

Professional Obsolescence and Well-Being of Middle-Aged IT Employees: The Mediating Role of Generativity

Anshika Mehrotra^{1*}, Ananya Shankarananda Shastry²

ABSTRACT

The information technology (IT) sector of India stands as a pivotal player in the global technology landscape. IT employees have long faced unique stressors that are a function of their work context (Kumari et al., 2014). Gussek et al. (2021) presents an all too relevant problem for current IT professionals - skill obsolescence, the discrepancy between knowledge and skills of an employee and their job requirements. In today's rapidly evolving landscape, skill obsolescence poses a significant threat, as without upskilling, professionals risk becoming irrelevant, hampering both their career growth, and satisfaction and well-being. Hence, we aimed to evaluate the following research questions a) "Does skill obsolescence (SO) predict the extent of well-being (WB) in IT professionals" b) "Does generativity mediate the relationship between SO and WB in middle aged professionals" as this is the age of grasping mastery and expertise in occupational domains which is hampered due to constant upgradation of skills. A sample of 83 employees (mean age = 45; M=72; F=11) was asked to complete three scales – Professional Obsolescence Scale (Chauhan & Chauhan, 2009), Psychological Well-Being Scale (Sisodia & Choudhary, 2012) and Loyola Generativity Scale (McAdams & Aubin, 1992). We analyzed data using Pearsons' Product Moment Correlation, Multiple Linear Regression and Generalised Linear Mediation Model. Results indicated a significant negative correlation between professional obsolescence and WB ($r = -0.476, p < 0.001$), and professional obsolescence and generativity ($r = -0.374, p < 0.001$). The influence of professional obsolescence on WB was partially mediated by generativity.

Keywords: Professional Obsolescence, Well-Being, Middle-Aged IT Employees, Mediating Role of Generativity

Middle age is often considered the age of grasping mastery and expertise in occupational domains. Further, the skill acquisition that individuals have invested many resources into is expected to benefit them in their workplace, and their expertise usually offsets any age-related disadvantages that they might begin to face (Krampe & Charness, 2006; Waldman & Avolio, 1986). While seeking new opportunities and applying critical thinking is beneficial to their physical and psychosocial well-being, it is not typical for individuals of this age to invest in learning unfamiliar technology or tasks.

¹Student, MIT School of Vedic Sciences, MIT ADT University, Pune

²Student, MIT School of Vedic Sciences, MIT ADT University, Pune

*Corresponding Author

Received: July 05, 2025; Revision Received: October 25, 2025; Accepted: October 28, 2025

Professional Obsolescence and Well-Being of Middle-Aged IT Employees: The Mediating Role of Generativity

Such an expectation may prove to be disadvantageous for their occupational outcomes, their perception of self, and satisfaction with various facets of their life (Bailey & Hansson, 1995). Further, a pressure to reskill can create demands on their cognitive and physical resources that exceeds their capacity to cope (Setor et al., 2015).

This scenario has currently manifested itself in the IT industry, where older employees experience skill obsolescence due to rapid advancements in technology. For example, traditional computing technologies have given way to newer one such as machine learning techniques. Programming language such as C and Pascal have been replaced by Python and Mainframe/Desktop technologies have given way to cloud technologies. Employees are now forced to upskill or re-skill to remain relevant in the workforce. Given that the IT revolution of the 1990s in India was aided by many 20-year-olds joining the workforce, the most experienced professionals are now middle aged (40-55 years old). This is the population that is most at-risk for feeling outdated in the market due to rapid changes in technology.

Apart from expertise and mastery in the workplace, middle age is also the time-period in which adults develop a sense of fulfilment about their lifelong accomplishments. By resolving the psychosocial conflict of generativity v/s stagnation, middle aged adults experience satisfaction with their life so far, and develop the capacity to contribute to future generations, at work and otherwise. Rapid skill obsolescence and the pressure to reskill can hinder this developmental milestone, to the detriment of their wellbeing.

