ROLE JOB SATISFACTION IN MEDIATING INFLUENCE RECOGNITION AND WORKING CONDITIONS TO VOLUNTARY TURNOVER INTENTION

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Abstract
This study is an explanatory research to explore the relationship between recognition, working conditions, job satisfaction, and voluntary turnover intention at state-owned enterprise. The research population consisted of contract employees of the company, with a total of 110 respondents. Data collection was conducted through a personal questionnaire using a 1-5 interval scale, ranging from Strongly Disagree (SD) to Strongly Agree (SA). Data analysis was performed using the Partial Least Square-Structural Equation Modeling (PLS-SEM) and Necessary Condition Analysis (NCA) methods. The results of this study indicate that recognition has a non-significant negative effect and is not necessary to achieve voluntary turnover intention. Similarly, working conditions have a non-significant positive effect and are not necessary to achieve voluntary turnover intention. In addition, it was found that recognition and working conditions have a significant positive effect on job satisfaction, and job satisfaction has a significant negative effect but is not necessary to achieve voluntary turnover intention. These findings highlight the importance of positioning job satisfaction as a key mediating variable, as improvements in recognition and working conditions will only be effective in reducing voluntary turnover intention if they are able to increase employee job satisfaction first. The managerial implication of this study is that companies must integrate recognition and working conditions policies to build job satisfaction as a key strategic instrument in effectively reducing voluntary turnover intention rates. However, job satisfaction is not an absolute requirement for achieving voluntary turnover intention at a certain level.
Keywords: recognition; working conditions; job satisfaction; voluntary turnover intention; PLS-SEM; NCA

INTRODUCTION

The condition of the global phenomenon in the era of digital development of industry 5.0 means that people can work online mobile. This is in line with the growth of Generation Z (Gen Z) as a new human resource (HR) population over the past decade. The Central Statistics Agency (BPS) categorizes this generation as those born between 1997 and 2012.

Gen Z's tendency to move jobs(turnover)The Deloitte Global study revealed that Gen Z is changing jobs faster and more frequently than previous generations. A 2022 survey by Deloitte Global found that 40% of 14,808 Gen Z respondents decided to change jobs within two years. In fact, 35% of Gen Z respondents were willing to leave their current jobs even if they didn't have alternatives lined up.

Turnover theoretically has a direct determining factor, namely turnover intention (intention to leave) (Ate et al., 2024). In response to the high level of turnover, the organization strategically strives to reduce turnover intention Because turnover high turnover not only results in the loss of qualified employees, but also incurs significant financial and operational losses (Kmieciak, 2022). Therefore, the decline turnover intention is a crucial goal for the sustainability and efficiency of the organization.

The phenomenon of high levels of turnover intention employee management is a critical issue faced by many companies, including state-owned construction company. The company encountered problems, particularly in the HR department (Human Resources).

To achieve a decline in voluntary turnover intention, various strategies are needed, one of which is increasing recognition of employee performance results (Mitsakis & Galanakis, 2022). Recognition is an HR Management tool or strategy whose main aim is to increase employee retention (Malavika & Raza, 2024). Recognition includes individual recognition, performance recognition, participation recognition Dasilveira et al., 2020); verbal appreciation, award programs, and public recognition (Sikira et al., 2024).

To lower voluntary turnover intention employees in addition to paying attention to recognition, can also be done by paying attention to other factors such as working conditions (working conditions).

Working conditions is a very important aspect in influencing employee intentions to leave (Richard, 2024). Working conditions reflect the physical, psychological, and social environment in which employees perform their work (Li et al., 2022).

According to Al Kurdi et al (2021) it states that reducing voluntary turnover intention Apart from paying attention to working conditions, other supporting factors are needed, such as job satisfaction (job satisfaction) in the organization.

Job satisfaction is a positive attitude toward work situations that reflects a pleasant emotional state from the assessment of one's work experience (Rudawska, 2024). In this context, employees feel happy, have their needs met, and have a strong emotional attachment to their work and the organization, ultimately reducing the level of work satisfaction. Turnover intention (Berber et al., 2022).

Although recognition and working conditions has been recognized as an important factor in reducing voluntary turnover intention, the impact job satisfaction in mediating this relationship has not been sufficiently researched. This research is expected to fill this gap by exploring how the role of job satisfaction mediate relationships between recognition, working conditions, And voluntary turnover intention at state-owned construction company.

LITERATURE REVIEW

Voluntary Turnover Intention

Voluntary turnover intention refers to an individual's estimated probability that they will leave the organization permanently at some point in the near future (Ugheoke et al., 2020). Voluntary turnover intention is an employee's desire or tendency to leave an organization voluntarily. This is the first step in the process of an employee deciding to resign from their job (Ye Fong et al., 2022). Based on the results of previous research definitions, it can be concluded that voluntary turnover intention is an employee's intention to resign voluntarily, which is represented by plans to change jobs in the near future, thoughts of quitting, the desire to seek new opportunities, and active steps to look for another job. High staff turnover hurts companies financially and disrupts work rhythms. The impact goes beyond training costs; organizations also lose intellectual assets that are key to competitive advantage (Hussein & Hussin, 2025).

Recognition

Recognition is the act of appreciating employee contributions and performance to increase motivation and job satisfaction (Petherbridge, 2021). The primary purpose of employee recognition is to promote positive employee behaviors and attitudes, motivate employees to perform better, and create a positive work environment. Recognition can be monetary (in the form of money or materials) or non-monetary (non-monetary, such as praise or opportunities) (Ndiango et al., 2024). Based on the results of the previous research definition, it can be concluded that recognition is an act of appreciating employee contributions to increase motivation and satisfaction represented through recognition of individual aspects, performance results, public appreciation, and their participation involvement.

Working Conditions

Working Conditions is a fundamental aspect of the work environment, and if not handled properly, it can lead to employee dissatisfaction. While improving working conditions can alleviate dissatisfaction, it may not necessarily improve employee motivation or performance (Abdulkhamidova, 2021). Working conditions refers to the work environment and the factors that influence workers while carrying out their duties. This includes various aspects such as physical

stress, exposure to environmental conditions, and job demands (Ortikov, 2022). Based on the results of the previous research definition, it can be concluded that working conditions is working conditions refer to all aspects of the work environment and requirements that influence an employee's experience, represented through organizational culture, interpersonal relationships, teamwork, and the intensity of work that employees experience.

