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Technology acceptance, job satisfaction and wellbeing among middle aged educators

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Abstract

This study investigates the relationship between technology acceptance, job satisfaction, and general well-being among middle-aged educators. As educational institutions progressively include digital technologies, understanding the factors impacting educator's technology acceptance becomes crucial, especially for middle-aged educators who may confront unique problems in adjusting to new technologies. This study uses a quantitative survey design with a sample of 150 educators age 40 to 60 to investigate the role of perceived usefulness and ease of use (from the technology acceptance model), job satisfaction and general well-being. The findings show substantial positive relationship between technology acceptance, job satisfaction and well-being, implying that educators who see technology as advantageous and easily adaptable are more likely to experience job satisfaction and general well-being. The findings create a supporting environment in providing proper training to encourage positive technology adoption experiences. These findings have suggestions for policy formulation, training programs and workplace initiative targeted at improving educators' professional and personal life in technology driven educational framework.

Keywords: Technology Acceptance; Job Satisfaction; General Well Being; Perceived Usefulness (PU); Perceived Ease of Use (PEOU)

1. Introduction

Educational systems are under pressure to adjust to quickly changing digital tools that provide creative methods to enhance learning and expedite administrative procedures. Even while technology has changed how we educate and made resources more accessible, middle-aged teachers still often encounter particular difficulties. These include the cognitive challenges of learning new tools, conventional patterns, and differing degrees of digital literacy. With an emphasis on the consequences of technology adoption for both professional and personal growth, this study examined the relationship between middle-aged educators' acceptance of technology, job satisfaction, and overall well-being.

1.1. Technology Acceptance

Technology Acceptance Model (TAM), developed by Davis (1989), which suggests that "Perceived Usefulness (PU) and Perceived Ease of Use (PEOU) are central to understanding an individual's purpose to use new technology" (Davis, 1989). According to TAM, PU represents the belief that technology will enhance one's job performance, while PEOU reflects the certainty that technology will be easy to use and require minimal effort. These perceptions are critical in predicting whether an individual will integrate new technology into their daily routines. For middle-aged educators, TAM provides an important lens through which to view technology acceptance. Middle-aged educators who perceive a specific technology as beneficial to their work are likely to be more motivated to learn and integrate it into their practices. For example, a teacher might adopt a digital grading platform if they perceive it will save time and simplify

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record-keeping, allowing them to focus more on student interactions. Conversely, if technology is seen as complex or not directly valuable to their teaching goals, educators may resist its adoption.

1.2. Job Satisfaction

Job satisfaction is a multifaceted concept encompassing an individual's contentment with their job role, sense of achievement, and the extent to which work aligns with personal values. "Job satisfaction is affected by both motivational factors such as recognition and accomplishment and hygiene factors such as work environment and interpersonal relationships" (Herzberg ,1966). For educators, job satisfaction is often derived from meaningful interactions with students, recognition from administration, and a positive work environment. In the context of technology use, motivational factors include how effectively technology helps educators meet their teaching goals and engage students. Successful technology integration can enhance job satisfaction by providing educators with tools that facilitate effective teaching, foster a sense of accomplishment, and help them meet institutional expectations. On the other hand, technology that requires excessive time or increases workload without clear benefits may diminish job satisfaction, as it disrupts established routines and adds stress.

1.3. General Well-Being

General well-being encompasses a range of dimensions, including emotional, psychological, and social health, all of which can be affected by work-related stress and job satisfaction. Self-Determination Theory (SDT) serves a framework by understanding how technology influences well-being by emphasizing the importance of autonomy, competence, and relatedness (Deci & Ryan, 1985a) . Autonomy pertains to an individual ability to pertain their own actions, competence reflects a sense of mastery and skill, and relatedness involves feeling socially supported and connected. For middle-aged educators, adapting to new technology can either enhance or hinder well-being, depending on how it affects these psychological needs. For example, if educators feel autonomous in choosing when and how to use technology, they are likely to experience higher well-being, as autonomy aligns with a sense of control and personal agency. Competence, on the other hand, may fluctuate based on the ease with which educators can adapt to technology. Those who feel competent and capable of learning new tools tend to report better psychological health, while those who struggle may experience increased stress and reduced self-efficacy. Finally, relatedness can be fostered when technology facilitates positive interactions with colleagues and students but may suffer if technology leads to feelings of isolation or detachment.

2. Literature review

The Technology Acceptance Model (TAM) identifies two critical factors influencing technology adoption: perceived usefulness (PU) and perceived ease of use (PEOU). These factors have a significant impact on the attitudes of middle-aged educators toward technology, which in turn influences their willingness to incorporate digital tools into teaching practices (Davis, 1989). Herzberg's Two-Factor Theory emphasizes the importance of motivation and hygiene factors in job satisfaction. The utility of technology in meeting teaching goals and reducing workload has a significant impact on teacher satisfaction levels (Spector, 1997).

