

Work-Life Balance Challenges Across Age Groups in the IT Industry: Insights for Global Collaboration

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Abstract—In the rapidly evolving IT industry, global collaboration has intensified the challenges of maintaining a healthy work-life balance (WLB). This study investigates age-based disparities in WLB among IT employees. Using the Independent-Samples Kruskal-Wallis Test on a dataset of 552 IT employees, the results indicate a statistically significant difference in WLB across age categories. Pairwise comparisons reveal that employee aged 21–30 experience significantly greater WLB challenges compared to those aged 31–40. However, no significant differences are observed between other age categories. These outcomes shed light on the necessity for IT organizations to adopt age-sensitive WLB policies.

Keywords—component; Work-life balance; IT industry; Age disparities; Employee well-being

I. INTRODUCTION

Work-life balance (WLB) is a crucial aspect of modern professional life, especially in high-demand sectors such as Information Technology (IT) (Kaushal, 2021). WLB refers to the equilibrium (Ali, 2022) considering the allocation of time and effort toward occupational obligations and individual life pursuits, including family, health, and leisure. As the global workforce becomes increasingly mobile and interconnected, the significance of keeping a healthy WLB has garnered significant attention from both researchers and practitioners. WLB is linked to a range of outcomes, including job satisfaction, employee well-being, organizational commitment, and productivity (Greenhaus & Allen, 2011). In the IT industry, where long working hours, digital connectivity, and the expectation of constant availability are common, the need for effective work-life balance strategies is especially pressing (Kaushal, 2021).

One of the most pivotal factors influencing WLB is age (Richert-Kaźmierska & Stankiewicz, 2016). Age-related differences in personal responsibilities, career aspirations, and work preferences can significantly affect how individuals experience and manage their work-life balance (Richert-Kaźmierska & Stankiewicz, 2016). Younger employees, particularly those at the beginning of their professional lives, often navigate the pressures of professional growth alongside evolving personal priorities, which can shape their approach to work-life integration. In contrast, middle-aged employees may

benefit from more established roles and clearer work-life boundaries, while older employees might encounter distinct challenges, such as health concerns or increased family responsibilities (Angrisani et al., 2020). Understanding these age-related variations in WLB is crucial for organizations striving to customize their policies in alignment with the varied and evolving requirements of their workforce.

This research aims to delve into and critically investigate the variance in WLB in the context of different age groups among IT employees in Uttar Pradesh, India. This research seeks to determine whether age influences the way employees perceive and manage work-life balance, with a particular focus on the variations between younger, middle-aged, and older employees. By exploring these differences, this study aims to generate analytical perspectives that contribute to a deeper understanding and informed evaluation of organizational policies and practices intended to optimize WLB for employees from different age categories. In the context of global collaboration, understanding and addressing age-based disparities in WLB is essential for fostering effective cross-border teamwork and driving industry-wide innovation. The results of this study will advance our understanding of how demographic factors, specifically age, shape the work-life balance experience and will offer practical recommendations for enhancing employee well-being in the IT sector.

II. LITERATURE REVIEW

- Work-Life Balance and Demographic Factors (Especially Age)

WLB has become a significant focus of academic research, especially within the framework of fast-paced and demanding environment of the Information Technology (IT) industry (Kaushal, 2021). As global collaboration and digital connectivity intensify work pressures, understanding the demographic factors influencing WLB becomes increasingly important (Bhatt & Pathak, 2024). Among these factors, age has been recognized as a key determinant shaping employees' perceptions and experiences of work-life balance (Kaushal & Parmar, 2019).

Earlier studies have consistently highlighted the impact of age on WLB outcomes (Richert-Kaźmierska & Stankiewicz, 2016). Greenhaus and Allen (2011) emphasized that demographic factors, including variables like chronological age, biological sex, and family responsibilities, significantly shape employees' experiences of work-life balance. Younger employees, especially those in the early stages of their careers, often encounter greater work-life conflicts due to the pressures of establishing themselves professionally and managing heightened work expectations (Richert-Kaźmierska & Stankiewicz, 2016). In contrast, older employees, with more established careers and greater control over their work schedules, tend to convey a clearer understanding of balance between work and personal life (Greenhaus & Allen, 2011).

