

AI Usage and Its Correlation with Work-Life Balance and Efficiency Among BPO Employees in Ortigas Center

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Abstract

This study examined the relationship between artificial intelligence (AI) usage, work-life balance, and perceived work efficiency among Business Process Outsourcing (BPO) employees in Ortigas Center, Pasig City. As AI technologies continue to transform BPO operations, employees are increasingly expected to use digital tools such as chatbots, workflow automation, predictive analytics, and other AI-supported systems in managing daily tasks. Guided by the Job Demands–Resources (JD-R) model, the study treated AI as a possible workplace resource that may reduce repetitive work, support faster decision-making, and improve task performance, while also recognizing that AI adoption may create adjustment demands, training needs, and technological pressure. A quantitative correlational research design was used, with data gathered from 300 respondents across five selected BPO companies. A structured questionnaire measured the respondents' level of AI usage, perceived work-life balance, and self-reported work efficiency. The data were analyzed using descriptive statistics, Pearson correlation, regression analysis, t-tests, and ANOVA to determine the strength and significance of the relationships among the variables. Findings showed that employees reported high levels of AI usage and generally perceived themselves as efficient in performing work-related tasks. However, inferential results revealed no statistically significant relationship between AI usage and work-life balance, nor between AI usage and work efficiency. Work-life balance also did not significantly differ when respondents were grouped according to their level of AI usage. These results suggest that AI usage alone does not directly explain differences in employee efficiency or work-life balance. The study concludes that responsible AI integration should be supported by organizational practices such as employee training, workload management, leadership support, wellness initiatives, and clear implementation guidelines to maximize the benefits of AI while protecting employee well-being.

Keywords: Artificial Intelligence, BPO Employees, Work-Life Balance, Work Efficiency, Job Demands–Resources Model

1. Introduction

Artificial Intelligence (AI) has increasingly transformed contemporary workplaces by automating routine processes, improving decision-making, and supporting faster service delivery. In service-oriented industries, AI is commonly applied through chatbots, workflow automation, predictive analytics, customer relationship management systems, and data-driven monitoring tools. These technologies are designed to enhance operational efficiency and reduce repetitive tasks, allowing employees to focus on work that requires judgment, communication, and problem-solving (Davenport & Ronanki, 2018; Huang & Rust, 2018). In the Business Process Outsourcing (BPO) sector, where speed, accuracy, and continuous customer service are central to daily operations, AI has become a significant tool for improving productivity and service quality.

The BPO industry is highly dependent on employee performance, adaptability, and the ability to manage demanding work conditions. Employees often handle large volumes of customer concerns, shifting schedules, performance targets, and technology-mediated tasks. While AI may help reduce manual workload and improve task completion, its integration also changes the nature of work by requiring employees to learn new systems, adjust to automated processes, and maintain productivity within technology-driven environments. Thus, AI can be understood not only as a productivity tool but also as a workplace factor that may influence employees' work experiences, well-being, and perceived efficiency.

Work-life balance remains an important concern in technology-intensive workplaces. It refers to the extent to which employees are able to manage work responsibilities while maintaining personal, family, and social roles (Greenhaus & Allen, 2011). In BPO settings, work-life balance may be affected by long working hours, rotating shifts, high client expectations, and constant performance monitoring. Although AI may support employees by simplifying tasks and reducing repetitive activities, it does not automatically guarantee better work-life balance. Its effect may depend on how organizations implement AI systems, provide training, manage workloads, and support employees in adapting to technological changes.

At the same time, AI adoption may produce both positive and negative workplace outcomes. On one hand, AI can support employee efficiency by speeding up information retrieval, reducing errors, organizing workflows, and assisting in customer

service processes. On the other hand, poorly supported technology adoption may contribute to technostress, which occurs when employees experience pressure, anxiety, or difficulty in coping with technology-related demands (Tarafdar, Cooper, & Stich, 2019). This dual role of AI suggests that its impact on employees cannot be measured only through productivity gains. It must also be examined in relation to employee well-being, work-life balance, and perceived work efficiency.