The Scenario So Far

Professional Obsolescence (PO) is a phenomenon concerned with the relationship between the present knowledge and skills of an individual and the characteristics of their past, current and future work environments. Kaufman (1989) defines obsolescence as “the degree to which organizational professionals lack the up-to-date knowledge or skills necessary to maintain effective performance in either their current or future work roles”. This is not a novel phenomenon. Every time a new process or method has been developed; people have scrambled to keep up with it. The drive to match oneself with the demands in the market is multi-fold – to avoid being replaced, to seat oneself in a lucrative position, simple curiosity, or the urge to improve. Irrespective of their reasons, both organizations and individuals need to cope with the problem of obsolescence, or risk being driven out in the competitive market. It has been a growing concern within organizations and several studies have explored the presence of this phenomenon in scientists and engineers. Abe et al. (2020) detail the issues of work-skill misalignment expected in the fourth industrial revolution along with skill obsolescence and the need to reskill/upskill. Santos et al. (2021) stated that unlike other professionals, it is estimated that an IT professional will become obsolete in two years.

Gussek et al. (2021) detail obsolescence as having emotional consequences, affecting turnover, and hampering career commitment. Literature shows that it plays a significant role in turnover intentions of IT professionals (Arman et al., 2017) and career commitment (Fu & Chen, 2015). Since obsolescence presents such a threat to turnover, much of the research focusing on countermeasures investigate updating strategies, effectiveness of knowledge renewal and factors affecting updating (Li et al., 2010; Rong & Grover, 2009; Marguiles & Raia, 1967; Aryee, 1991; Joseph & Kuan Koh, 2011). Despite being a cause of concern for many years, obsolescence has been studied solely through the lens of an inevitable obstacle that needs to, and can be overcome by people who are inclined towards, and capable of

Professional Obsolescence and Well-Being of Middle-Aged IT Employees: The Mediating Role of Generativity

updating themselves (Dubin, 1972; Nogren & Warner, 1977; Harel & Conen, 1982; Tsai et al., 2004; Dominic, 2019). The effects of perceiving oneself as obsolete on other aspects of life, such as life satisfaction and well-being have not been explored in detail.

Job Related Antecedents of Well-Being

There is extensive literature available regarding the relationship between factors at the workplace and well-being, however, research on IT professionals specifically is very limited. A study on mental-wellbeing of IT professionals in India states that one quarter of the participants reported moderate to severe stress, anxiety, depression, and interpersonal difficulties. It reports that the IT population appears to be at a higher risk of mental health challenges than the reported average within India (Bharat et al., 2021). Research tends to focus on how well-being plays a role in job outcomes such as motivation (Kaur, 2013), job performance (Cropanzano & Wright, 2000) and job satisfaction and turnover (Qasim et al., 2014), but the vice versa is not greatly explored. One study on the relationship between workplace well-being and subjective well-being in IT employees suggested that workplace well-being, flow, and job involvement have a positive and significant impact on the subjective well-being of employees (Chang & Hsiang, 2022).

Leaving a Mark through Work: The Role of Generativity

One of the most difficult challenges for older adults to cope with are those that render their previous experiences invalid as their competency in performing their job is central to mature workers' self-concept and career identity (Bailey & Hansson, 1995). Older IT professionals participate less in formal updating activities, and perceive less value in maintaining professional competency (Schambach, 1999). Such findings are especially relevant when changes in identity due to obsolescence impact the achievement of developmental milestones and spills-over onto other aspects of personal life, such as well-being. Older adults who are midway through their careers face the challenge of generativity, which has been shown to be influenced by work contexts. Arnold & Clark (2015) reported that individuals whose career had plateaued and whose outlook reflected maintenance showed less generativity than those whose careers were continuing to advance either formally or in a more intrinsic sense.

Generativity has not only work-related antecedents and outcomes, but is also related to measures of well-being. There is significant association between generative concern and subjective well-being, especially with positive affectivity, life satisfaction, and work satisfaction (Ackerman et al., 2000). Generativity concern also significantly predicted all six domains of Ryff's Psychological Well-Being and life satisfaction (Grossbaum & Bates, 2002). Generativity and well-being demonstrate meaningful correlated change over time, though other mechanisms may determine the individual developmental pattern of these constructs (Lodi-Smith, et al., 2021). Becchetti & Bellucci (2021) found that generativity in act, both in its leisure and work dimensions, has a positive and significant effect on subjective well-being. Individuals who reported higher levels of multidimensional mental well-being also reported higher levels of generativity. Similar associations were found between emotional and psychological well-being and generativity (Reinilä et al., 2023).