According to Self-Determination Theory (SDT), autonomy, competence, and relatedness are necessary for psychological well-being. Successful technology integration can enhance these dimensions, improving educators' emotional and social health (Deci & Ryan, 1985b).

3. Methodology

3.1. Objective

The object of the study is to examine the association between technology acceptance and job satisfaction by assessing the extent to which educators' acceptance of technology influences their overall job satisfaction. Investigate the association between job satisfaction and well-being. By exploring the impact of job satisfaction on educators' general well-being, including their emotional health, psychological state, and Physical well-being. Explore the relationship between technology acceptance and well-being.

3.2. Hypothesis

To guide the research the following Null hypothesis are being tested

- There is no correlation between technology acceptance and job satisfaction among middle-aged educators.

- There is no association between job satisfaction and Well-being among middle-aged educators.
- Technology acceptance does not influence well-being among middle-aged educators.

3.3. Research Design

A quantitative survey this method is well-suited for measuring variables, testing hypotheses, and identifying statistical relationships. The data is collected as numerical or verbal entries which then converted to numerical data which is used to calculate the significant impact of technology acceptance, Job satisfaction and general wellbeing.

3.4. Participants

150 middle-aged educators aged 40-60 years old selected from various learning institutions, 75 men and 75 women gender equality.

3.5. Tool Description

The Technology Acceptance Model (TAM) Scale (12 items) to measure Perceived Usefulness (PU) and Perceived Ease of Use (PEOU), the Job Satisfaction Survey (JSS) (36 items) to assess various dimensions of job satisfaction, and the General Well-Being Scale (GWBS) (18 items) to evaluate psychological, physical, and social well-being, with all responses analysed using SPSS software through correlation and regression analyses.

3.6. Procedure

Data will be collected through an online survey via Google Forms, ensuring accessibility and convenience for participants. The survey will include an introduction outlining the study's purpose, voluntary participation, and confidentiality. Participants will provide informed consent before proceeding. The survey consists of four sections: demographic information (age, gender, experience, location, marital status), Technology Acceptance Model (TAM) Scale (perceptions of usefulness and ease of use), Job Satisfaction Survey (JSS) (satisfaction levels), and General Well-Being Scale (GWBS) (overall well-being). Estimated completion time is 15-20 minutes, varying by individual response speed.

3.7. Statistical Analysis

This study, statistical analysis was tested using IBM SPSS Statistics Version 20 to examine the relationships between technology acceptance, job satisfaction, and well-being among middle-aged educators. Specifically, correlation and regression analyses were applied to explore how several components of the Technology Acceptance Model (TAM) namely, Perceived Usefulness (PU) and Perceived Ease of Use (PEOU) have significance in Job Satisfaction (JSS) and General Well-Being (GWBS) in the educational context. Pearson's correlation coefficient was used to regulate the strength and direction of the relationships between these variables in the correlation analysis. Also alone with correlation, regression analysis was used to further investigate the predictive power of JSS and GWBS on PU and PEOU. A simple linear regression model was constructed to assess the individual and combined impact of JSS and GWBS on PEOU, providing insight into the extent to which these independent variables explain variance in educators' technology acceptance.

Ethical Issues: Data confidentiality was maintained, and participants had the right to withdraw at any stage.

4. Result

Table 1 Socio demographic statistics of participants

		Mean	Median	Standard Deviation	Count	Column N %
Age		48	47	7		
Gender	Female				75	50.0%
	Male				75	50.0%
Place of residence	Rural				45	30.0%
	Urban				105	70.0%
State	Gujarat				1	0.7%

	Kerala				64	42.7%
	Maharashtra				5	3.3%
	Tamil Nadu				80	53.3%
Marital status	Married				138	92.0%
	Unmarried				12	8.0%
Work Experience	5-15 years				54	36.0%
	Above 15 years				92	61.3%
	Below 5 years				4	2.7%

Note. N=150

Table 1 provides an overview of the sociodemographic features of the 150 middle age educators respondents from 4 states across India. The sample includes participants from Kerala (64 participants, 42.7%), Gujarat (1participants, 0.7%), Tamil Nadu (80 participants, 53.3%), Maharashtra (5 participants, 3.3%). The participants consist of 75 females, 75 males. The participants were currently living in an urban or rural setting

Table 2 Linear Regression of PEOU as dependent variable

Variable	n	M	SD	1	2	3
Perceived usefulness	150	5.81	1.19			
Perceived ease of use	150	4.45	0.769	0.411		
Job satisfaction	150	5.52	1.24	0.410		0.582
General well Being	150	3.90	0.535	0.431	0.228	

Note. <05, p<01, p<.001

Table 2 displays the mean (M) score for Perceived Usefulness is 5.81 with a standard deviation (SD) of 1.19, Perceived Ease of Use is 4.45 with a standard deviation of 0.769, Job Satisfaction is 5.52, with a standard deviation of 1.24, and General Well-Being is 3.90, with a standard deviation of .535.