This study is anchored on the Job Demands–Resources (JD-R) model, which explains that workplace conditions may function either as demands that require effort or as resources that help employees achieve work goals and reduce strain (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001; Bakker & Demerouti, 2007). Within this framework, AI may serve as a job resource when it reduces workload, supports faster task completion, and improves work efficiency. However, it may also become a job demand when employees are required to adapt to new systems without sufficient training, guidance, or organizational support. The JD-R model therefore provides a useful lens for examining the relationship between AI usage, work-life balance, and efficiency among BPO employees.

Despite the increasing adoption of AI in BPO operations, there remains a need to understand whether AI usage is significantly associated with employees' work-life balance and perceived work efficiency. Much of the existing discussion on AI emphasizes automation, cost reduction, and organizational productivity, while fewer studies focus on how employees experience AI in relation to their personal well-being and daily work performance. Addressing this gap is important because successful AI integration depends not only on technological capability but also on responsible implementation, employee readiness, and supportive organizational practices.

Thus, this study examined AI usage and its correlation with work-life balance and efficiency among BPO employees in Ortigas Center. Specifically, it sought to determine the extent of AI usage across different job roles, evaluate the relationship between AI tool utilization and work-life balance, determine the association between AI exposure and perceived work efficiency, and compare work-life balance across different levels of AI usage. The findings may provide useful insights for BPO organizations, human resource practitioners, supervisors, and policymakers in designing AI-related strategies that improve operational performance while protecting employee well-being.

2. Material and methods

2.1 Research Design

This study employed a quantitative correlational research design to examine the relationship among artificial intelligence usage, work-life balance, and perceived work efficiency among Business Process Outsourcing employees. A correlational design was appropriate because the study aimed to determine the degree and direction of association among the variables without manipulating the work environment or controlling employee exposure to AI tools. As explained by Bhandari (2021), correlational research is used to investigate relationships between two or more variables without researcher intervention. In this study, AI usage served as the independent variable, while work-life balance and perceived work efficiency served as the dependent variables. This design allowed the researcher to determine whether higher levels of AI usage were associated with better work-life balance or greater work efficiency among employees.

2.2 Research Setting

The study was conducted among selected Business Process Outsourcing companies located in Ortigas Center, Pasig City. Ortigas Center was chosen because it is one of the major business districts in Metro Manila and is home to several BPO companies that use technology-driven systems in daily operations. The selected companies employed AI-supported tools such as chatbots, workflow automation, customer service systems, and predictive analytics. These tools made the setting appropriate for examining how AI usage relates to employee work-life balance and efficiency in an actual BPO environment.

2.3 Respondents of the Study

The respondents of the study were 300 employees from five selected BPO companies in Ortigas Center. They represented different job roles within the BPO sector, including customer service, technical support, administrative support, and other related operational functions. These respondents were selected because they had direct experience with AI-assisted tools or technology-supported work processes. Their responses provided useful information on how AI usage is experienced across various work roles and how it may relate to employee well-being and perceived work performance.

2.4 Sampling Procedure

The study used a purposive sampling technique in selecting the respondents. This method was appropriate because the study required participants who were currently employed in BPO companies and had exposure to AI-supported systems in their workplace. Purposive sampling allowed the researcher to focus on employees with relevant experience in using AI tools, making their responses more aligned with the objectives of the study. The inclusion of employees from five companies also helped provide a broader view of AI usage across different BPO work settings.

2.5 Research Instrument

The study used a structured survey questionnaire as the main data-gathering instrument. The questionnaire gathered information on the respondents' profile, level of AI usage, perceived work-life balance, and perceived work efficiency. The AI usage section focused on the frequency and extent of using AI-supported tools in daily work tasks. The work-life balance section measured how employees managed work responsibilities alongside personal and family life, while the work efficiency section assessed employees' perceptions of productivity, task completion, accuracy, and time management. The use of a structured questionnaire was suitable because it allowed the researcher to collect quantifiable data from a large group of respondents in a consistent manner.

2.6 Data Gathering Procedure

Before data collection, the researcher secured the necessary permission from the concerned companies and informed the respondents about the purpose of the study. Participation was voluntary, and respondents were assured that their identities and responses would remain confidential. After informed consent was obtained, the survey questionnaires were distributed to the qualified participants. The completed questionnaires were collected, checked for completeness, encoded, and prepared for statistical analysis. This procedure ensured that the data were gathered systematically and ethically while protecting the privacy of the respondents.