Rationale

Certain researches have explored the theoretical implications of technological changes on psychological stress and exhaustion (Kaplan & Lerouge, 2007) while empirical research has focused on other aspects of the job such as technostress (Gaudioso et al., 2017), role

Professional Obsolescence and Well-Being of Middle-Aged IT Employees: The Mediating Role of Generativity

ambiguity and role conflict (Venkatesh et al., 2020). However, empirical research into the psychological effects of professional obsolescence is relatively limited. Similarly, the effects of job-related factors on well-being have not been empirically studied. While generativity has been studied in relation to well-being and various work-related antecedents, there is a gap in the literature while addressing professional obsolescence, the most relevant challenge for older employees in today's workforce.

Research Questions

The following questions were considered for this study:

1. What is the relationship between professional obsolescence (PO) and well-being (WB) in middle aged IT employees?
2. To what extent does generativity (GEN) mediate the relationship between professional obsolescence and well-being?

Hypotheses

The null hypothesis is as follows. There is no relationship between the levels of professional obsolescence (x) and well-being of middle-aged IT employees (y).

The alternative hypotheses are as follows:

1. H1 - Professional obsolescence (x) has a negative correlation with the well-being of middle-aged IT employees (y).
2. H2 - The negative correlation between professional obsolescence (x) and well-being of middle-aged IT employees (y) is partially mediated through generativity (m).

METHOD

Sample

The population from which sampling was done is IT professionals in India. IT professionals between the age of 35-60 with a work experience of minimum 10 years were chosen with the reason that their relative distance from the time of graduation makes them vulnerable to changes in skill demands and obsolete in the face of adoption of new technology (Deming & Noray, 2019). Participants were recruited for this study through word-of-mouth and snowball sampling.

Measures

An online form was created with 10 items for demographic details and 104 items from the psychometric measures detailed below.

1. Professional Obsolescence Scale developed by Chauhan & Chauhan (2009). It consists of 34 items and measures obsolescence in two domains. The first domain, related to individual factors consists of Professional Knowledge/Skills, Motivation to Update, Attitude towards Learning and Self-Initiated Learning. The second domain, related to organizational factors consists of Organizational Climate, Organizational Support, Attitude of Superiors and On-the-Job Updating Activities.
2. The Loyola Generativity Scale (McAdams & Aubin, 1992). This scale consists of 20 items, which assesses individual differences in generativity concern and the number of everyday actions that are suggestive of generativity. It is a thematic assessment of critical autobiographical experiences that taps into generative narration in one's life story.
3. Psychological Well-Being Scale developed by Sisodia & Choudhary (2012). The PWBC – SDCP consists of 50 items which measures Well-Being on five areas – satisfaction, efficiency, sociability, mental health, and interpersonal relations.

Professional Obsolescence and Well-Being of Middle-Aged IT Employees: The Mediating Role of Generativity

Statistical Analysis

The estimated ideal sample size was calculated with G-Power 3.1.9.4. A power analysis for a linear multiple regression with two predictors which indicated that the minimum sample size to yield a statistical power of 0.9 with an alpha of 0.05 and a medium effect size ($f^2 = 0.15$) is 88. Jamovi was used to analyze the data. Descriptive statistics and correlation analysis were performed between main variables. Multiple regression was used to estimate the impact of the predictor variables on the outcome variable. Generalised Mediation Model was implemented to estimate the indirect effect of predictor on outcome through the mediating variable. Standard (delta) method and 1000 bootstrapping for normal distribution was done to estimate the size of mediation effect.