Job satisfaction

Job satisfaction is a pleasant positive emotional state or feeling that results from an individual's evaluation of his or her job or work experience. Job satisfaction not only about salary, but also involves various aspects of work and work environment (Dasilveira et al., 2020). Job satisfaction is an employee's positive state of mind towards their work (Oamen, 2021). Based on the results of previous research definitions, it can be concluded that job satisfaction is an employee's positive feelings about their work that influence motivation and performance, represented through enjoyment of work, team improvement orientation, management support, and the availability of formal participation opportunities.

Literature Gaps

Improvement recognition has a significant negative impact on voluntary turnover intention because employees feel recognized for their performance achievements by the organization (Dasilveira et al., 2020). However, research conducted by Krishnaraj (2020) and Chongfei et al. (2025) found that recognition has a significant positive influence on voluntary turnover intention. Presence working conditions. It is hoped that it can create conducive working conditions so that employees become more enthusiastic about working, which in the end can reduce the level of voluntary turnover intention. This is supported by several previous studies by Richard (2024) and Hadush & Katheriyar (2023) which show thatworking conditions has a significant negative effect on voluntary turnover intention. Likewise with the results of Dasilveira et al., (2020), who found that the increase working conditions have a negative impact on voluntary turnover intention. However, research by Arnold & Rahimi (2025) and Martin et al. (2021) shows that working conditions have a significant positive relationship with employees' intention to leave their jobs.

Hypothesis Development
Recognition

Several previous studies have found that recognition has a significant negative effect on turnover intention Pratama et al., 2023. Research by Mitsakis & Galanakis (2022) underlines that recognition have a major interest in job satisfaction, motivation, increased well-being, and decreased turnover employees. Inadequate recognition is one of the main factors that increases the intention to turnover (Dasilveira et al., 2020. This is a strong indication of a negative relationship between recognition and turnover intention (Koshak & Rajkhan, 2024). Lack of recognition contributes to high turnover rates which means that recognition has a negative impact on voluntary turnover intention McDermott et al., 2025). Based on the discussion above, it is hypothesized that:

H1: *Recognition* has a negative impact on *voluntary turnover intention.*

Working Conditions

Several previous studies have found that working conditions has a significant negative effect on turnover intention (Li et al., 2022). Poor working conditions (represented by job-related stress) lead to lower job satisfaction and higher burnout, which in turn leads to higher turnover intention. Better working conditions, such as support and good leadership from managers, will increase job satisfaction, and ultimately, this high job satisfaction will reduce their intention to leave the job (Smokrović et al., 2022).

Based on the discussion above, it is hypothesized that:

H2: *Working conditions* has a negative impact on *voluntary turnover intention.*

Job Satisfaction

Several previous studies, such as those by Raziq & Lane-Krebs (2021), show a positive relationship between recognition and job satisfaction. Recognition has a positive and significant relationship with job satisfaction (Morufdeen et al., 2023). Therefore, if individual recognition, performance recognition, public recognition, and participation recognition in an organization are improved or enhanced, employee job satisfaction will increase. Based on the discussion above, it is hypothesized that:

H3: *Recognition* has a positive impact on *job satisfaction*.

Romero et al.'s (2020) research demonstrated that working conditions have a positive and significant impact on job satisfaction. Toropova et al.'s (2021) study found that employees who consistently reported better working conditions also reported higher levels of job satisfaction. This indicates a positive relationship, meaning that when working conditions improve, job satisfaction tends to increase. Conversely, poor working conditions tend to decrease job satisfaction. Therefore, if organizational culture, interpersonal/social relationships, teamwork, and work intensity within an organization are improved or become better, employee job satisfaction will increase. Based on the discussion above, it is hypothesized that:

H4: *Working conditions* has a positive impact on *job satisfaction.*

Job satisfaction has a negative impact on voluntary turnover intention. This means that as job satisfaction levels increase, the intention to leave the job tends to decrease (Smith & Mondal, 2025). The results of research by Al Shbail et al. (2025) job satisfaction has a negative impact on voluntary turnover intention. Thus, if feelings of enjoyment of work, team improvement orientation, supportive management, and formal opportunities for employee participation (generally referred to as job satisfaction) improved or become better, then voluntary turnover intention employee will decrease. Based on the discussion above, it is hypothesized that:

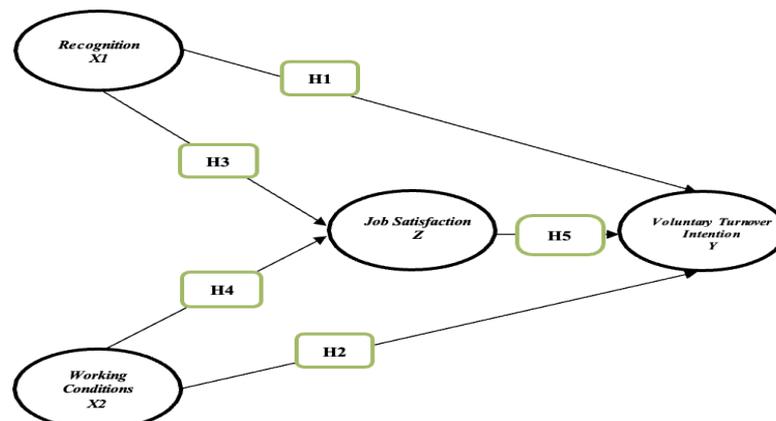H5: *Job satisfaction* has a negative impact on *voluntary turnover intention.*

Figure 1: Research Framework: Source: Author

Data Collection Procedure

This study used an online data collection method. The survey was developed using Google Forms. An embedded link was sent to contract employees of state-owned construction company. It was also stated that participation in the survey was voluntary. Data were collected over a one-week period in January 2026. After follow-up, 110 responses were collected. This study used 110 questionnaires after reviewing relevant and complete responses. Of the 110 responses, 104 (94.5%) were male, and 6 (5.5%) were female.

Research Instruments

Actual usage was measured using a 1-5 Likert scale adapted from (Hair et al., 2021). This study adopted a research tool used in previous literature. The 4-item scale by Dasilveira et al. (2020) and Sikira et al. (2024) was used to measure recognition,4-item scale for working conditions from Dasilveira et al. (2020) and Antón et al. (2023), a 4-item scale by Kmieciak (2022) and Freire & Azevedo (2024) to measure voluntary turnover intention, a 4-item scale to measure job satisfaction by Van den Berg et al. (2025).