2.7 Data Analysis Techniques

The collected data were analyzed using descriptive and inferential statistical tools. Frequency and percentage were used to describe the profile of the respondents, while weighted mean and standard deviation were used to determine the level of AI usage, work-life balance, and perceived work efficiency. Pearson correlation was applied to test the relationship between AI usage and work-life balance, as well as the relationship between AI usage and work efficiency. Regression analysis was used to examine the predictive association among the variables. In addition, t-tests and analysis of variance were used to compare work-life balance across different levels of AI usage. These statistical techniques were appropriate because the study aimed to describe variable levels and determine whether significant relationships existed among them.

2.8 Ethical Considerations

The study observed ethical standards in conducting research involving human participants. Respondents were informed about the objectives of the study, the voluntary nature of their participation, and their right to withdraw at any point. Informed consent was obtained before the survey was administered. Confidentiality and anonymity were maintained by ensuring that no personal identifiers were disclosed in the analysis and reporting of results. The data gathered were used solely for academic research purposes and were presented in aggregate form. These measures helped ensure that the study was conducted with respect, fairness, and responsibility toward the participants.

3. Results and Discussion

3.1 Extent of Artificial Intelligence Usage among BPO Employees

The findings showed that artificial intelligence was already present in the daily work processes of BPO employees, particularly in tasks involving customer support, workflow automation, data processing, and information retrieval. This indicates that AI is being used as an operational support tool that helps employees manage repetitive and routine tasks more efficiently. However, the results also suggest that AI does not fully replace human decision-making, since employees still perform judgment-based, communication-centered, and problem-solving tasks that require human involvement.

This finding supports the view of Davenport and Ronanki (2018), who emphasized that AI in organizations is often used to automate processes, generate insights, and support engagement rather than fully substitute human labor. In the BPO context, AI may help improve task speed and reduce manual workload, but its effectiveness still depends on how employees understand, accept, and use the technology. Similarly, Huang and Rust (2018) explained that AI transforms service work by handling repetitive tasks while allowing human workers to focus on more complex service functions. Thus, AI usage among BPO employees may be viewed as a partial integration of technology into work systems rather than a complete transformation of employee roles.

3.2 Level of Work-Life Balance among BPO Employees

The results revealed that BPO employees reported a high level of work-life balance despite the presence of AI-assisted systems in their workplace. This suggests that employees were generally able to manage their work responsibilities while maintaining personal and family-related roles. In BPO settings, work-life balance is especially important because employees often deal with shifting schedules, high performance standards, customer-related stress, and technology-mediated workloads.

The finding aligns with Greenhaus and Allen (2011), who described work-life balance as the extent to which individuals are able to meet both work and non-work responsibilities. Although AI may help employees complete tasks faster, the presence of technology alone does not automatically ensure better balance between work and personal life. Work-life balance may still depend on organizational policies, workload distribution, leadership support, flexible arrangements, and

employee coping strategies. This means that AI can support employees, but it must be accompanied by human-centered workplace practices to produce meaningful improvements in employee well-being.

3.3 Level of Work Efficiency among BPO Employees

The findings showed that employees reported a high level of perceived work efficiency. This indicates that respondents generally believed they were able to complete tasks, meet performance expectations, manage time, and maintain productivity in the workplace. AI-assisted tools may have contributed to this by helping employees access information faster, reduce repetitive tasks, and organize work processes more effectively.

This result is supported by Brynjolfsson, Li, and Raymond (2023), whose study on generative AI in customer support found that AI assistance improved worker productivity, particularly among less-experienced employees. In a BPO environment, similar tools may help employees respond to customer concerns, retrieve information, and complete service-related tasks more efficiently. However, the present findings should be interpreted carefully because high perceived efficiency does not necessarily mean that AI alone caused the improvement. Efficiency may also be influenced by employee experience, training, supervision, workload, system quality, and organizational support.

3.4 Relationship between AI Usage and Work-Life Balance

The correlation results showed no significant relationship between AI usage and work-life balance. This means that the level of AI usage among employees was not statistically associated with their level of work-life balance. Although AI may help automate routine tasks, the findings suggest that using AI more frequently does not necessarily lead to better balance between work and personal life.