Age-related differences in WLB are particularly relevant in the IT industry, where the demands of digital presenteeism and constant availability can exacerbate work-life conflicts. Younger employees often face greater challenges balancing professional and personal responsibilities due to their early career pressures and the expectation of being perpetually connected. Conversely, older employees may benefit from greater autonomy and accumulated experience, enabling them to manage their WLB better.

Despite the significance of age as a determinant of WLB, the literature often overlooks its nuanced impact within specific industries like IT. In the context of emerging markets such as India, where the IT sector plays a critical role in the economy, understanding how WLB varies across distinct phases of professional development, encompassing the early, mid, and advanced stages of a career—remains underexplored.

- Theoretical Framework and Models Explaining Work-Life Balance Using the Template

Several theoretical frameworks provide insight into the dynamics of WLB and its relationship with age. The Work-Family Border Theory, proposed by Clark (2000), suggests that individuals navigate between work and family domains by managing boundaries. This capacity to keep clear boundaries between one's personal and professional lives is often influenced by personal characteristics, including age. Older employees may have developed more effective boundary management strategies over time, contributing to their perceived higher levels of WLB.

The Conservation of Resources (COR) theory, introduced by Hobfoll (1989), also offers a valuable perspective. This theory posits that people work hard to safeguard and amass resources including time, energy, and social support—to maintain well-being. In the context of WLB, younger employees are more susceptible to resource depletion due to high work demands and limited coping strategies. In contrast, older employees, having accumulated more resources over time, are better equipped to manage work and personal life demands.

Additionally, the Job Demands-Resources (JD-R) model by Bakker and Demerouti (2007) emphasizes that employee well-being is determined by striking a balance between job demands and available resources. Age-related differences in resources—such as experience, autonomy, and social support—affect how employees manage job demands and maintain work-life balance. Older employees, with greater control over their work

environment and higher levels of available resources, often experience better WLB outcomes.

- Gaps in Existing Literature Regarding Age-Specific Differences in Work-Life Balance

While extensive empirical and theoretical investigations have been carried out on the concept of WLB, studies focusing on age-specific differences within the IT industry—especially in emerging economies like India—remain limited. Most existing studies on age and WLB have been conducted in Western contexts or have generalized demographic variables without distinguishing between different career stages. The specific challenges faced by young professionals, mid-career employees, and older workers in the IT sector are often overlooked.

Moreover, there is a scarcity of empirical research examining the way work-life balance evolves over time within the IT industry. Given the sector's unique demands and the varying expectations across career stages, a deeper exploration of age-related disparities in WLB is essential. Understanding these dynamics in the context of India's IT industry can provide valuable insights into the formulation of tailored, age-specific policy interventions designed to optimize and promote employee well-being.

III. METHODOLOGY

- Design of Research

This study applies a quantitative methodology to systematically examine and analyze age-based disparities in WLB among IT employees in Uttar Pradesh, India. Given the increasing demands of digital connectivity and global collaboration in the IT industry, a quantitative approach is well-suited as it enables systematic measurement of variables and the application of statistical techniques to identify significant differences (Creswell, 2014). This research aims to explore the underlying mechanisms of how demographic traits, particularly age, and variations in WLB perceptions among IT professionals.

- Description of the Sample

The study focuses on IT professionals from five major IT hubs in Uttar Pradesh: Lucknow, Noida, Ghaziabad, Kanpur, and Prayagraj. These cities were chosen due to their growing prominence in the IT sector and the diversity of their workforce. Respondents were grouped into three distinct age categories: 21 to 30 years, 31 to 40 years, and 41 years and above. These categories were selected to reflect different career stages and life circumstances that may shape perceptions of WLB. The total sample size consists of 552 respondents, distributed as follows: 460 in the 21 to 30 years group, 83 in the 31 to 40 years group, and 9 in the 41 years and above group. This distribution mirrors the typical demographic composition of the regional IT workforce.