Data analysis

Demographics

A. Respondent Profile

The majority of respondents were male (94.5%), while 5.5% of the 110 respondents were female. This suggests that the dominance may be due to the type of work or industry the company operates in, particularly those related to physical labor, field operations, or the manufacturing and infrastructure sectors, which are often considered male-dominated.

In terms of age, the majority of respondents were in the 17-28 age group, with 51 (46.4%). This was followed by the 29-44 age group with 38 (34.5%), the 45-60 age group with 19 (17.3%), and those aged 60 and above with 2 (1.8%). This indicates that state-owned construction company has an employee base dominated by young workers or Gen Z.

Based on length of service, the majority of respondents (40 respondents) had a work period of 1-2 years, with 36.4% having a work period of less than 1 year. 37 (33.6%) had a work period of more than 2 years. 33 (30%) had a work period of more than 2 years. This indicates that state-owned construction company has an employee base dominated by employees with relatively new work periods (Table 1).

Table 1: Demographics

No.	Item	Description	N = 110 Total	%
1	Gender	Male	104	94,5
		Female	6	5,5
2	Age	17–28 years old	51	46,4
		29–44 years old	38	34,5
		45–60 years old	19	17,3
		60 years old and above	2	1,8
3	Length of Service	Less than 1 year	37	33,6
		1–2 years	40	36,4
		More than 2 years	33	30

Source: Author

B. Descriptive Analysis of Variables

Based on Table 2, the variables recognition, the overall average value of the indicators is 3.48, indicating that respondents' perceptions of recognition is in the moderate category. This shows that recognition towards contract employees of state-owned construction company which is indicated by individual recognition, performance recognition, public recognition, and participation recognition in the medium category.

On the variable working conditions, the overall average value of the indicators is 3.18, indicating that respondents' perceptions of working conditions is in the moderate category. This shows that working conditions towards contract employees of state-owned construction company which is indicated by organizational culture, interpersonal/social relationships, teamwork, and work intensity in the moderate category.

On the variable voluntary turnover intention, the average value of the overall indicator is 3.67, which is in the medium to high category. This indicates that voluntary turnover intention against contract employees of state-owned construction company, which is indicated by the intention to change jobs in the near future, thoughts of resigning, the desire to find a new job, and looking for work in another organization in the medium to high category.

On the variable job satisfaction, the overall average value of the indicators is 3.30, which is in the moderate category. This shows that job satisfaction towards contract employees of state-owned construction company, which is indicated by feelings of enjoying work, team improvement orientation, supportive management, and formal opportunities for employee participation in the moderate category.

All standard deviation values are lower than the mean, which shows that the data in the study is relatively homogeneous or closely clustered around their respective average values. So this shows thatmean. It is a good and reliable representation of the entire data set. It also indicates that respondents or research subjects provided fairly consistent responses, with no extreme differences.

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Table 2: Descriptive Analysis of Variables

No	Variable		Indicator	Mean	St.Dev
1	Recognition (X1)	a.	Individual recognition.	3.52	1.11
		b.	Performance recognition.	3.55	1.14
		c.	Public recognition.	3.40	1.23
		d.	Participation recognition.	3.45	1.26
			Overall mean	**3.48**	**1.19**
2	Working Conditions (X2)	a.	Organizational culture.	3.50	1.27
		b.	Interpersonal/social relationships.	3.15	1.45
		c.	Team work.	3.23	1.41
		d.	Work intensity.	2.85	1.35
			Overall mean	**3.18**	**1.37**
3	Voluntary Turnover Intention (Y)	a.	Intention to change jobs in the near future.	3.56	1.34
		b.	Thoughts of resigning.	3.58	1.34
		c.	Desire to look for a new job.	3.76	1.38
		d.	Currently looking for a job in another organization.	3.76	1.46
			Overall mean	**3.67**	**1.38**
4	Job Satisfaction (Z)	a.	Feeling of enjoyment at work.	3.44	1.12
		b.	Team improvement orientation	3.26	1.37
		c.	Supportive management.	3.60	1.11
		d.	Formal opportunities for employee participation.	2.90	1.38
			Overall mean	**3.30**	**1.25**

Source: Author

Evaluation of Measurement Model (Outer Model)

In analysis PLS-SEM, the basic evaluation carried out is the evaluation of the measurement model (outer model) with the aim of determining the validity and reliability of the indicators that measure latent variables. The validity criteria are measured by convergent and discriminant validity, while the construct reliability criteria are measured by indicator and composite reliability.

Test Convergent Validity

Evaluation of the latent variable measurement model with reflective indicators is analyzed by looking at convergent validity each indicator. This test is on PLS-SEM can be seen from the size Average Variance Extracted (AVE), where a latent construct explains the variance of its latent variable indicators with a value of AVE≥ 0.50 is highly recommended. In Table 3, the magnitude AVE for each variable was > 0.50. These test results indicate that all constructs in this research model have met the criteria for good convergent validity. Therefore, it can be concluded that all indicators used accurately and convincingly represent the latent constructs being measured.

Table 3: Calculation Results AVE

	Average Variance Extracted (AVE)
JOB SATISFACTION_Z	0.59
RECOGNITION _X1	0.63
VOLUNTARY TURNOVER INTENTION_Y	0.65
WORKING CONDITIONS _X2	0.53

Source: Author

Test Discriminant Validity

Discriminant validity namely a measure that shows that the latent variable is different from other constructs or variables in theory and is proven empirically through statistical testing. Discriminant validity is measured by Fornell Larcker Criterion, Cross Loadings and HTMT. The test results for each variable can be explained as follows:

Test Results Fornell Larcker Criterion

Validity testing using the Fornell-Larcker Criterion done by looking at the square root value of AVE compared to the correlation between constructs with other constructs. This test is met if the square root AVE greater than the correlation between variables. From Table 4, it is obtained that the square root value AVE higher than the correlation value between other constructs. This result indicates that the constructs in the estimated model have met the criteria for discriminant validity high, meaning the results of the data analysis can be accepted because the value that describes the relationship between constructs has a lower value compared to the square root value AVE from the construct itself.

