta & Srivastava, 2021).

3. Study Methods

This study adopts a conceptual research design with the objective of examining the relationship between Artificial Intelligence (AI) and employees' work–life balance, with special reference to women empowerment and the moderating role of organisational and societal support.

An extensive review of existing literature was undertaken to understand the impact of AI on work–life balance, boundary management, women empowerment and the moderating role of organisational and societal support. Relevant studies were sourced from peer-reviewed journals, books, conference proceedings, and reports published by recognised academic and professional institutions. The literature review focused on identifying key constructs, relationships, and emerging themes related to AI adoption and employee work–life dynamics.

Based on the studied literature, five major propositions were developed explaining the relationships among AI adoption, work–life balance, women empowerment, boundary management and organisational and societal support. These propositions were logically derived from recurring patterns identified in the literature.

Further, a conceptual framework was developed to visually represent the proposed relationships among the study variables and to illustrate the moderating role of organisational and societal support on work–life balance. The framework serves as a foundation for future empirical research and provides a structured understanding of how AI can influence employees' work–life balance within supportive organisational and societal contexts.

4. Research Implications

Although prior studies have examined the impact of artificial intelligence (AI) on employee work–life balance, women's empowerment, and boundary management separately, an integrated examination of these factors remains lacking. Existing research also provides limited insight into the gender-based advantages of AI adoption, particularly for women employees. Furthermore, the moderating role of organizational and societal support in shaping these relationships has received little attention. As a result, there is insufficient understanding of how AI adoption, gender, and support mechanisms jointly influence work–life balance and women's empowerment. This study addresses these gaps by offering a comprehensive analysis of these interrelated factors. The results of this study will contribute valuable insights for the policy formulation and organisational practices in view of the employee work life balance.

Table 1

Variables and Propositions

Variables	Propositions	Equations
AI and Work-Life Balance	AI provides opportunities for flexible work arrangements and caregiving support, enhancing women's work-life balance.	WLC = f (AI_FA, AI_AU, WL, CS) Where: WLC: Work-Life Convergence AI_FA: AI-enabled Flexibility and Autonomy AI_AU: AI-enabled Automation and Support WL: Workload CS: Caregiving Support WLC = β0 + β1(AI_FA) + β2(AI_AU) - β3(WL) + β4(CS) + ε Where β0 is the intercept, β1, β2, β3, and β4 are coefficients, and ε is the error term.
AI and	AI blurs boundaries	WLB = β0 + β1(AI_BB) +

Boundary Management	between work and family, affecting women's work-life balance.	β2(WFBC) + β3(WM) + ε Where:WLB: Women's Work-Life Balance AI_BB: AI-enabled Boundary Blurring WFBC: Work-Family Boundary Characteristics (e.g., flexibility, autonomy) WM: Women's Workload and Expectations (e.g., caregiving responsibilities) β0: Intercept or Constant Term β1, β2, β3: Coefficients representing the relationships between variables ε: Error Term
AI and Women Empowerment	AI has a significant impact on women empowerment with both positive and negative effects.	WE = α + β1(AI Empowerment) + β2(AI Bias) + ε Where: - WE = Women Empowerment -AI Empowerment = AI-driven empowerment factors (access to education, employment, healthcare, entrepreneurship, skill development) - AI_Bias = AI-driven biases and stereotypes limiting empowerment - α = Constant term - β1, β2 = Coefficients representing the impact of AI empowerment and AI_Bias on WE - ε = Error term

Organisational Support	Organizational Support mediates the relationship between AI-driven work-life balance boundary management and women's empowerment, such that high levels of organizational support enhance the positive effects of AI on women's empowerment through effective boundary management.	$WE = \beta_0 + \beta_1(AIWLB) + \beta_2(OS) + \beta_3(BM) + \beta_4(AIWLB \times OS) + \beta_5(OS \times BM) + \varepsilon$ Where: - WE = Women's Empowerment - AIWLB = AI-driven Work-Life Balance - OS = Organizational Support - BM = Boundary Management - ε = Error Term
Societal Support	Societal Support (SS) moderates the relationship between AI-driven support and Women's Empowerment (WE) through Work-Life Balance (WLB), such that high levels of SS enhance the positive effects of AI on WLB and WE.	$WE = \beta_0 + \beta_1(AI) + \beta_2(SS) + \beta_3(AI \times SS) + \beta_4(WLB) + \varepsilon$ $WLB = \beta_0 + \beta_1(AI) + \beta_2(SS) + \beta_3(AI \times SS) + \varepsilon$ Where: - WE = Women's Empowerment - AI = AI-driven support - SS = Societal Support - WLB = Work-Life Balance - ε = Error Term

5. Discussion

The conceptual framework proposes that AI-driven factors, including AI-enabled flexibility and autonomy, AI-enabled automation and support, and AI-enabled boundary blurring, influence work-life balance. Work-life balance, in turn, affects women's empowerment. Organizational support mediates the relationship between AI-driven work-life balance and women's empowerment, while societal support moderates the relationship between AI-driven support and work-life balance.