- Data Collection Methods and Kruskal-Wallis Analysis

Data were gathered using a structured survey that captured both demographic information and factors influencing WLB. The survey incorporated a mix of question formats, Various question formats are utilized, including binary (dichotomous)

questions, multiple-choice items, and Likert-scale assessments (5-point scale), to ensure comprehensive data collection. It was distributed both online and through in-person visits to IT organizations in the selected cities, ensuring broad coverage and minimizing response bias (Bryman, 2016).

The primary statistical tool for data analysis was the Independent-Samples Kruskal-Wallis Test, to determine whether there are significant variations (McKnight & Najab, 2010) in WLB across the three age groups. The results indicated a statistically significant difference in WLB among age categories ($p = 0.000$), which led to rejecting the null hypothesis. Pairwise comparisons further revealed that the 21 to 30 years group reported significantly lower WLB compared to the 31 to 40 years group (adjusted $p = 0.000$), while no significant differences were noted between the other groups.

- Explanation of the Variables

Key variables in this study are age and WLB levels:

- Age: Categorized into three groups—21 to 30 years, 31 to 40 years, and 41 years and above—this variable captures different career stages and the unique challenges associated with each phase.
- Work-Life Balance Levels: Measured on a Likert scale with 5 points (ranging from Very Low to Very High), this variable reflects employees' ability to manage professional responsibilities with personal and family life, a crucial factor for job satisfaction and overall health and happiness.

This analysis seeks to give a thorough insight of the impact of age on WLB perceptions among IT employees in Uttar Pradesh using Table 1 and 2, and Fig. 1. These findings can inform the development of age-sensitive policies and targeted interventions to optimize employee well-being and maximize productivity in the evolving IT sector.

IV. DATA ANALYSIS AND INTERPRETATION

Independent-Samples Kruskal-Wallis Test: Difference in Work-Life Balance Across Age (in Years) Groups

TABLE I.

Hypothesis Test Summary for Work-Life Balance Across Age Groups		Hypothesis Test Summary			
Null Hypothesis	Test	Test Statistic	Sig.	Decision	
There is no significant difference in Work-Life Balance across categories of Age (in years).	Independent-Samples Kruskal-Wallis Test	19.236	.000	Reject the null hypothesis.	
a. The threshold for statistical significance is established at 0.050. b. The asymptotic significance is presented. c. Degree Of Freedom is 2.					

Interpretation- The Kruskal-Wallis test was conducted to compare WLB across different age groups. The p-value is below the significance level (0.001), indicating a statistically

significant difference in WLB among age groups. Therefore, the null hypothesis is rejected, meaning that the distribution of WLB scores differs across age categories. This suggests that age may influence perceptions or experiences of WLB within the sampled population. These findings imply that interventions aimed at improving Work-Life Balance may need to be tailored to different age groups to address their specific needs.

Fig. 1. Work-Life Balance Distribution Across Age Groups

The boxplot visualizes the differences in WLB scores across age categories. The 21 to 30 years group exhibits higher median compared to the 31 to 40 years group and 41 & above group, suggesting potentially better work-life balance. The median for 31 to 40 years group and 41 & above group is almost similar. 31 to 40 years group shows the greatest variability in reported work-life balance scores, as evidenced by the largest interquartile range. This reflects statistically significant variations as identified by the Kruskal-Wallis test.

TABLE II.

Pairwise Comparisons of Age (in years)					
Sample 1-Sample 2	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj. Sig.
41 & above-31 to 40	10.882	52.618	.207	.836	1.000
41 & above-21 to 30	84.837	50.465	1.681	.093	.278
31 to 40-21 to 30	73.955	17.881	4.136	.000	.000

a. Each row assesses the null hypothesis that there is no difference between the distributions of Sample and Sample 2.

b. Reported significance values are asymptotic and correspond to two-sided tests, with a defined significance level of 0.050.

c. To mitigate the risk of Type I errors arising from multiple comparisons, significance values have been adjusted using the Bonferroni correction.