Table 4: Discriminant Validity Test Value with Fornell-Larcker Criterion

	JOB SATISFACTION_Z	RECOGNITION _X1	VOLUNTARY TURNOVER INTENTION_Y	WORKING CONDITIONS_X2
JOB SATISFACTION_Z	0.920			
RECOGNITION _X1	0.774	0.949		
VOLUNTARY TURNOVER INTENTION_Y	-0.574	-0.466	0.968	
WORKING CONDITIONS_X2	0.804	0.821	-0.444	0.877

Source: Author

Test Results Cross Loadings

Testing discriminant validity. in this way, it is said to be valid if each indicator has the highest load on the construct it is targeting. From the results of data processing presented in the table cross loadings, it can be seen that these conditions have been met so that all constructs in the estimated model meet the criterion of discriminant validity, which means that the results of the data analysis are acceptable.

Table 5: Correlation Value of Constructs with Indicators (Cross Loadings)

	JOB SATISFACTION_Z	RECOGNITION_X1	VOLUNTARY TURNOVER INTENTION_Y	WORKING CONDITIONS_X2
JS1	0.913	0.701	-0.528	0.743
JS2	0.949	0.646	-0.523	0.710
JS3	0.920	0.788	-0.439	0.747
JS4	0.899	0.710	-0.613	0.753
R1	0.720	0.942	-0.442	0.748
R2	0.743	0.960	-0.434	0.768
R3	0.742	0.944	-0.426	0.794
R4	0.731	0.949	-0.466	0.803
VTI1	-0.613	-0.521	0.977	-0.482
VTI2	-0.542	-0.466	0.963	-0.460
VTI3	-0.536	-0.419	0.971	-0.391
VTI4	-0.522	-0.386	0.960	-0.377
WC1	0.664	0.808	-0.219	0.809
WC2	0.709	0.731	-0.414	0.930
WC3	0.713	0.717	-0.381	0.927
WC4	0.726	0.644	-0.508	0.839

Source: Author

Test Results Heterotrait-Monotrait Ratio (HTMT)

Validity testing using criteria Heterotrait-Monotrait Ratio (HTMT)This is done by looking at the HTMT matrix. The accepted HTMT criteria are below 0.90, indicating that the discriminant validity evaluation is acceptable. Using HTMT, Table 6 shows that the values in the HTMT matrix are not more than 0.90. This means that the model shows that the discriminant validity evaluation is acceptable.

Table 6: Discriminant Validity Test Value with HTMT criteria

	JOB SATISFACTION_Z	RECOGNITION _X1	VOLUNTARY TURNOVER INTENTION_Y	WORKING CONDITIONS_X2
JOB SATISFACTION_Z				
RECOGNITION _X1	0.812			
VOLUNTARY TURNOVER INTENTION_Y	0.594	0.477		
WORKING CONDITIONS_X2	0.872	0.890	0.461	

Source: Author

Test Indicator Reliability

Testing whether the indicators measure the construct consistently (e.g., using outer loadings) with standard values outer loadings must be ≥ 0.70. Table 7 shows that the calculation results outer loadings≥ 0.70. This means that all indicators in this model have a sufficient level of reliability to consistently measure their latent constructs.

Table 7: Reliability Test Results with Outer Loadings Values

	JOB SATISFACTION_Z	RECOGNITION X1	VOLUNTARY TURNOVER INTENTION_Y	WORKING CONDITIONS_X2
JS1	0.913			
JS2	0.949			
JS3	0.920			
JS4	0.899			
R1		0.942		
R2		0.960		
R3		0.944		
R4		0.949		
VTI1			0.977	
VTI2			0.963	
VTI3			0.971	
VTI4			0.960	
WC1				0.809
WC2				0.930
WC3				0.927
WC4				0.839

Source: Author

Test Composite Reliability

Testing the internal consistency of the construct, for example using Cronbach's Alpha or Composite Reliability with a standard value of ≥ 0.70. Table 8 shows that the results of the construct reliability test above can be said to be good. This is proven by the value composite reliability and cronbach alpha construct > 0.70. Therefore, it can be concluded that all constructs in this research model have met the criteria for excellent internal consistency reliability.

Table 8: Reliability Test Results with Cronbach's Alpha or Composite Reliability Values

	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)
JOB SATISFACTION_Z	0.940	0.940	0.957
RECOGNITION _X1	0.963	0.963	0.973
VOLUNTARY TURNOVER INTENTION_Y	0.978	0.982	0.983
WORKING CONDITIONS_X2	0.899	0.906	0.930

Source: Author

Based on the evaluation results convergent and discriminant validity as well as indicator and composite reliability, it can be concluded that the indicators as measures of each variable are valid and reliable measures.

Model Evaluation Structural (Inner Model)

In analysis PLS-SEM analysis, evaluation inner model (also referred to as structural model evaluation) is the stage of assessing the relationships between latent constructs in a research model. Inner model focuses on the predictive power of the model and the relationships between variables. The main criteria in the evaluation inner model According to Hair et al (2021), are measured by collinearity test (collinearity), R-square (coefficient of determination), F-square (effect size), and Q-square (predictive relevance).

Collinearity Test

The Collinearity Test aims to detect excessive correlation between predictor variables using the VIF value. A VIF value ≤ 5 (ideal ≤ 3) indicates a model that is safe from multicollinearity, while a VIF > 5 indicates serious problems that can make research estimates biased or unstable. Based on the results of Table 9, it can be seen that the VIF values of all variables are below 5. This means that there can be no collinearity problems in the model formed.

Table 9: Collinearity Test Results

	VIF
JOB SATISFACTION_Z -> VOLUNTARY TURNOVER INTENTION_Y	3.181
RECOGNITION _X1 -> JOB SATISFACTION_Z	3.063
RECOGNITION _X1 -> VOLUNTARY TURNOVER INTENTION_Y	3.452
WORKING CONDITIONS_X2 -> JOB SATISFACTION_Z	3.063
WORKING CONDITIONS_X2 -> VOLUNTARY TURNOVER INTENTION_Y	3.911

Source: Author

Test R-square (Coefficient of Determination)

R-square (R^2) measures the extent to which independent (exogenous) variables are able to explain the variance of dependent (endogenous) variables. General guidelines are: 0.75 (strong/substantial), 0.50 (moderate), and 0.25 (weak). This number indicates the percentage influence of the combination of exogenous variables on the endogenous variables in the model.

The coefficient of determination(R^2) obtained from the construct job satisfaction of 0.686 indicates that approximately 68.6% (or 68% after adjustment) of the variation in the construct JS can be explained by the independent variables, namely recognition and working conditions. While the remaining 31.4% is influenced by other variables outside the study. This value is included in the fairly strong category, which means that the independent variables have a significant and dominant influence on job satisfaction in this model.