RESULTS

The sample population of 83 participants were residents of and employed in IT sector companies in India. It was comprised of 11 females and 72 males. The participants age ranged from 36 to 58 years with a mean of 45 years. Participants' score on individual obsolescence (IO) and managerial obsolescence (MO) indicated that there is potential obsolescence of skills and knowledge on both personal and organizational levels. Participants' scores on overall Well-Being (WB) indicate high well-being, corresponding to a Z-score of +2.01. Participants' score on Generativity indicates average level of generativity concerns, behavior, and generative themes in one's life. Variable means and standard deviations can be found in Table 1.

Hypothesis Testing

Pearson's product moment correlation co-efficient was used to calculate correlations. The results (Table 2) reveal a significant medium negative relationship ($r = -0.476$) between Individual Obsolescence and Well-Being (95% CI [-0.29, -0.62]). There is also a significant weak negative relationship ($r = -0.385$) between Managerial Obsolescence and Well-Being (95% CI [-0.18, -0.55]). Further, Generativity significantly correlates negatively with Individual Obsolescence (95% CI [-0.17, -0.54]), but the effect size is small ($r = -0.374$). There is also a significant positive relationship between Generativity and Well-Being (CI [0.57, 0.20]).

A standard multiple regression was conducted to determine the extent to which individual obsolescence and managerial obsolescence predict the total level of well-being in IT employees as well as the individual domains of well-being. The two predictors combined explained 23.1% of the variance in well-being, representing a significant proportion of variance explained (adj. $R^2 = 0.21$, $F(2,80) = 11.98$, $p < 0.0001$). The results for each individual predictor within the regression model are shown in Table 3. Increased scores on IO domain were significantly associated with decreased scores on WB. Scores on MO did not contribute significantly to the model. Therefore, the null hypothesis has been rejected and H1 which states that professional obsolescence has a correlation with well-being has been retained.

The data was analyzed to explore whether there was statistical support for the hypothesis that the relationship between Professional Obsolescence and Well-Being Is mediated by Generativity in middle-aged IT professionals. Only the scores on IO were used, as MO did not show a statistically significant relationship with generativity. Within the full regression model (Table 4), 28.8% of the variances in Well-Being was explained by the combination of Individual Obsolescence and Generativity (adj. $R^2 = 0.27$, $F(2,80) = 16.14$, $p < 0.0001$). This

Professional Obsolescence and Well-Being of Middle-Aged IT Employees: The Mediating Role of Generativity

is a significant amount of variance explained. The indirect effect of IO on WB through Generativity was significant (Table 5), providing statistical support for the argument that mediation is present. Given that the direct effect of IO on WB is significant ($p < 0.001$), the mediation is partial and not full. The percentage mediation of indirect effect is 20.78% and the percentage mediation of the direct effect is 79.21%. Through these results, H2, i.e., the effect of professional obsolescence on well-being is mediated through generativity is retained.

DISCUSSION

In an investigation of sources of negative pressure from workplace among software professionals, Rajeswari & Anantharaman (2003) found that the fear of obsolescence is one of the factors account for maximum variance. The stress specifically arises from viewing technical obsolescence as a threat. The results of the present study extend these findings and show that obsolescence not only affects job related contexts but also well-being. In an investigation of how developers' performance, health and well-being are affected by job skill change requirements, Chilton et al., (2010) found that higher job skill changes lead to higher levels of strain and lower performance. Setor et al. (2015) found that professional obsolescence invokes the use of problem-focuses coping strategies, which were not significant in lowering psychological strain. Some of the participants in a study by Tsai et al. (2007) were unable to fully alleviate their distress, despite their activities to cope with obsolescence. These may explain how obsolescence continues to affect well-being, even when there are efforts to improve one's skills. It is interesting that Individual Obsolescence predicts Well-Being, but Managerial Obsolescence does not, suggesting that individual factors leading to obsolescence might have more to do with the impact on well-being as compared to organizational factors. Further study of the specific antecedents of obsolescence in relation to well-being may better explain these findings.

