
A study on the impact of psychological empowerment on motivation and satisfaction among the faculty working in the technical educational institutions in India based on age and work

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Abstract: The purpose of this study is to investigate how the impact of PE on motivation and satisfaction varies according to the faculty member's age and work experience. Data were collected from 402 faculty members employed at technical institutions across India. From the results of the study, it is evident that faculty members with above average age exhibited higher PE, motivation and satisfaction. Subsequently, faculty members with above average experience possessed higher level of PE and satisfaction. Further, the implication of these findings suggests that the proposed framework will act as a benchmarking tool to measure the psychological empowerment among the faculty members.

Keywords: psychological empowerment; age; work experience; faculty; India.

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1 Introduction

Empowerment is defined as giving power, holding responsibility, authority, opportunities and rewards through the way one can be motivated to attain empowerment. Empowerment allows the employees to increase the information sharing, taking the initiative and make the decision to improve the service and performance which in turn will contribute to enhance their competence and satisfaction. The organisation motivates employees to attain the empowerment in two ways, namely structural empowerment, and psychological empowerment (PE). In this, PE plays an important role to achieve the employee's individual and organisational goal. An individual perceives PE when he/she believes their self-efficacy is the means for their self-improvement (Conger and Kanungo, 1988). Spreitzer (1995a) examined PE as a multidimensional construct through four cognitive components meaning, competence, impact and self-determination. Existing studies by Almaçik et al. (2012), Hayati and Caniago (2012), Meng et al. (2016), and Hartmann et al. (2018) have identified the roles and responsibilities of PE for an individual. Subsequently, PE influences employee's level of motivation (Fook et al., 2011; Li et al., 2015) and satisfaction (Ahmadi et al., 2018). Most of the research studies on PE and its consequences focused on service industries like banking, hospitals, hotels, IT and manufacturing industries (Saif and Saleh, 2013; Ahmadi et al., 2018) but there exists very scant studies in educational institutions particularly, in India. Since, faculty member's PE, motivation, and satisfaction are essential for student's growth as well as institutional growth as it has a direct impact on student's performance and learning effectiveness.

The schema of demographic factors has a significant effect while examining the relationship between constructs. Also, the demographic variables impact can enhance the correlation of variables, historical causality, and decision making in various aspects of research (Ross, 2008). The demographic analysis also leads to the elaboration of research and it leads to a different outcome for each elaboration process (Hirschi and Selvin, 2017) and also provides the interactional and integrative outcome of research (Lopopolo, 2002). Also, the demographic factors are used for three reasons: first, without demographic classifications, the statistical proof of experiments can be misleading. Secondly, the demographic constraint varies based on the nature of the sample or environment and affects the identical proof of statistical outcome. And finally, the mediation and moderation effects have a significant difference between independent and dependent variables. Eventually, there is a necessity to examine the control group spuriousness (Carlson and Wu, 2012) in the effect of the constructs and extract the possible outcome of those constructs.

Demographic factors have significant impact on PE and it's the outcome in various contexts (Alnaçık et al., 2012; Ergeneli et al., 2006; Kinsella et al., 2018; Lambrou et al., 2010; Woodworth, 2016). The purpose of this study is to analyse the significant differences between PE and its impacts on motivation and satisfaction level. This study examines the impact of PE on motivation and satisfaction by means of varying effects of faculty's age and work experience. Also, this paper proposes a diagnostic tool to capture the degree of variation in the impact of PE on motivation and satisfaction based on age and experience. In addition, this study specifically focuses on technical institutions in India. Hence the objective of this study is to relate faculty member's age and work experience with the factors such as PE, motivation and satisfaction among the faculty members employed in technical institutions. This paves the way for understanding the role of demographic factors among faculty members (specifically the age and work experience) on their perception about PE, motivation and satisfaction at their workplaces.

The remainder of the paper is organised as following: the first section presents literature of PE, motivation and satisfaction and its demographic relationship are discussed. Next, the research methodology has been adopted to examine the research hypotheses. Subsequently, the analysis and discussion are elaborated in detail. Finally, the conclusion of the study was presented with the implications of the current study, along with the future research aspects.

2 Conceptual background

The literature is organised as follows: first, PE and its components are discussed. Secondly, the relationship between PE and motivation; Thirdly, PE and satisfaction are elaborated; finally, the literature to substantiate the implication and necessity of demographic factors such as age and work experience are provided.