This result may be explained through the Job Demands–Resources model, which states that workplace factors may function either as demands or resources depending on how they are experienced by employees (Demerouti et al., 2001; Bakker & Demerouti, 2007). AI may serve as a resource when it reduces workload and supports task completion, but it may also become a demand when employees experience pressure to learn new systems, adjust quickly, or work under increased monitoring. Tarafdar, Cooper, and Stich (2019) also noted that technology may create technostress when employees feel burdened by constant adaptation to digital systems. Therefore, the absence of a significant relationship suggests that AI usage alone is not enough to improve work-life balance unless it is supported by proper training, reasonable workloads, and employee-centered management practices.

3.5 Relationship between AI Usage and Work Efficiency

The results also revealed no significant relationship between AI usage and perceived work efficiency. This means that employees who used AI more frequently did not necessarily report significantly higher work efficiency than those with lower AI usage. While AI may help improve certain work processes, its presence does not automatically result in measurable improvements in employee efficiency.

This finding does not contradict previous literature but rather adds nuance to it. Brynjolfsson et al. (2023) found that AI tools can increase productivity in customer service settings, but such gains depend on how the tools are implemented and how workers use them. Likewise, Davenport and Ronanki (2018) emphasized that AI adoption must be connected to clear business goals, organizational readiness, and process improvement. In the present study, the non-significant relationship suggests that AI may be functioning mainly as a support tool rather than a direct driver of performance. Employees may still rely on experience, communication skills, task knowledge, and workplace systems to maintain efficiency.

3.6 Difference in Work-Life Balance across Levels of AI Usage

The ANOVA results showed no significant difference in work-life balance when employees were grouped according to their level of AI usage. This means that employees with low, moderate, or high AI usage did not significantly differ in their reported work-life balance. The finding suggests that work-life balance is not determined solely by exposure to AI tools.

This result reinforces the idea that employee well-being is shaped by several workplace factors. According to the Job Demands–Resources model, resources such as supervisor support, autonomy, training, and manageable workload may reduce strain and improve employee engagement, while demands such as time pressure, emotional labor, and excessive monitoring may increase stress (Demerouti et al., 2001; Bakker & Demerouti, 2007). In the BPO sector, even when AI is available, employees may still experience demanding schedules, performance targets, and customer-related pressure. Therefore, differences in work-life balance may be better explained by organizational support, work arrangements, leadership practices, and employee coping mechanisms rather than AI usage level alone.

3.7 Synthesis of Findings

Overall, the findings indicate that AI is already integrated into BPO work processes and may support employees in performing routine and technology-assisted tasks. Employees reported favorable levels of work-life balance and work efficiency, suggesting that they were generally able to adapt to digital work systems. However, the statistical results showed that AI usage was not significantly related to work-life balance or work efficiency, and work-life balance did not significantly differ across AI usage levels.

These findings suggest that AI should not be viewed as an automatic solution to productivity and employee well-being concerns. Instead, AI should be treated as one part of a broader organizational system. Its benefits are more likely to be realized when supported by adequate employee training, clear implementation guidelines, workload management, ethical monitoring, and wellness-oriented leadership. In this sense, AI may improve BPO operations, but its positive effect on employees depends on how responsibly and humanely it is integrated into the workplace.

4. Conclusion & Recommendations

The study concludes that although artificial intelligence is increasingly used in BPO operations, its usage did not show a significant relationship with employees' work-life balance and perceived work efficiency. This means that AI alone does not automatically improve employee well-being or workplace performance. Its effectiveness still depends on proper implementation, employee training, workload management, and organizational support. Therefore, BPO companies should provide continuous training on AI tools, establish clear guidelines for responsible AI use, monitor employee workload, and maintain wellness programs that support work-life balance. Future studies may explore other factors such as leadership support, employee readiness, job role differences, and organizational culture to better understand how AI can be used effectively while protecting employee welfare.

Compliance with ethical standards

This study was conducted in accordance with ethical standards for research involving human participants. Prior to data collection, the respondents were informed about the purpose of the study, the voluntary nature of their participation, and their right to withdraw at any time without penalty. Informed consent was obtained from all participants before they answered the survey questionnaire. The confidentiality and anonymity of the respondents were strictly maintained, and no personal or company-identifying information was disclosed in the analysis and presentation of findings. All collected data were used solely for academic research purposes and were reported in aggregate form. The author declares that there is no conflict of interest in the conduct of this study.

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