The results also suggest that the effect of individual obsolescence on well-being is partially mediated by generativity. A meta-analysis by Doerwald et al. (2021) revealed that generativity at work has many person and context related antecedents with motivation, well-being, and career outcomes. Specifically, employees with higher job, organizational, and occupational satisfaction may focus more on meaningful goals such as generativity. Generativity in work related contexts is positively related to mentoring relationship quality, volunteering work, meaningful contribution, career satisfaction, and motivation to continue working. Xingniu et al. (2021) found that job burnout is negatively related to generativity concern, and is mediated by subjective well-being. This study offers evidence about a new factor affecting generativity at work, and how these effects spill-over onto broader areas of work, resulting in lower well-being.

In a study on updating in response to the experience of lacking knowledge, Pazy (2004) reported that in incidents where individuals experienced that they lack knowledge, they reported feeling damage to their reputation and feeling incompetent and helpless. These feelings were not predictive of updative actions in the study. Our study offers elaboration on the areas that these affective states can impact such as generativity and well-being, and makes a case for the argument that updating may not be end all solution to obsolescence. Obsolescence and associated feelings have a significant impact on both generativity and well-being as they directly relate to one's sense of self- especially self-esteem and self-worth and is an important factor to be considered when evaluating the workplace experience of middle-aged IT professionals in India.

CONCLUSION

The present research expands on the effects of professional obsolescence on well-being, specifically highlighting the role of individual obsolescence. It also introduces developmental processes such as self-concept and identity in this phenomenon through the mediating variable – generativity. This study represents an attempt to focus on unique challenges faced by older employees in a dynamic technology landscape. However, the findings are rudimentary as these variables have not been studied together previously. Therefore, it is essential to replicate these findings in different populations and sample sizes to confirm the results of the study.

Practical Implications

The results of this study have several practical implications that should be beneficial to individuals, organizations, managers in terms of a deeper understanding of the significance of the well-being of their employees in the current technological context. The findings of the study emphasize the role of generativity at predicting the well-being, hence focusing on techniques which enriches the generative concerns and acts, can further lead to well-being. Furthermore, when interpreted considering other findings, the results suggest that engaging in updating activities may not be an effective way to enhance self-competence, and individuals can focus on other areas for self-enhancement and satisfaction.

Suggestions for Future Research

Researchers can focus on investigations concerning the mechanisms through which obsolescence affects generative actions and concerns such as self-concept, self-esteem, frustration, stress related to work, etc. Such explorations will lend a robust and comprehensive model regarding the manifestation and consequences of this phenomenon.

Ethical Considerations

Researchers do not report any conflict of interest. The study posed no harm to the participants. The participants were informed about the nature, purpose, risks, benefits, and potential alternatives of the proposed study personally by the authors over a telephone call, and all the participants verbally agreed to be the part of the study. All the measurement tools used were open access and no copyrights have been infringed upon.

REFERENCES

- Abe, E. N., Abe, I. I., & Adisa, O. (2020). Future of Work: Skill Obsolescence, Acquisition of New Skills, and Upskilling in the 4IR. In E. N. Abe, *Future of Work, Work-Family Satisfaction, and Employee Well-Being in the Fourth Industrial Revolution* (pp. 217-231).
- Ackerman, S., Zuroff, D. C., & Moskowitz, D. (2000). Generativity in Midlife and Young Adults: Links to Agency, Communion, And Subjective Well-Being. *International Journal of Aging and Human Development*, 50(1), 17-41.
- Arman, S., Mahmud, I., Toma, R. T., Ramayah, T., & Rawshon, S. (2017). My knowledge is not Enough: An Investigation on the Impact of Threat of Professional Obsolescence on Turn Away Intention Among IT Professionals in Bangladesh. *ICBM - 1st International Conference on Business & Management*. Dhaka, Bangladesh.
- Arnold, J., & Clark, M. G. (2015). Running the Penultimate Lap of the Race: A Multi-Method Analysis of Growth, Generativity, Career Orientation and Personality amongst Men in Mid/Late Career. *Journal of Occupational and Organisational Psychology*, 89(2), 308-329.