The coefficient of determination(R^2) obtained from the construct voluntary turnover intention of 0.333 indicates that approximately 33.3% (or 31.5% after adjustment) of the variation in the construct voluntary turnover intention can be explained by the independent variables in the research model. While the remaining 66.7% is influenced by other variables outside the research. This value is included in the moderate category, which means that the independent variables have a significant but limited influence on voluntary turnover intention in this model.

Table 10: Mark *R-square (R^2)*

	R-square	*R-square adjusted*
JOB SATISFACTION_Z	0.686	0.680
VOLUNTARY TURNOVER INTENTION_Y	0.333	0.315

Source: Author

Test f-square (Effect Size)

Mark f^2 (effect size): Inner size PLS-SEM to assess the extent of the contribution or specific "impact" of the independent variable on the dependent variable. This value indicates how much the accuracy of the model decreases. (f^2) if the variable is removed. threshold criteria: 0.02 (small), 0.15 (medium), and 0.35 (large). Based on Table 11, the value f^2(effect size) for each relationship path in the research model:

1. Against JS (Z)

REC (X1)$\rightarrow$ JS(Z): 0.127

Has an impact in the small category (approaching medium). Job recognition has an effect on job satisfaction, but its contribution is still relatively low or limited in explaining the variance in satisfaction. work as a whole.

WC(X2) $\rightarrow$ JS(Z): 0.277

It has a moderate impact. This indicates that working conditions are a fairly important factor and make a significant contribution to employee job satisfaction.

2. AgainstVTI(Y)

JS(Z) $\rightarrow$ VTI(Y): 0.157

Having a moderate impact, job satisfaction plays a crucial role in determining whether an employee intends to leave or stay.

REC (X1)$\rightarrow$ VTI(Y): 0.005

Has a very small/weak impact. Direct recognition is not a major consideration for employees to resign in this model.

WC(X2) $\rightarrow$ VTI(Y): 0.005

Has a very small/weak impact. This indicates that directly, working conditions have almost no influence in predicting employee turnover intentions unless through intermediary variables.

From the values above, it can be seen that the variable job satisfaction (Z)is the most important "bridge". The independent variables (X1 and X2) have a stronger influence in shaping job satisfaction first, then job satisfaction has an impact on voluntary turnover intention.

Table 11: The f-square value (f^2)

	JOB SATISFACTION_Z	RECOGNITION _X1	VOLUNTARY TURNOVER INTENTION_Y	WORKING CONDITIONS_X2
JOB SATISFACTION_Z			0.157	
RECOGNITION _X1	0.127		0.005	
VOLUNTARY TURNOVER INTENTION_Y				
WORKING CONDITIONS_X2	0.277		0.005	

Source: Author

Test Q-square (Predictive Relevance)

Measuring the predictive ability of a model on out-of-sample data using the procedure of blindfolding. The criteria must be > 0. Values above zero indicate that the model has good predictive relevance, meaning that the model is able to accurately predict latent variable observations. Q^2 on Latent Variable (LV) Summary is the main indicator to determine whether the research structural model has predictive relevance to the latent variables being studied.LV Summary summarizes the overall model performance for each latent variable, which is often the primary focus in interpreting structural models in PLS-SEM. Based on Table 4.12, the Q value^2 (predictive relevance) on job satisfaction and voluntary turnover intention > 0, then the overall research model has predictive relevance which is good for both variables.

Table 12: The Q-square value (Q^2)

	Q²predict
JOB SATISFACTION_Z	0.667
VOLUNTARY TURNOVER INTENTION_Y	0.204

Source: Author

Descriptive Statistics

The following results of the hypothesis testing are presented in Table 13. Path Coefficients as follows: In testing hypothesis 1, namely the influence between recognition to voluntary turnover intention obtained value original sample estimate -0.109 indicates a very weak negative relationship. T-statistic0.811 (<1.645) andP-value0.417 (>0.05) indicates that this relationship is not statistically significant. This means that an increase in recognition received by employees is not significant enough to reduce voluntary turnover intention so (H1 is rejected). In testing hypothesis 2, namely the influence between working conditions and voluntary turnover intention the original sample estimate 0.109 indicates a very weak positive relationship. T-statistic0.639 (<1.645) andP-value0.523 (>0.05) indicates that the relationship is not statistically significant. This means that even though the increase working conditions felt by employees is very small increase voluntary turnover intention, the relationship No statistically significant (H2 is rejected). In testing hypothesis 3, namely the influence between recognition and job satisfaction the original sample estimate 0.350 indicates that there is a moderate positive relationship. T-statistic2,907 (>1,645) andp-value0.004 (<0.05) indicates that the relationship is statistically significant. This means that the increase recognition received by employees is quite strong and significant increase job satisfaction (H3 is accepted). In testing hypothesis 4, namely the influence between working conditions and job satisfaction obtained value original sample estimate 0.516 indicates that there is a moderate positive relationship. T-statistic 4,590 (>1,645) andp-value0.000 (<0.05) indicates that the relationship is statistically significant. This means that the increase working conditions received by employees is quite strong and significant increase job satisfaction (H4 is accepted). In testing hypothesis 5, namely the influence between job satisfaction and voluntary turnover intention obtained value original sample estimate -0.577 indicates a fairly strong negative relationship between job satisfaction and voluntary turnover intention. T-statistic4,945 (>1,645) and P- value0.000 (<0.05) indicates that the relationship is statistically significant. This means that the increase job satisfaction received by employees is very significant lower voluntary turnover intention (H5 is accepted).

Table 13: Path Coefficients

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values
JOB SATISFACTION_Z -> VOLUNTARY TURNOVER INTENTION_Y	-0.577	-0.588	0.117	4.945	0.000
RECOGNITION _X1 -> JOB SATISFACTION_Z	0.350	0.361	0.120	2.907	0.004
RECOGNITION _X1 -> VOLUNTARY TURNOVER INTENTION_Y	-0.109	-0.108	0.134	0.811	0.417
WORKING CONDITIONS_X2 -> JOB SATISFACTION_Z	0.516	0.507	0.112	4.590	0.000
WORKING CONDITIONS_X2 -> VOLUNTARY TURNOVER INTENTION_Y	0.109	0.123	0.170	0.639	0.523

Source: Author

In addition to testing direct effects, this analysis also evaluates indirect influences between variables to understand the role of mediation in the research model. According to Hair et al. (2021), there are three types of mediation:
1. Partial mediation (that is, complementary mediation): indirect and direct effects are significant and point in the same direction.
2. Suppressor effect (that is, competitive mediation): the indirect and direct effects are significant but trend in opposite directions.
3. Full mediation (that is, indirect-only mediation): significant indirect effect, but insignificant direct effect.