2.1 Psychological empowerment

Spreitzer (1995b) has described PE as the combination of intrapersonal, interactional and behavioural components and further, he has found these components to be experienced in the working environment in the form of meaning, competence, self-determination, and impact. Meaning refers to a perfection between required work role and one's belief (Hackman, 1980); competence refers to one's capability to perform work activities with skill (Bandura, 1978); self-determination involves initiating one's choice of action (Spreitzer, 1995a); Impact is a degree of one's involvement in strategic, administrative and operational outcomes (Spreitzer, 1995a). Meaning and competence are perceived by the individuals at their workplace and whereas feedback and autonomy of individual employees are determined by others such as supervisor and a peer in the organisation.

Kraimer et al. (1999), Corsun (1999) and Gagne et al. (1997) have highlighted the difference between the closely related constructs of PE and job characteristic model as PE examines the individuals' psychological response to their work, while, job characteristics are focused on measuring the objective facet of the job. This allows for exploring the significant combination of job characteristics with psychological constructs. Subsequently, the demographic variables making sure that the experimental variables are the same and except the testing variable one thing at a time (Ross, 2008), so, the impact of demographic classification has to be examined. Hancer and George (2003) depicted

the PE scores and dimensions differed based on the subgroups. Also, there are the evidences, the their demographic variables have a significant influence on PE (Atinc et al., 2012; Ergeneli et al., 2006).

2.2 Motivation

Motivation is the process to increase the experience of positivity from the psychological factors and further improves the individual's performance to achieve their goal. Many studies have found that PE has significant impact on intrinsic work motivation (Li et al., 2015; Fook et al., 2011; Tuuli and Rowlinson, 2010). The significant association between PE and motivation enhances employees ability to perform (Tuuli and Rowlinson, 2010), employee's work performance (Li et al., 2015), employees creativity (Mumford et al., 2017), and decreases the employee's turnover intention (Liu et al., 2011). Stupnisky et al. (2018) subjected the faculty motivation with the basic psychological needs such as autonomy, competence, and relatedness. The relatedness has the greatest effect on autonomous motivation and it will increase faculty's effective teaching methods. On the basis of existing literature the relationship between the PE and motivation, is examined.

2.3 Satisfaction

Job satisfaction is a pleasurable and positive state that happened when one needs from one's job and what actually he perceives it (Locke, 1976). Thomas and Tymon (1994) said that assessment of empowerment generates intrinsic rewards that lead to job satisfaction of an individual. The existing studies have found significant association between PE and job satisfaction (Ahmadi et al., 2018; Wadhwa and Verghese, 2015) and also PE as a significant predictor for job satisfaction (Evans, 2000; Millette and Gagné, 2008). Owen et al. (2018) has outlined that PE confers job satisfaction in general but still the role of both meaning and competence is more influential. Saif and Saleh (2013), Adeniji et al. (2018), Hanaysha (2016), Razaka (2017) and Wong and Cheung (2014) have found that in academic profession, job satisfaction and motivation increase the employee's service quality, intention to stay and decrease job-hopping.

2.4 Demographic variables

The demographic variables are essential to assess and clarify the relationship between controls and dependent variables. The impact of demographic variables may skew the whole outcome of the model. At the same time, demographic variables were included in the study to account for the variance, not for main effects (Atinc et al., 2012). Bernerth and Aguinis (2015) explored various demographic variables that have been identified in different organisational researches like turnover intention, job satisfaction, organisational commitment, employee burnout, personality, leader-member exchange, task performance, organisational citizenship behaviours, and organisational justice. Among them, 68% of demographic variables were used to justify the studies in the mode of age, gender, experience, education, and organisation type. Liu et al. (2011) revealed that employee's experience and technical level could control the job performance and turnover intention.

Demographic variables aid to take a subsequent decision on the actual outcome of the research (Aguinis and Vandenberg, 2014) and unless considering the impact of controlling variables, we cannot extract the real outcomes (Becker, 2005). In contrast to

the research which includes the effect of demographic variables, the potential risk of that research finding would be negligible (Carlson and Wu, 2012). Also, Jose and Mampilly (2014) and Singh et al. (2013) have emphasised the necessity of examining the role of demographic factors on PE. While aligning the organisational goal through employee's satisfaction, and motivation the inferences of age and experience group have to be analysed. Hence, there is a necessity to test the role of faculty member's age and experience in PE and further its effect on motivation and satisfaction. To examine the influence of demographic variable (age and experience) the following hypotheses were formulated.