Professional Obsolescence and Well-Being of Middle-Aged IT Employees: The Mediating Role of Generativity

- Aryee, S. (1991). Combating obsolescence: Predictors of technical updating among engineers. *Journal of Engineering and Technology Management*, 8(2), 103-119. doi:10.1016/0923-4748(91)90025-M
- Bailey, L. L., & Hansson, R. O. (1995). Psychological Obstacles to Job or Career Change in Late Life. *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences*, 50B(6), 280-288. doi:10.1093/geronb/50b.6.p280
- Becchetti, L., & Bellucci, D. (2021). Generativity, aging and subjective well-being. *International Review of Economics*, 68, 141-184.
- Bharat, V., Bunge, E. L., Barrera, A. Z., & Leykin, Y. (2021). Mental Well-Being of Information Technology Professionals Working in India. *Indian Journal of Mental Health* 2021, 8(2).
- Chang, S.-Y., & Hsiang, C. H. (2022). Validation of the double mediation model of Workplace Well-being on the Subjective Well-being of Technological Employees. *Frontiers in Psychology*, 13.
- Chauhan, S., & Chauhan, D. (2009, April). Are You on the Verge of Obsolescence? *Indian Journal of Industrial Relations*, 44(4), 646-659. Retrieved from <https://www.jstor.org/stable/27768236>
- Chilton, M. A., Hardgrave, B. C., & Armstrong, D. J. (2010). Performance and Strain Levels of IT Workers Engaged in Rapidly Changing Environments: A Person-Job Perspective. *The DATA BASE for Advances in Information Systems*, 41(1), 8-35.
- Cropanzano, R., & Wright, T. (2000). Psychological well-being and job satisfaction as predictors of job performance. *Journal of Occupational Health Psychology*, 5(1), 84-94.
- Deming, D. J., & Noray, K. L. (2019). *STEM Careers and the Changing Skill Requirements of Work*. Working Paper, National Bureau of Economic Research. doi:10.3386/w25065
- Doerwald, F., Zacher, H. B., Yperen, N. W., & Scheibe, S. (2021). Generativity at work: A meta-analysis. *Journal of Vocational Behaviour*, 125.
- Dominic, P. (2019). Educating for the Future in the Age of Obsolescence. *18th International Conference on Cognitive Informatics & Cognitive Computing (ICCI*CC)* (pp. 278-285). Milan, Italy: IEEE. doi:10.1109/ICCICC46617.2019.9146030
- Dubin, S. S. (1972). Obsolescence or lifelong education: A choice for the professional. *American Psychologist*, 27(5), 486-498. doi: <https://doi.org/10.1037/h0033050>
- Fu, J.-R., & Chen, J. H. (2015). Career commitment of information technology professionals: The investment model perspective. *Information & Management*, 52(5).
- Gaudioso, F., Turel, O., & Galimberti, C. (2017). The mediating roles of strain facets and coping strategies in translating techno-stressors into adverse job outcomes. *Computers in Human Behavior*, 69, 189-196.
- Grossbaum, M. F., & Bates, G. W. (2002). Correlates of psychological well-being at midlife: The role of generativity, agency and communion, and narrative themes. *International Journal of Behavioural Development*, 26(2), 120-127.
- Gussek, L., Schned, L., & Manuel, W. (2021). Obsolescence in IT Work: Causes, Consequences and Counter-Measures. *Wirtschaftsinformatik 2021 Proceedings (Track 19: IT Strategy, Management & Transformation)*. 2. Association for Information Systems, AIS Electronic Library (AISeL).
- Harel, G. H., & Conen, L. K. (1982). Expectancy Theory Applied to the Process of Professional Obsolescence. *Public Personnel Management*, 11(1), 13-21.