Table 14 Total Indirect Effects presenting the results of estimating the indirect influence of variables recognition and working condition to voluntary turnover intention through job satisfaction. This value represents the strength of the mediated relationship, where its significance is determined through a procedure bootstrapping with value criteria p-value<0.05. Based on Table 4.15, the indirect effect between recognition to voluntary turnover intention through job satisfaction has a coefficient value of -0.202. The valuet-statistic2,406 (>1,645) andp-value0.016 (<0.05) indicates that the indirect effect is statistically significant. Considering that the previous direct effect was not significant, while the indirect effect was significant, it can be concluded that job satisfaction mediate the relationship between recognition to voluntary turnover intention. This means that providing recognition will only be effective in reducing employee turnover intentions if it can first increase their job satisfaction.

Indirect influence between working conditions to voluntary turnover intention through job satisfaction has a coefficient value of -0.298. The valuet-statistic3,177 (>1,645) andp-value0.001 (<0.05) indicates that the indirect effect is statistically significant. Considering that the previous direct effect was not significant (even tending to be weakly positive), while the indirect effect was negatively significant, it can be concluded that job satisfaction mediate the relationship between working conditions to voluntary turnover intention this shows that improving working conditions will not directly keep employees, unless the improvements are able to create job satisfaction first.

Based on the results of the analysis, it was found that job satisfaction plays an important role as a mediator in the relationship between recognition and working conditions to voluntary turnover intention. Recognition and working conditions indirectly influence voluntary turnover intention. Improvement recognition and working conditions perceived by employees will significantly increase job satisfaction them. Improvement job satisfaction this will then significantly and strongly reduce employees' intention to leave.

Table 14: Total Indirect Effects

|	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values
RECOGNITION _X1 -> VOLUNTARY TURNOVER INTENTION Y	-0.202	-0.213	0.084	2.406	0.016
WORKING CONDITIONS_X2 -> VOLUNTARY TURNOVER INTENTION Y	-0.298	-0.299	0.094	3.177	0.001

Source: Author

C. Necessary Condition Analysis (NCA) Results

NCA is used to see whether a factor is a minimum requirement (mandatory condition) for a result to occur. It does not look at "the higher X, the higher Y," but rather looks at "Does X have to exist for Y to reach a certain value?" NCA results can be seen in NCA Charts and Bottleneck Table (Values), Bottleneck Table (Percentages), NCA Effect Size d, and combined PLS-SEM interpretation with NCA.
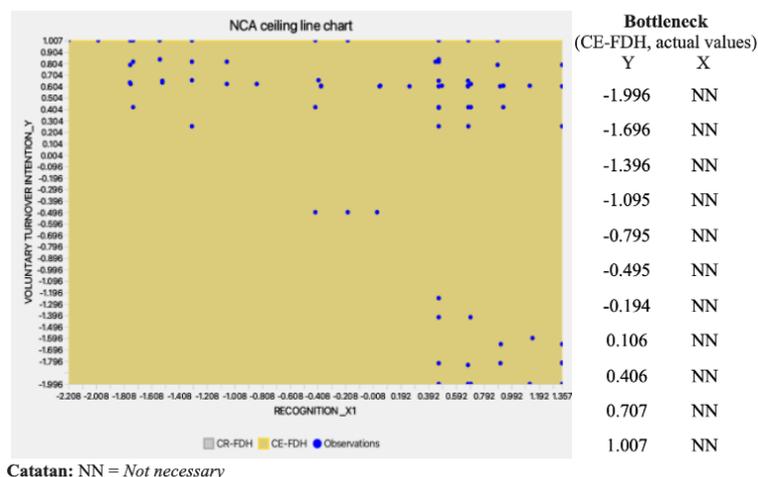
NCA Charts

The following are NCA Charts, scatter diagrams for all relevant relationships:

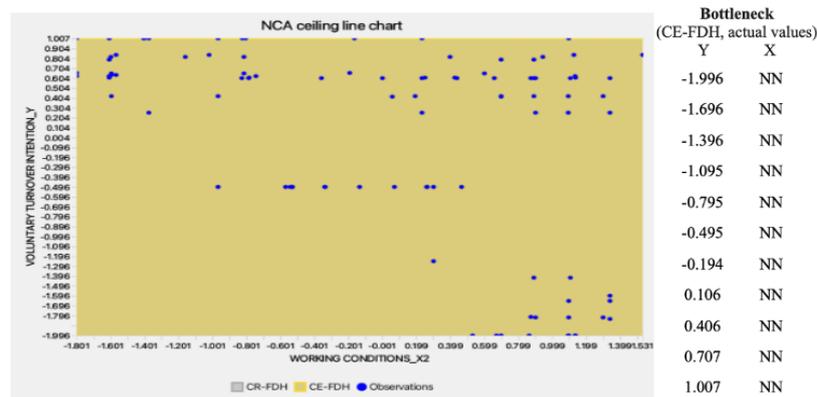1. NCA Chart: Job Satisfaction - Voluntary Turnover Intention

Catatan: NN = *Not necessary*
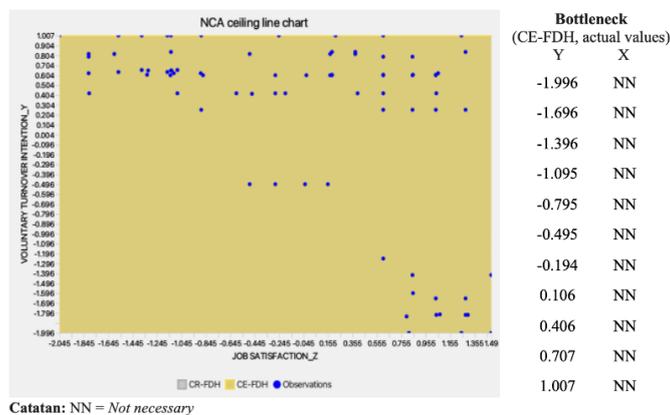
Source: Author