Interpretation- The Independent-Samples Kruskal-Wallis Test demonstrated significant differences in WLB across age groups, with a p-value of $< .001$. Pairwise comparisons provided further insights into these differences.

Between the 41 & above and 31 to 40 years age groups, the p-value after Bonferroni adjustment was 1.000, indicating no significant difference in their WLB perceptions. Similarly, the comparison between the 41 & above and 21 to 30 years groups showed no significant difference, with an adjusted p-value of .278. However, a significant difference emerged between the 31 to 40 years and 21 to 30 years age groups, with an adjusted p-value of .000, with 31 to 40 years age groups reporting a better WLB with a positive test static (73.955).

These results suggest that while the younger and older age groups share similar levels of work-life balance, the 31 to 40 years group experiences markedly different perceptions, likely due to the unique challenges of this life stage.

V. DISCUSSION

- Analysis of the Results

The findings of this study demonstrate a noteworthy correlation between age and WLB among IT professionals in Uttar Pradesh. The Independent-Samples Kruskal-Wallis Test indicated a statistically significant variance in WLB across different age categories ($p = 0.000$), resulting in the rejection of the null hypothesis. Pairwise comparisons demonstrated that the most notable difference exists between employees aged 21 to 30 years and those aged 31 to 40 years, with the younger group reporting lower WLB scores which is consistent with the findings of Richert-Kaźmierska and Stankiewicz (2016). This discrepancy suggests that early-career employees may face greater work pressures, digital presenteeism, and expectations of constant availability, contributing to heightened WLB challenges. However, there was no discernible difference found between the 41 & above and the 31 to 40 years groups, indicating a stabilization of WLB perceptions beyond the early career phase.

- Implications of the Findings for Organizations and Policymakers

The findings of this investigation have important ramifications for organizations and policymakers striving to enhance WLB within the IT sector. Given the significant differences in WLB across age groups, a single-size-fits-all strategy to WLB policies may prove ineffective. These findings have broader implications for global IT organizations managing geographically dispersed and age-diverse teams. Tailored WLB policies that address the unique needs of different age groups can enhance international collaboration by reducing burnout, increasing engagement, and fostering innovative thinking across borders. Younger employees, particularly those aged 21 to 30, may benefit from initiatives aimed at reducing digital presenteeism and promoting boundaries around work hours, such as structured remote work options and digital disconnection policies. In contrast, employees aged 31 to 40 years, balancing career growth with increased personal responsibilities, could benefit from workload management strategies and additional support mechanisms like childcare assistance and flexible scheduling. For the 41 & above group, policies focused on sustaining well-being and mitigating burnout, such as leadership training and extended leave options, may prove beneficial.

Policymakers should advocate for age-sensitive WLB policies tailored to the evolving needs of employees at different life stages. By identifying the unique challenges encountered by various demographic groups, organizations can create a more encouraging and fairer workplace, which will improve workers' well-being, increases retention rates, and optimizes overall productivity.

- Possible Reasons for Variations in Work-Life Balance Across Different Age Groups

The differences in WLB observed among various age groups can be explained by shifting demands of personal and professional life as employees progress through their careers. Employees aged 21 to 30 years often encounter early-career pressures, such as establishing themselves professionally and meeting the expectations of digital availability, leading to increased WLB challenges.

For the 31 to 40 years age group, the dual demands of career advancement and familial responsibilities, such as childcare or eldercare, contribute to moderate WLB levels. This stage often involves increased job responsibilities and leadership roles, leading to greater stress and a need for enhanced support systems.

Among employees aged 41 and above, WLB perceptions stabilize as they adapt to the obligations associated with their professional and personal roles. While they may still face challenges like long work hours and leadership pressures, their experience and established coping mechanisms likely contribute to more balanced WLB perceptions.