Hypotheses

- H1a PE has a significant impact on motivation in the above average age group.
- H1b PE has a significant impact on motivation in the below average age group.
- H1d PE has a significant impact on motivation in below average experience group.
- H1c PE has a significant impact on motivation in above average experience group.
- H2a PE has a significant impact on satisfaction in the above average age group.
- H2b PE has a significant impact on satisfaction in the below average age group.
- H2c PE has a significant impact on satisfaction in above average experience group.
- H2d PE has a significant impact on satisfaction in the below average experience group

3 Research method

The unit of analysis for this study is individual faculty members in technical institutions located across India. The instrument consists of 27 items measuring the six constructs and two demographic questions. All the items are measured with five-point Likert scale (1 = strongly disagree and 5 = strongly agree). To measure 'meaning and competence' three items each were adopted from Spreitzer (1995a). Autonomy (four items) and Feedback (six items) were measured by using Hackman and Oldham (1975) questionnaire. Job satisfaction was measured with seven items by Bagozzi (1980) and the motivation for faculty members was measured with four items from Forest et al. (2008). Demographic details such as age, and work experience were also collected to understand the profile of the respondents.

3.1 Sample details

The data were collected from the faculty members working in technical institution across India, by using a self-administered survey. In total, 402 samples were collected from professors, associate professors, and assistant professors with 40.2 years of average age group and 12.7 years of average work experience. Respondents were 66.9% male and 33 % of female, where 26.9% had a PG degree (42% Male and 58% Female), and 73.13% had completed their research degree (75.7% Male and 24.3% Female). Table 1 provides a summary of the demographic characteristics of respondents.

Table 1 Distribution of respondent demographic characteristics (n = 402)

<i>Demographic characteristics</i>	<i>Category</i>	<i>N (%)</i>
Gender	Male	66.92
	Female	33.08
Age (in years)	26–35	38.56
	36–45	35.32
	46–55	15.17
	56–65	10.95
Educational qualification	Post graduate	22.00
	PhD	78.00
Work experience (in years)	1–10	52.00
	11–20	26.00
	21–30	15.00
	31–40	7.00
Designation	Assistant professor	64.43
	Associate professor	19.40
	Professor	16.17

3.2 Reliability and validity

Reliability of the scales adapted was assessed by using Cronbach's alpha internal consistency measure. Cronbach's alpha reliability scores were above 0.60 for all the constructs indicating good internal consistency of the measures (Hair et al., 2014). Convergent validity was examined by assessing the factor loadings of the constructs, as suggested by Fornell and Larcker (1981). All the indicators exhibited significant loadings onto the corresponding latent constructs ($p < 0.001$). Table 2 exhibits the summary of results for validity and reliability.

Table 2 Validity and reliability

<i>Constructs</i>	<i>Items</i>	<i>Cronbach's alpha</i>	<i>Factor loadings</i>	<i>Composite reliability</i>
Meaning	Me1	0.82	0.68	0.75
	Me2		0.68	
	Me3		0.77	
Competence	Co1	0.72	0.71	0.70
	Co2		0.79	
	Co3		0.47	
Autonomy	Au1	0.7	0.44	0.65
	Au2		0.47	
	Au3		0.63	
	Au4		0.72	
Feedback	Fe1	0.72	0.67	0.63
	Fe2		0.40	
	Fe3		0.33	
	Fe5		0.82	

Table 2 Validity and reliability (continued)

<i>Constructs</i>	<i>Items</i>	<i>Cronbach's alpha</i>	<i>Factor loadings</i>	<i>Composite reliability</i>
Satisfaction	Sa2	0.72	0.54	0.61
	Sa3		0.57	
	Sa4		0.67	
	Sa5		0.44	
	Sa6		0.34	
	Sa7		0.31	
Motivation	Mo1	0.79	0.77	0.78
	Mo2		0.55	
	Mo3		0.74	
	Mo4		0.68	

Discriminant validity for the study constructs was assessed and the results are depicted in Table 3. It can be inferred from the results that the square root of average that variance extracted values of all the constructs (in the diagonal) are greater than the inter-construct correlations except for faculty satisfaction. There exists a lack of discriminant validity between motivation and satisfaction amongst the faculty members. This implies that for further analyse the link between motivation and satisfaction constructs.