Given that the sample size is large (n = 150 for all variables), according to the Central Limit Theorem, the sampling distribution of the sample mean is approximately normal. This allows for the use of parametric tests to assess the relationships between these variables, such as correlation tests, as these variables meet the assumptions of normality due to the sample size. Therefore, further statistical analyses can be performed to explore how Perceived Usefulness, Perceived Ease of Use, Job Satisfaction, and General Well-Being are related to one another.

Table 2 shows a strong correlation between technology acceptance (PU and PEOU), job satisfaction (JSS), and general well-being (GWBS), resulting in the acceptance of the alternative hypothesis. A moderate positive correlation was observed between PU and JSS (r = 0.410, p = 0.000), indicating that greater perceived usefulness enhances job satisfaction, consistent with Venkatesh and Davis (2000) and Gefen and Straub (2000). Likewise, PU and GWBS (r = 0.431, p = 0.000) revealed a moderate positive association, suggesting that beneficial technology enhances well-being by alleviating stress and increasing control (DeLone and McLean, 2003). The relationship between PEOU and JSS (r = 0.411, p = 0. 000) indicates that ease of use improves job satisfaction by diminishing frustration and boosting competence (Agarwal and Prasad, 1999). A weaker yet significant correlation between PEOU and GWBS (r = 0. 228, p = 0.005) implies that user-friendly technology may lead to decreased stress and better well-being (Ayyagari et al. , 2011). In addition, JSS and GWBS (r = 0.582, p = 0. 000) exhibited a strong positive correlation, affirming that increased job satisfaction significantly enhances overall well-being (Warr, 2007). These results emphasize that technology acceptance favourably impacts both job satisfaction and Awell-being, with job satisfaction playing an essential role in enhancing educators' overall well-being.

Table 3 Linear Regression of PU as dependent variable

Model	R	R Square	Adjusted R Square	Standard Error of the Estimate
1	0.474a	0.224	0.214	1.05907

Note. a. Predictors: (Constant), GWBS, JSS

Table 4 Linear Regression Analysis

Model	Unstandardized Coefficients		Standardized Coefficients	t	Significance
	B	Standard Error	Beta		
(Constant)	0.474a	0.224		0.214	1.05907
JSS	0.374	0.139	0.241	2.700	0.008
GWBS	0.649	0.199	0.291	3.259	0.001

Note. a. Dependent Variable: PU

Table 3 and 4 shows the linear regression analysis was directed to assess the impact of Job Satisfaction (JSS) and General wellbeing on Perceived usefulness (PU). The results indicate a moderate positive correlation between GWBS and JSS, with an R value of 0.474. This suggests that higher levels of job satisfaction and wellbeing are associated with higher perceived usefulness of technology.

The regression coefficient for (B = 0.374) indicates that for each one-unit increase in job satisfaction is likely to increase by 0.374 units assuming wellbeing is constant .Similarly, GWBS(B=0.649) indicates a positive impact on perceived usefulness, with each one-unit wellbeing is associated with a 0.649 increase in PU.

The R^2 value of 0.224 means that approximately 22.4% of the variance in perceived usefulness can be explained by job satisfaction and wellbeing. This supports the acceptance of the alternative hypothesis, indicating that job satisfaction and general wellbeing have a noteworthy positive impact on perceived usefulness. , leading to the rejection of the null hypothesis, which posited no relationship between them.

These findings align with previous research by Venkatesh and Davis (2000), who found that technology adoption is facilitated by factors like job satisfaction and wellbeing, enhancing perceived usefulness and promoting positive work experiences Further, Agarwal and Karahanna (2000) also found that job satisfaction and perceived usefulness correlates with increased employee motivation, as useful technology can reduce obstacles and increase efficiency in the work place.

Table 5 Linear Regression of PEOU as dependent variable

Model	R	R Square	Adjusted R Square	Standard Error of the Estimate
1	0.411a	0.169	0.158	1.14192

Note. a. Predictors: (Constant), GWBS,

Table 6 Linear Regression Analysis

Model	Unstandardized Coefficients		Standardized Coefficients	t	Significance
	B	Standard Error	Beta		
(Constant)	0.474a	0.224		0.214	1.05907
JSS	0.374	0.139	0.241	2.700	0.008
GWBS	0.649	0.199	0.291	3.259	0.001

Note. a. Dependent Variable: PEOU

Table 5 and 6 shows the results of a simple linear regression analysis to determine the impact of Job Satisfaction (JSS) and General Wellbeing (GWBS) on Perceived Ease of Use (PEOU). The analysis reveals a positive and significant relationship between JSS and PEOU (R = 0.411, p = 0.000), suggesting that higher job satisfaction is associated with greater perceived ease of use of technology. For each unit increase in job satisfaction, there is a 0.679 increase in perceived ease of use. However, GWBS does not show a significant relationship with PEOU (p = 0.863), indicating that general wellbeing has little to no predictive effect on how easy employees perceive their work-related technology to be.