2. NCA Chart: Recognition -Voluntary Turnover Intention

Catatan: NN = *Not necessary*

Source: Author

3. NCA Chart: Working Condition -Voluntary Turnover Intention

Catatan: NN = *Not necessary*

Source: Author

The NCA analysis results show that each X variable is "Not Necessary" (NN), which means that these factors are not bottlenecks that cause delays. The following are the characteristics of the NCA Chart image:
• Data Distribution: Data points (observations) are scattered randomly throughout the graph.
• No Empty Areas: There are no large empty areas in the upper left corner as in the previous graph.
• Points Can Be Anywhere: Employees can have low X values but also low Y values, or vice versa.
• Boundary Line: The yellow line (ceiling line) is very high or almost flat at the top of the graph, indicating that X does not limit Y at all.
Simply put, if X = NN (Not Necessary), it means that job satisfaction, recognition, and working conditions (X) are not necessary or not absolute requirements for obtaining a certain voluntary turnover intention (Y) result.

Bottleneck Table (Percentages)
This study uses the CE-FDH Bottleneck Table to ensure that no data is above the threshold line. This guarantees 100% accuracy, so that the resulting thresholds are completely valid and non-negotiable. Unlike CR-FDH, which ignores some data to find the average, the accuracy can be less than 100%. This risks misinterpreting the actual conditions that must be met (Richter et al., 2020). The following are the results of the Table values 15 Bottleneck Table CE-FDH:

Table 15: Bottleneck Table CE-FDH

	VOLUNTARY TURNOVER INTENTION	JOB SATISFACTION	RECOGNITION	WORKING CONDITIONS
0.000%	-1.996	NN	NN	NN
10.000%	-1.696	NN	NN	NN
20.000%	-1.396	NN	NN	NN
30.000%	-1.095	NN	NN	NN
40.000%	-0.795	NN	NN	NN
50.000%	-0.495	NN	NN	NN
60.000%	-0.194	NN	NN	NN
70.000%	0.106	NN	NN	NN
80.000%	0.406	NN	NN	NN
90.000%	0.707	NN	NN	NN
100.000%	1.007	NN	NN	NN

Source: Author

Based on Table 15, it shows that at a 50% success rate, the main obstacle that arises is voluntary turnover intention, with a minimum score of -0.495 required. On the other hand, job satisfaction, recognition, and working conditions are not necessary (NN) to achieve this level.

NCA Effect Size d
Based on research by Richter et al. (2020), d ranges from $0 \le d \le 1$. Where:
• $0 < d < 0.1$ can be characterized as a small effect,
• $0.1 \le d < 0.3$ as a moderate effect,
• $0.3 \le d < 0.5$ as a large effect, and
• $d \ge 0.5$ as a very large effect.

Table 16: NCA Effect Size d

Ceiling lines - CE-FDH

	Effect size	Accuracy
JOB SATISFACTION_Z	0.000	100.000
RECOGNITION _X1	-0.000	100.000
WORKING CONDITIONS X2	0.000	100.000

Source: Author

According to Table 16, the three factors above have an effect size of 0, which means that these factors do not meet the criteria as necessary conditions for limiting employee turnover.

Combined interpretation of PLS-SEM with NCA

The combined use of PLS-SEM and NCA can provide results with higher practical value. By using PLS-SEM, researchers can identify the factors that produce the best results. Through NCA, researchers can identify the factors that are important for achieving certain results.

Both issues, namely should-have factors and must-have factors, have high practical relevance (Richter et al., 2020).

The following are Table 4.18 PLS SEM Path Coefficient and Table 17 NCA Permutation:

Table 17: Path Coefficient PLS SEM

	Original sample (O)	P values
JOB SATISFACTION_Z -> VOLUNTARY TURNOVER INTENTION_Y	-0.577	0.000
RECOGNITION _X1 -> VOLUNTARY TURNOVER INTENTION_Y	-0.109	0.417
WORKING CONDITIONS_X2 -> VOLUNTARY TURNOVER INTENTION_Y	0.109	0.523

Source: Author

Table 18: NCA Permutation

	Original effect size	Permutation p value
JOB SATISFACTION_Z	0.000	1,000
RECOGNITION _X1	-0.000	0.335
WORKING CONDITIONS_X2	0.000	1,000

Source: Author

Based on Table 17 and Table 18, the analysis of PLS-SEM and NCA results shows that:

1. Recognition -> Voluntary Turnover Intention
• Results: Not significant and unnecessary.
• Conclusion: Improving recognition is ineffective in reducing voluntary turnover intention, because this factor has no significant effect and is not necessary to achieve a certain level of voluntary turnover intention.
2. Working Conditions -> Voluntary Turnover Intention
• Results: Not significant and not necessary.
• Conclusion: Improving working conditions is not effective in reducing voluntary turnover intention, as this factor does not have a significant effect and is not required to achieve a certain level of voluntary turnover intention.
3. Job Satisfaction -> Voluntary Turnover Intention
• Results: Significant but not necessary.
• Conclusion: Improving job satisfaction is effective in reducing voluntary turnover intention because it has a significant effect, but this factor is not necessary to achieve a certain level of voluntary turnover intention.

These results show that NCA can complement PLS-SEM analysis by emphasizing that not only significant determinants (such as job satisfaction), but also insignificant determinants (such as recognition and working conditions) can be assessed as to whether they are necessary conditions or not. Therefore, both approaches are very important for a comprehensive understanding of the factors that influence employee voluntary turnover intention.