Table 3 Discriminant validity

<i>Constructs</i>	<i>Meaning</i>	<i>Competence</i>	<i>Autonomy</i>	<i>Feedback</i>	<i>Motivation</i>	<i>Satisfaction</i>
Meaning	0.78					
Competence	0.49	0.71				
Autonomy	0.44	0.33	0.65			
Feedback	0.33	0.32	0.61	0.63		
Motivation	0.43	0.22	0.27	0.26	0.73	
Satisfaction	0.36	0.16	0.51	0.55	0.62	0.55

4 Analysis

Demographic factors considered for this study are age and work experience. Both the factors were grouped based on the average values into two sets i.e.,

- 1 above and below average age
- 2 above and below average work experience.

The average age of faculty members remains as 42 years and for work experience, the average remains as 12 years. Subsequent to the classification of demographic factors the study constructs were grouped accordingly. From the grouping of the study constructs, the variation between the estimates were compared and analysed in detail.

4.1 Measurement model

The measurement models for each demographic group (age and experience) were assessed with the chi-square value of the individual group. For above average age group $\chi^2 = 433.674$, below average age group $\chi^2 = 577.016$, above average experience group $\chi^2 = 489.646$, and below average experience group $\chi^2 = 517.728$ with 237 degrees of freedom which does not fit for the corresponding data, however, the other model fit indices support the model fit which is shown in Table 4.

Table 4 Result of the CFA model fit

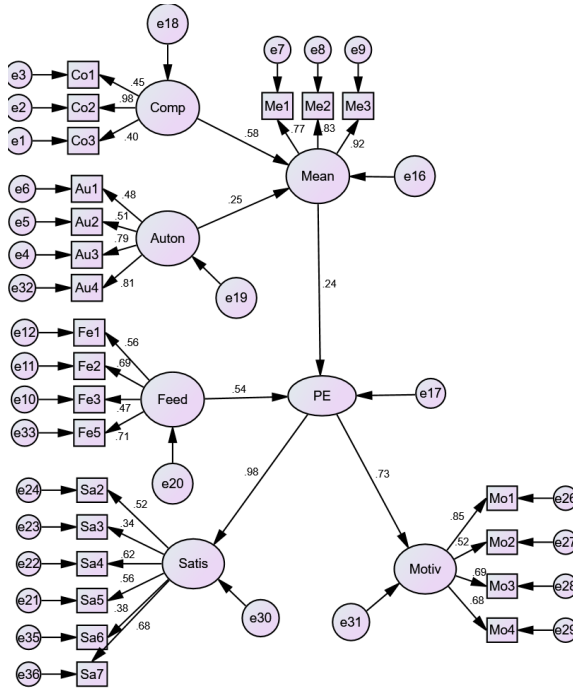
Fit index		Model 1 (above average age)	Model 2 (below average age)	Model 3 (above average experience)	Model 4 (below average experience)
Absolute fit	χ^2	433.674	577.016	489.646	517.728
	d.f	237	237	237	237
	$\chi^2/d.f$	1.830	2.435	2.066	2.185
	GFI	0.807	0.842	0.807	0.844
	RMR	0.057	0.057	0.057	0.055
Incremental fit	NFI	0.703	0.765	0.698	0.765
	AGFI	0.756	0.799	0.756	0.803
	CFI	0.834	0.847	0.812	0.855
Parsimonious fit	RMSEA	0.075	0.073	0.08	0.071
	PCFI	0.716	0.727	0.698	0.734

The overall model fit comes under three perspectives, namely, absolute fit, Incremental fit and parsimony fit. In the absolute fit, the chi-square with its degrees of freedom, the goodness of fit (GFI), and root mean square error (RMR) was analysed. The normative fit index (NFI), adjusted goodness-of-fit-index (AGFI) and comparative fit index (CFI) were analysed as an incremental fit. The parsimonious fit was assessed by using root mean square approximation of error (RMSEA) and parsimonious confirmatory fit index (PCFI). These fit indexes indicate the overall model for the observed data using CFA (Hair et al., 2014). For four models, all the fit indices were assessed and depicted in Table 4. All the results were above the acceptable threshold.