The framework suggests that AI-driven factors have a significant impact on work-life balance, which subsequently impacts women's empowerment. Additionally, organizational support plays a crucial role in enhancing the positive effects of AI-driven work-life balance on women's empowerment. Societal support also influences the relationship between AI-driven support and work-life balance, highlighting the importance of considering contextual factors in understanding the impact of AI on women's empowerment.

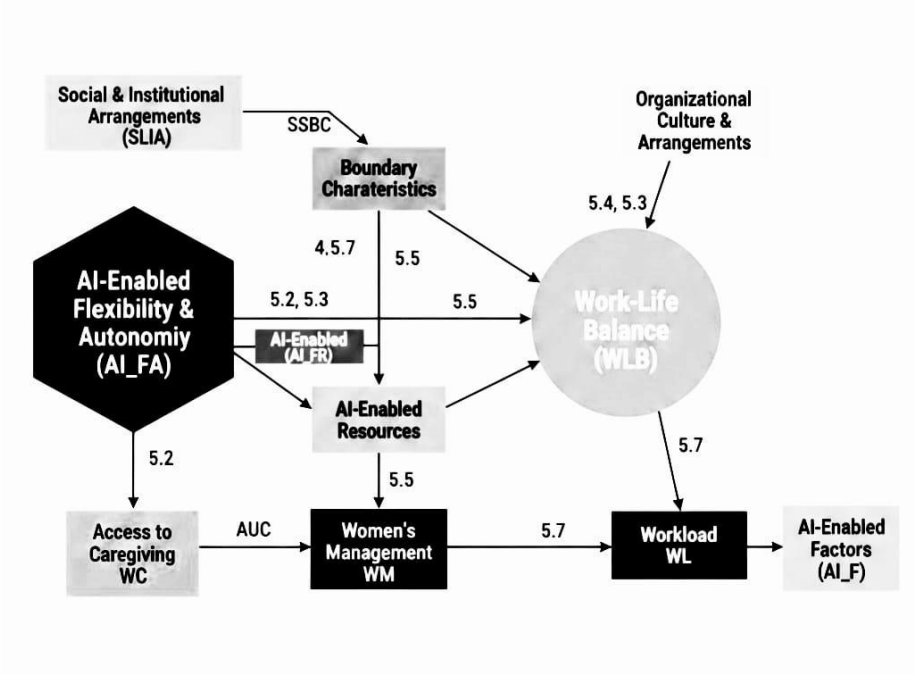

Fig. 1. Conceptual Model for AI-driven Work-Life Balance and Women's Empowerment (Source: Authors' Own Elaboration)

5.1. AI_FA represents AI-enabled Flexibility and Autonomy, meaning artificial intelligence provides tools that give women more flexibility in managing their tasks and greater autonomy in decision-making.

5.2. AI_FA WLB indicates that AI-enabled Flexibility and Autonomy directly influence Work-Life Balance, suggesting that AI-driven flexibility helps women achieve a better balance between work and personal life.

5.3. AI_FR WLB signifies that AI-enabled Flexibility and Resources affect Work-Life Balance, implying that AI-provided resources enhance flexibility, thereby improving women's work-life balance.

5.4. SLIA SSBC refers to Social and Institutional Arrangements (Societal Support) influencing Boundary Characteristics, meaning societal and institutional support shapes how women manage the boundaries between work and family life.

5.5. AUC WM denotes Access and Utilization of Caregiving influencing Women's Management of work-life, indicating that access to caregiving resources helps women manage their work-life responsibilities more effectively.

5.6. OCA WLB means Organizational Culture and Arrangements influence Work-Life Balance, suggesting that workplace culture and policies impact how women balance work and personal life.

5.7. AI_F WL represents AI-enabled Factors influencing Workload, implying that artificial intelligence affects the amount or nature of work women handle.

5.8. AI_FA → shows AI-enabled Flexibility and Autonomy as a central factor affecting various aspects of work-life balance and empowerment, indicating that AI-driven flexibility and autonomy drive changes in work-life balance and women's empowerment.

6. Conclusion and Scope for Future Research

The conclusion of the research paper can be framed around the central role of AI-enabled Flexibility and Autonomy (AI_FA) in shaping work-life balance and empowerment for women.

AI-driven flexibility and autonomy act as a pivotal catalyst that enhances work-life balance by influencing multiple interrelated factors: AI-enabled flexibility and resources (AI_FR WLB), organizational culture (OCA WLB), access to caregiving (AUC WM), societal support (SLIA SSBC), and workload management (AI_F WL). By optimizing these dimensions, AI empowers women to manage professional responsibilities and personal life more effectively, leading to improved overall well-being and greater empowerment in the workplace.

Future research should focus on quantifying the impact of specific AI interventions on each of these factors and exploring tailored strategies to maximize AI's positive influence on work-life balance across diverse contexts.

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