DISCUSSION

This study aims to describe and analyze the influence of recognition, working conditions, and job satisfaction on voluntary turnover intention. It also seeks to understand the extent to which job satisfaction mediates the influence of recognition and working conditions on voluntary turnover intention. Furthermore, it aims to determine whether recognition, working conditions, and job satisfaction are necessary to achieve a certain level of voluntary turnover intention. Based on the above research results, it can be concluded that:

1. Recognition has no influence and is not necessary to achieve a certain level of voluntary turnover intention. In the context of reducing voluntary turnover intention, the concept of recognition in this study, which is indicated by individual recognition, performance recognition, public recognition, and participation recognition, is unable to reduce the intention to leave voluntarily. In addition, employees who feel that individual recognition is good enough but does not affect their intention to leave. Even though the company has given recognition for the results of employees' work, this is not enough to dampen employees' desire to seek other job opportunities that are more secure. Recognition in front of coworkers has not been able to suppress employees' desire to leave. Similarly, for contract employees, participatory involvement is considered merely a work routine that does not provide long-term security, so it cannot reduce their intention to leave. Therefore, it is necessary to develop a more appropriate recognition concept that is expected to reduce voluntary turnover intention, especially indicators that have a direct impact on contract employees. Even though an employee may have the intention to leave their job, they may still feel appreciated (receive recognition) by the company.2. Working conditions have no effect and are not mandatory to achieve a level of voluntary turnover intention. In the context of reducing voluntary turnover intention, the concept of working conditions in this study, which is indicated by organizational culture, interpersonal/social relationships, teamwork, and work intensity, is not sufficient to reduce the intention to leave voluntarily. In addition, comfort with the current work culture is not enough to offset employees' intention to leave the company. Social comfort is not strong enough to suppress the desire to leave. The solidarity of teamwork felt by employees is not enough to reduce the intention to leave. Similarly, the intensity of work, whether heavy or light, is not a determining factor that influences contract employees' desire to stay or leave the company. Therefore, it is necessary to develop a more appropriate concept of working conditions that is expected to reduce voluntary turnover intention, especially

indicators that have a direct impact on contract employees, and working conditions are not mandatory to achieve a low turnover rate. However, employees may still intend to leave their jobs, even if their current work environment is comfortable and good.

3. Recognition affects job satisfaction. In the context of increasing job satisfaction. the concept of recognition in this study, which is indicated by individual recognition, performance recognition, public recognition, and participation recognition, can increase employee job satisfaction. The significant influence of recognition on job satisfaction shows that company recognition is a key factor in driving the job satisfaction of contract employees. The higher the recognition received, the higher their job satisfaction. Therefore, the company must first improve its recognition system, both in financial and non-financial forms. By providing timely and relevant appreciation for employee achievements, job satisfaction will ultimately increase.4. Working conditions affect job satisfaction. In the context of increasing job satisfaction, the concept of working conditions in this study, which is indicated by organizational culture, interpersonal/social relationships, teamwork, and work intensity, can increase employee job satisfaction. The significant influence of working conditions on job satisfaction shows that working conditions at the company are a key factor in driving the job satisfaction of contract employees. The better the perceived working conditions, the higher their job satisfaction. Therefore, companies must first improve working conditions, both in terms of ergonomic and safe physical facilities and an inclusive and supportive work environment. By providing adequate infrastructure support and a balance between work and personal life (work-life balance), job satisfaction will ultimately increase significantly.5. Job satisfaction has an influence but is not mandatory to achieve a low level of voluntary turnover intention. In the context of reducing voluntary turnover intention, the concept of job satisfaction in this study, which is indicated by feelings of enjoyment of work, team improvement orientation, supportive management, and formal opportunities for employee participation, can reduce the intention to leave voluntarily. The significant influence of job satisfaction on voluntary turnover intention shows that job satisfaction in the company is a key factor in reducing the intention of contract employees to leave. The higher the perceived job satisfaction, the lower the level of intention to leave working conditions. However, even happy and satisfied employees can still have the intention to change jobs. Therefore, keeping employees satisfied does not guarantee that they will not leave.

The theoretical implication of this study is to contribute to the literature on recognition, working conditions, job satisfaction, and voluntary turnover intention by examining the relationship between these variables in the context of human resource management in a company.

The managerial recommendations or implications that researchers can propose are managerial policies that focus on all job satisfaction indicators, in line with the findings that job satisfaction has a negative and significant effect on voluntary turnover intention. However, job satisfaction is not mandatory to achieve a certain level of voluntary turnover intention. The researchers' suggestions are as follows:

1. Regarding the indicator of enjoyment of work, management can strengthen employee enthusiasm and comfort in order to create positive psychological conditions. Enjoyment in carrying out daily tasks effectively increases employee job satisfaction, which ultimately strengthens their commitment to stay, thereby reducing the level of voluntary turnover intention.

2. Regarding the team improvement orientation indicator, management can strengthen collaborative commitment to mutually evaluate and improve group work effectiveness. This solid culture of improvement effectively increases job satisfaction through a progressive and supportive team environment. With the creation of good work synergy, team members' comfort will increase, which will ultimately reduce the level of voluntary turnover intention.3. In terms of supportive management indicators, management can strengthen the role of supervisors in providing direction, guidance, and concern for employee obstacles. This tangible managerial support effectively increases employee job satisfaction because they feel valued and secure professionally. The trust built in the organization will ultimately reduce the level of intention to voluntarily leave.

4. Finally, on the indicator of formal opportunities for employee participation, management can provide a formal forum for employees to provide input and engage in work improvement. The existence of this space for participation provides a sense of meaning and increases job satisfaction because employees feel that their voices are valued. This active involvement effectively strengthens emotional ties to the organization, which will ultimately reduce the level of intention to leave voluntarily.

CONCLUSION

In conclusion, Recognition has no effect and is not required to achieve voluntary turnover intention. Working conditions have no effect and are not required to achieve voluntary turnover intention.Recognition affects job satisfaction. Working conditions affect job satisfaction. Job satisfaction has an effect but is not required to achieve voluntary turnover intention.

LIMITATION

This study has several limitations and can be improved in future studies. The following are some of the limitations of this study:

1 The results of the study showing that recognition and working conditions have no significant effect on voluntary turnover intention provide opportunities for further research.

2 The population and sample size in this study were limited, with varying characteristics in terms of age and work experience, which could lead to bias related to differences in perceptions of job opportunities elsewhere.

3 At the condition level (X), namely recognition, working conditions, and job satisfaction, all values are NN (Not Necessary). This indicates that these three factors do not limit or are not necessary to achieve a certain level of voluntary turnover intention in the analyzed data.

FUTURE RESEARCH

Based on the results and limitations of this study, future researchers are advised to conduct the following studies:

1. The variables of recognition and working conditions can be replaced with other variables that influence voluntary turnover intention, or the variables of recognition and working conditions can be retained but the research location can be changed to one with characteristics different from those of company.

2. Age and length of service should be categorized because they have the potential to have different impacts on the intention to resign.

3. Since the three factors are not currently bottlenecks (NN), future research should focus on other conditions such as economic conditions, financial needs, or employment contracts that force employees to stay, which may limit these outcomes.

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