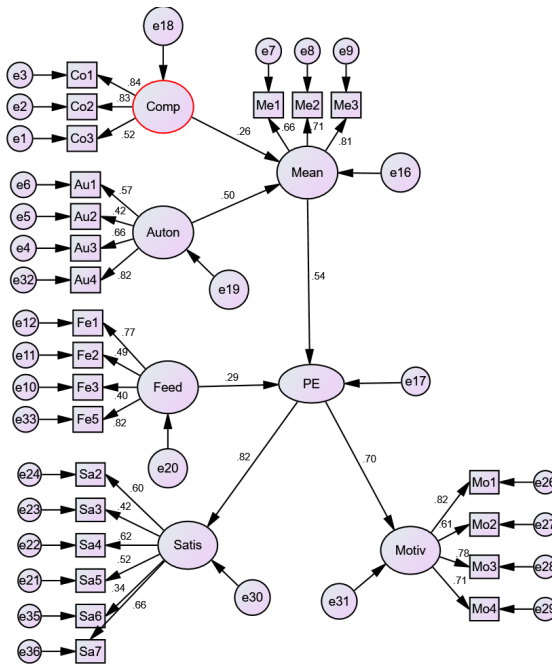
4.2 Structural model

The structural model was constructed and examined with two demographic classifications such as age and experience which is shown in Figure 1 and Figure 2 with standardised regression weights. The empirical analysis supports H1a, H1b, H1c, H1d, H2a, H2b, H2c, and H2d at the 0.001 level of significance (Byrne, 2000). As hypothesised H1 a, b, c, d series has a significant positive association with PE on motivation and PE on satisfaction for above and below average age group. Faculty members' above and below average experience group supports the H2a, H2b, H2c, and H2d series of hypotheses, providing a positive association with PE on motivation and PE on satisfaction. Based on the results of this study, the association between the components of PE on motivation and satisfaction for demographic groups (age and experience) is proven.

Figure 1 Structural model (age group), (a) above average age (b) below average age (see online version for colours)

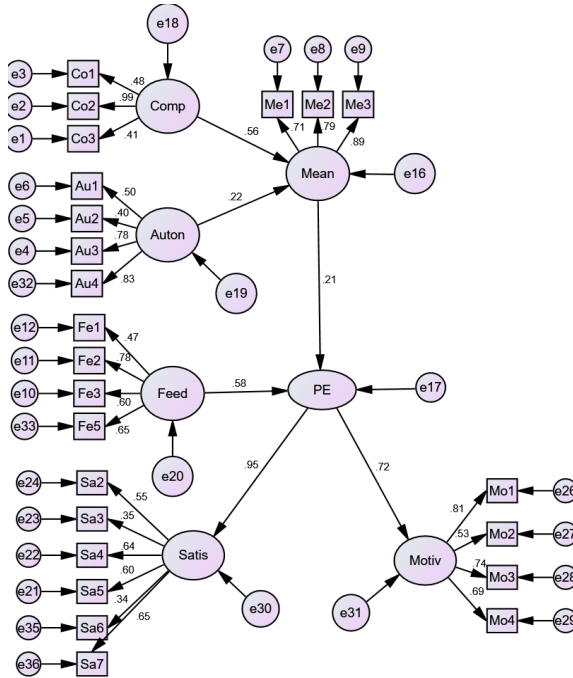


(a)

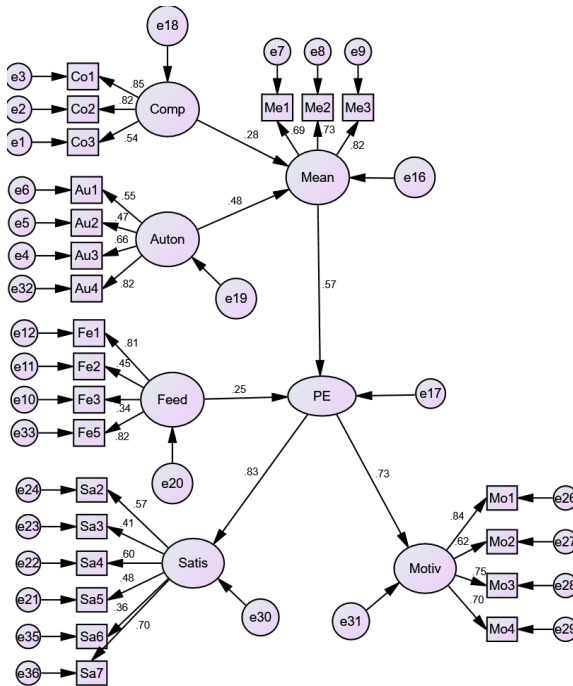


(b)