Professional Obsolescence and Well-Being of Middle-Aged IT Employees: The Mediating Role of Generativity

- Joseph, D., & Kuan Koh, C. S. (2011). Organization Support as a Moderator in Coping with the Threat of Professional Obsolescence. *17th Americas Conference on Information Systems, AMCIS 2011*. Detroit, Michigan.
- Kaplan, D. M., & Lerouge, C. (2007). Managing on the edge of change: Human resource management of information technology employees. *Human Resource Management, 46*(3), 325-330.
- Kaufman, H. (1989). Obsolescence of Technical Professionals: A Measure and a Model. *Applied Psychology: An International Review, 38*(1), 73-85.
- Kaur, J. (2013). Role Of Psychological Well Being and Its Impact on the Motivational Level of the Employees In IT Sector. *International Journal of Advanced Research in Management and Social Sciences, 6*(2), 43-51.
- Krampe, R. T., & Charness, N. (2006). Aging and Expertise. In A. K. Ericsson, N. Charness, P. J. Feltovich, & R. R. Hoffman, *The Cambridge handbook of expertise and expert performance* (pp. 723-742). Cambridge University Press. doi: doi:10.1017/9781316480748.042
- Kumari, G., Joshi, G., & Pandey, K. (2014). Job Stress in Software Companies: A Case Study of HCL Bangalore, India. *Global Journal of Computer Science and Technology: Software & Data Engineering, 14*(7), 22-30.
- Li, H., Driscoll, J. A., & Liu, Z. (2010). Retrieved from Obsolescence in Software Engineering Careers.: <https://digitalcommons.wpi.edu/iqp-all/3073>
- Lodi-Smith, J., Ponterio, E. J., Newton, N. J., Poulin, M. J., Baranski, E., & Whitbourne, S. K. (2021). The codevelopment of generativity and well-being into early late life. *Psychology and Aging, 36*(3), 299–308.
- Marguiles, N., & Raia, A. P. (1967). Scientists, Engineers, and Technological Obsolescence. *California Management Review, 10*(2), 43-48. doi:10.2307/41164102
- McAdams, D. P., & Aubin, E. d. (1992). A Theory of Generativity and Its Assessment Through Self-Report, Behavioural Acts, and Narrative Themes in Autobiography. *Journal of Personality and Social Psychology, 1003-1015*.
- Nogren, P. H., & Warner, A. W. (1966). *Obsolescence and Updating of Engineers' and Scientists' Skills. Final Revised Report*. Results of A study by Seminar on Technology and Social Change of Columbia University, United States Department of Labor, Office of mapower Policy, Evaluation and Research.
- Pazy, A. (2004). Updating in Response to the Experience of Lacking Knowledge. *Applied Psychology: An International Review, 53*(3), 436-452.
- Qasim, T., Javed, U., & Shafi, M. S. (2014). Impact of Stressors on Turnover Intention: Examining the Role of Employee Well-Being. *International Scholarly and Scientific Research & Innovation, 8*(1), 176-184.
- Rajeswari, K. S., & Anantharaman, R. N. (2003). Development of an instrument to measure stress among software professionals: factor analytic study. *SIGCPR/SIGMIS03: ACM SIGCPR/SIGMIS 2003 Computer Personnel Research* (pp. 34–43). Philadelphia: Association for Computing Machinery.
- Reinilä, E., Kekäläinen, T., Saajanaho, M., & Kokko, K. (2023). The structure of mental well-being and its relationship with generativity in middle adulthood and the beginning of late adulthood. *International Journal of Behavioral Development, 47*(4), 328-338.
- Rong, G., & Grover, V. (2009). Keeping up-to-date with information technology: Testing a model of technological knowledge renewal effectiveness for IT professionals. *Information & Management, 46*, 376–387.

Professional Obsolescence and Well-Being of Middle-Aged IT Employees: The Mediating Role of Generativity