The R² value of 0.169 indicates that 16.9% of the variance in perceived ease of use is explained by job satisfaction and general wellbeing together. This result implies that while job satisfaction plays a meaningful role in predicting perceived ease of use, other factors are likely contributing to ease-of-use perceptions as well.

These results align with prior research on technology acceptance. For instance, studies by Agarwal and Prasad (1999) found that user satisfaction with their role in the workplace can enhance perceived ease of use, as it reduces potential frustration and increases comfort with technology. Conversely, the lack of impact from general wellbeing suggests that ease of use perceptions may be more closely tied to specific job-related experiences than to overall wellbeing.

5. Conclusion

This study explored the relationship between Job Satisfaction (JSS), General Well-Being (GWBS), and key components of the Technology Acceptance Model (TAM), specifically Perceived Usefulness (PU) and Perceived Ease of Use (PEOU), within a professional setting. Through a quantitative, non-experimental design involving 150 respondents from diverse backgrounds, the research analyzed how these factors interact using structured questionnaires and statistical methods. The findings highlight that job satisfaction significantly influences employees' perceptions of technology, making them more likely to view it as useful and easy to use. In contrast, general well-being, while important for overall workplace health, did not emerge as a strong predictor of technology adoption. This suggests that fostering job satisfaction can play a crucial role in shaping employees' willingness to engage with new digital tools. These insights reinforce the principles of TAM, emphasizing that employees' attitudes toward technology are closely linked to their workplace experiences and satisfaction levels rather than just their general well-being.

Implications

- Organizational Strategies

To improve employees' technology adoption, organizations should focus on enhancing job satisfaction. By creating a positive work environment and ensuring that employees feel valued, companies may increase perceived usefulness and ease of use of the technology, ultimately driving better productivity and engagement.

- Human Resources and Training Programs

HR departments can use these findings to design programs that foster job satisfaction. Effective training programs can build employees' confidence in using technology, thereby improving their perception of its ease of use and usefulness.

- Workplace Policies

Given the connection between job satisfaction and technology acceptance, workplace policies that enhance employee well-being such as providing recognition, mentorship opportunities, and reducing workplace stress can promote higher levels of technology acceptance.

Limitations

- Cross-Sectional Design

Due to its cross-sectional nature, this study is limited in its ability to establish casual relationships. Implementing a longitudinal approach in future research could offer deeper insights into how job satisfaction, well-being and technology acceptance change over time.

- Self-Reported Data

Using self –reported questionnaires may led to response biases, such as social desirability bias, which could impact the accuracy of the collected data.

- Sample Representation

The sample was drawn from a specific demographic, which may restrict the generalizability of the findings to other populations, industries, or cultural contexts. Future studies with more diverse samples would enhance the applicability of the results.

Future recommendations

- Longitudinal Research

Future studies could monitor changes in job satisfaction, general well-being, and technology acceptance over time to well understand the contributory relationships among these factors and how they influence long-term technology adoption.

- Exploring Additional Predictors and Moderators

Future research could explore other potential predictors, such as organizational support, workload, or work life balance, which might moderate or mediate the relationship between job satisfaction and technology acceptance.

- Cross-Cultural Studies

Given that cultural factors can shape perceptions of job satisfaction and technology acceptance, cross-cultural studies could explore whether these findings hold across different cultural settings, particularly in individualistic versus collectivistic cultures.

- Expanding on TAM Variables

Future research could build on the Technology Acceptance Model by examining additional variables like Behavioural Intentions and Attitude toward Technology, as well as exploring the combined effects of Perceived Usefulness (PU) and Perceived Ease of Use (PEOU) on job satisfaction and general well-being.

Compliance with ethical standards

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Disclosure of conflict of interest

The research was done in order of fulfilment for the award of Master degree (M. Sc.) in Counselling Psychology of Kristu Jayanti College (Autonomous) affiliated to Bengaluru North University, the results of the research were not affected by the organization.

Statement of ethical approval and informed consent

The research involved the collection of data through a survey. All participants were informed about the purpose of the study, and their voluntary participation was ensured. Prior to completing the survey, participants provided informed consent, acknowledging their willingness to participate and their right to withdraw at any time without consequences. The study was conducted in accordance with ethical guidelines, ensuring confidentiality and anonymity of all responses.

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