

Designing AI-Enabled HR Systems for Working Mothers: A Moderated Mediation Model of Time Pressure, Intelligent Work Flexibility, and Technostress

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ABSTRACT

Purpose: The integration of artificial intelligence in human resource systems, i.e., AI-enabled HR support (AIHR), has shown potential in enhancing employee efficiency and productivity. However, its impact on reducing the time pressure of a specific demography - Indian working mothers - remained underexplored. Grounded in the Transactional Model of Stress (TMS) and Self-Determination Theory (SDT), this study examines how AIHR influences time pressure through the mediation of intelligent work flexibility, and whether this relationship is moderated by technostress.

Research Methodology: The study adopted a quantitative, cross-sectional research design using Partial Least Squares Structural Equation Modelling (PLS-SEM) for data analysis. Employing the purposive sampling method, the data were collected from 464 Indian working mothers. The data was analysed using SmartPLS4 software.

Major Findings: The study observed a significant negative association between AIHR and time pressure, as well as a positive relationship with intelligent work flexibility, which, in turn, was negatively related to time pressure. A significant yet weak mediation of intelligent work flexibility between AIHR and time pressure was observed. Importantly, moderation of technostress within the mediated pathways was observed.

Originality: The study uniquely combines TMS and SDT theories and extends their application to the population of working mothers. This study provides insights for AI developers, organisations, and HR teams to better understand how to support working mothers by using digital tools that ease time-related pressures, thereby creating a more inclusive and efficient work environment.

Keywords: AI-enabled HR, Time pressure, Intelligent work flexibility, Technostress, Working mother