- Santos, A., Rocha, B., & França, C. (2021). Assessing Obsolescence of Software Engineers. *SBES '21: Proceedings of the XXXV Brazilian Symposium on Software Engineering*, (pp. 398–403).
- Schambach, T. (1999). Updating Activities of Older Professionals. *AMCIS 1999*. Retrieved from <https://aisel.aisnet.org/amcis1999/175>
- Setor, T., Joseph, D., & Srivastava, S. C. (2015). Professional Obsolescence in IT: The Relationships between the Threat of Professional Obsolescence, Coping and Psychological Strain. *SIGMIS-CPR '15*, (pp. 117-122). Newport Beach.
- Sisodia, D. S., & Choudhary, P. (2012). *Psychological Well-Being Scale PWBS - SDCP*. Udaipur, Rajasthan, India: National Psychological Corporation.
- Tsai, H. P., Compeau, D., & Haggerty, N. (2004). A Cognitive View of How IT Professionals Update Their Technical Skills. *Proceedings of the 2004 Conference on Computer Personnel Research Careers, Culture, and Ethics in a Networked Environment - SIGMIS CPR '04*. doi:10.1145/982372.982387
- Tsai, H. Y., Compeau, D., & Haggerty, N. (2007). Of Races to Run and Battles to Be Won: Technical Skill Updating, Stress, And Coping of It Professionals. *Human Resource Management*, 46(3), 395-409.
- Venkatesh, V., Thong, J. Y., Chan, F. K., Hoehle, H., & Spohrer, K. (2020). How agile software development methods reduce work exhaustion: Insights on role perceptions and organisational skills. *Information Systems Journal*, 30(4), 733-761.
- Waldman, D. A., & Avolio, B. J. (1986). A Meta-Analysis of Age Differences in Job Performance. *Journal of Applied Psychology*, 71(1), 33-38.
- Xingniu, L., Yinghao, L., Guirong, W., & Haiying, Y. (2021). Relationships Among Job Burnout, Generativity Concern, and Subjective Well-Being: A Moderated Mediation Model. *Frontiers in Psychology*, 12. doi:10.3389/fpsyg.2021.613767

Acknowledgment

The author(s) appreciates all those who participated in the study and helped to facilitate the research process.

Conflict of Interest

The author(s) declared no conflict of interest.

How to cite this article: Mehrotra, A. & Shastry, A.S. (2025). Professional Obsolescence and Well-Being of Middle-Aged IT Employees: The Mediating Role of Generativity. *International Journal of Indian Psychology*, 13(4), 365-375. DIP:18.01.033.20251304, DOI:10.25215/1304.033

APPENDIX

Table 1 Descriptive Statistics

	Individual Obsolescence	Managerial Obsolescence	Generativity	Well-Being
N	83	83	83	83
Mean	35.2	40	35.6	190.7
Median	36	40	32	190
Std Deviation	7.05	9.22	4.09	16.52

Professional Obsolescence and Well-Being of Middle-Aged IT Employees: The Mediating Role of Generativity

Table 2 Bivariate Correlation Matrix for Relationships between Main Variables

	IO	MO	GEN	WB
IO				
MO	0.728***			
GEN	-0.374***	-0.207		
WB	-0.476***	-0.385***	0.406***	

Note. Correlations are significant at * $p < .05$, ** $p < .01$, *** $p < .001$

Table 3 Standard Multiple Regression results for the prediction of WB from IO and MO

	β	95% CI for β		B	p	$r^2_{a(b,c)}$
		LL	UL			
Individual Obsolescence	-0.41	-0.7015	-0.1321	-0.97	0.0046	0.0816
Managerial Obsolescence	-0.08	-0.3671	0.2023	-0.14	0.5663	0.0032

Table 4 Standard Multiple Regression results for the prediction of WB from IO and GEN

	β	95% CI for β		B	p	$r^2_{a(b,c)}$
		LL	UL			
Individual Obsolescence	-0.37	-0.5802	-0.1751	-0.88	0.0004	0.123
Generativity	0.26	0.0622	0.4673	1.07	0.011	0.06

Table 5 Mediation Table showing the standardized effect sizes of IO and GEN on WB

Type	Effect	β	z	p
Indirect: Path a*b	IO-> Generativity-> Well-Being	-0.0991	-2.1500	0.0316
Component: Path a	Individual Obsolescence-> Generativity	-0.3743	-3.6779	0.0002
Component: Path b	Generativity-> Well-Being	0.2648	2.6499	0.0081
Direct: Path c'	Individual Obsolescence-> Well-Being	-0.3776	-3.7796	0.0002
Total: Path c	Individual Obsolescence-> Well-Being	-0.4767	-4.9111	<.0001