In summary, this study's findings align with broader research on age-related disparities in WLB, emphasizing the importance of age-specific interventions. By addressing the unique needs of each age group, IT organizations can foster a collaborative and efficient organizational climate which can significantly contribute to the optimization of workplace dynamics, thereby promoting the overall psychological and occupational well-being of employees.

VI. CONCLUSION

This study investigated the variation between age and WLB among IT employees in Uttar Pradesh, India, emphasizing how age influences work-life dynamics. The Independent-Samples Kruskal-Wallis Test revealed statistically significant differences in WLB across three age groups—21 to 30 years, 31 to 40 years, and 41 years and above. Notably, employees aged 21 to 30 reported lower levels of work-life balance, facing greater challenges likely due to heightened work pressures and expectations of constant availability. In contrast, the 31 to 40 years group exhibited significantly better WLB, possibly benefiting from more established careers and greater work-life stability. Employees aged 41 and above showed no significant difference in WLB compared to the 31 to 40 group, suggesting a levelling off of work-life balance perceptions beyond mid-career stages.

These findings underscore the importance of recognizing diverse WLB needs at different career stages. Younger employees may require initiatives supporting work-life integration, flexibility, and professional development, while mid-career employees might benefit from strategies focused on managing workload and maintaining stability. Older employees may need support addressing work intensity, career transitions, and health considerations. Tailored interventions aligned with these varying needs can enhance employee well-being and productivity across age groups.

- Suggestions for Upcoming Studies

Future research should broaden the scope by including diverse industries and geographic locations to broaden the applicability and robustness of the findings. A more insightful

comprehension of WLB could be achieved by examining additional demographic variables, including gender, marital status, and parental responsibilities. Furthermore, longitudinal research tracking work-life balance would eventually yield more profound understandings of the evolving nature of these dynamics across different stages of employees' careers.

Investigating the specific mechanisms through which age impacts WLB—such as changing job demands, career aspirations, and personal priorities—could strengthen theoretical frameworks. Qualitative methods like interviews and focus groups may also provide richer perspectives on how employees from different age groups experience work-life balance.

- Practical Implications for Improving Work-Life Balance Based on Age-Related Differences

Addressing age-specific WLB needs is pivotal for the health of employees and also plays a significant part in improving global workforce management and collaborative innovation. In the context of global collaboration, teams often consist of diverse age groups working across different time zones and cultural environments. By developing tailored WLB programs that consider the distinct challenges faced by younger, mid-career, and older employees, organizations can cultivate a highly engaged and efficient global workforce. Flexible work policies, digital disconnection initiatives, and workload management strategies can help mitigate burnout and improve work-life integration, leading to more effective cross-border collaboration and innovative problem-solving. These efforts ultimately contribute to building a resilient and adaptable workforce capable of driving global industry innovation.

The study's findings suggest several practical steps for organizations aiming to improve WLB across different age groups:

Tailored Work-Life Balance Programs: Organizations should develop age-specific WLB initiatives. Younger employees may benefit from adaptable work schedules, availability of telecommuting arrangements, and provision of continuous professional growth initiatives. Mid-career employees might require workload management and career growth support, while older employees could benefit from health-related assistance and career transition programs.

Training and Awareness: HR departments should conduct training to increase awareness of varying WLB needs across career stages. Managers equipped with this understanding can better address the distinct challenges faced by each age group.

Policy Adjustments: Companies should adapt their policies to support employees across different age groups. Flexible leave options, childcare support, and retirement planning could enhance WLB for older employees, while younger employees may benefit from policies promoting work-life integration and growth.

Supportive Organizational Culture: Fostering an organizational culture that acknowledges diverse WLB needs and encourages open communication and flexibility can significantly improve job satisfaction and retention.

The implementation of these strategies has the potential to improve the wellbeing of employees, leading to greater job

satisfaction, productivity, and long-term organizational commitment. By addressing age-specific WLB challenges, organizations not only enhance employee well-being but also strengthen their capacity for global collaboration and innovation, positioning themselves for long-term success in an interconnected world.

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