Figure 2 Structural model (experience group), (a) above average experience (b) below average experience (see online version for colours)



(a)



(b)

4.2.1 *Age and study constructs*

Faculty members above the age of 42 years possess a better perception of PE and consequently they exhibit strong association with motivation ($\beta = 0.73$) and satisfaction ($\beta = 0.98$) whereas, the faculty members with age group of less than 42 years exhibited relatively lesser association with motivation ($\beta = 0.70$) and satisfaction ($\beta = 0.82$). From these results it is evident that faculty members with above the average age of 42 years possess high PE and which in turn enhances their motivation and satisfaction level at their workplace.

4.2.2 *Experience and study constructs*

Faculty members above the experience of 12 years possess a better perception of PE and consequently they exhibit strong association with motivation ($\beta = 0.72$) and satisfaction ($\beta = 0.95$) whereas, the faculty members with the experience of less than 12 years exhibited relatively high association with motivation ($\beta = 0.73$) and lesser satisfaction ($\beta = 0.83$). From these results it is evident that faculty members with above the average experience of 12 years possess high satisfaction with lesser motivation. Foremost, with lesser experience possess higher motivation than the faculty members with above average work experience (12 years). This indicates that they are highly aspirational to achieve more work-related outcome.

5 **Result and discussion**

From the results, it is evident that employees with above average age group possess higher motivation. This implies that faculty members enjoy doing their job and exhibit more pleasure on openness for learning new dimensions related to their job compared to the faculty with below average age group. Similarly, faculty with above average age group possess higher satisfaction compared to the faculty with a below average age. From this, it is evident that faculty are relatively more satisfied with their pay, work environment and possess a higher sense of job security and accomplishments. Therefore, when the employees possess more PE in their job, subsequently, they exhibit relatively higher motivation and satisfaction. Especially, in the given context, this is prominent among employees more with above average age group (i.e., > 42 years) than with below average age group. Faculty with above average work experience possesses higher satisfaction compared to the faculty with below average work experience. From the results, it can be inferred that experienced faculty encompasses higher satisfaction with their pay, working conditions and a greater sense of work accomplishment with more persuasion to make others join their institution for similar job positions. However, in contrast to the above findings, employees with above average work experience possess relatively lesser motivation than employees with below average work experience. This indicates that faculty with below average work experience enjoys their work more and possess more pleasure in performing their job tasks.

6 Managerial implications

This study proves that there is a positive interrelationship between PE, motivation and satisfaction constructs. This study also paves the way to leverage the developed model with respect to age and work experience. In this study, the result shows that faculty members with above average age and work experience are psychologically empowered. Consequently, they are highly satisfied and motivated. Hence, the model and instruments could be used as a diagnostic tool to identify faculty member's age and work experience, to know which constructs are relatively weak in the path that constitutes PE, motivation and satisfaction. Consecutively, the organisation has to take all efforts to identify and apply the ways and means for the enhancement of the relatively weak dimensions either directly or indirectly.

7 Conclusions

This study has found that PE has a significant impact on motivation and satisfaction for both age and work experience factors. The instrument adapted in this study acts as a diagnostic tool to capture the variations among the faculty members perception about PE, motivation and satisfaction. This tool can be generalised for other technical institutions to understand whether the faculty member's perception of PE, motivation and satisfaction varies based on the age and work experience of faculty members. This study has certain limitations. The study was conducted amongst the teachers working in technical institutions all over the country. The respondent in each demographic group remains limited. All of the responses were collected through self-report method causing concern for common method bias. Only two demographic factors were considered in the study and the future studies should examine the role of various other demographic factors such as hierarchical power of the faculty designation, educational qualification, gender etc., in order to explore the avenues for further research. Future studies should focus on selecting and examining the demographic factors based on the context of the study.

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