The Effect Of Work Stress On Turnover Intention Among Employees In The Qa Department PT. X

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Abstract.

This study examines the effect of job stress on turnover intention among employees in the Quality Assurance (QA) department at PT. X. In an era of increasing globalization, high employee turnover has become a critical concern for businesses, with job stress identified as a primary catalyst. This quantitative research used a causal-comparative design, with a total sampling technique applied to all 64 employees of the QA department. Data were collected using the Indonesian versions of the six-item Turnover Intention Scale (TIS-6) and the ten-item Perceived Stress Scale (PSS-10). The data were analyzed using simple linear regression via IBM SPSS 25. The results showed a significant and positive effect of job stress on turnover intention (p=0.000<0.05), with job stress accounting for a substantial 76% (R2=0.760) of the variance in turnover intention. The findings highlight the importance of proactive stress management strategies within organizations to reduce turnover rates and improve employee retention.

Keywords: Job Stress; Quality Assurance; Turnover Intention; Workload and Workplace.

I. INTRODUCTION

In today's highly competitive global market, the issue of turnover intention—the tendency of employees to leave an organization—has become a critical concern for businesses. A high rate of employee turnover can have serious repercussions on a company's sustainability and operational effectiveness, leading to increased recruitment costs and reduced team productivity (Bothma & Roodt, 2015; Purwanto & Suparno, 2021). This phenomenon is not confined to Indonesia; it is a global trend. The Microsoft Work Trend Index (2022) reported that approximately 41% of employees worldwide were considering leaving their jobs. This number rises to 52% among Gen Z and Millennials, highlighting this demographic's heightened sensitivity to working conditions and work-life balance. Furthermore, a Gallup (2023) report reinforces these findings, noting that nearly half of all global workers experience daily stress. These statistics underscore the significant role that psychological factors in the workplace, such as stress, play in an employee's decision to stay with or leave an organization.

One of the primary factors consistently found to have a strong correlation with turnover intention is job stress. Job stress is defined as a psychological and physical response to job demands that exceed an individual's capacity to cope (Robbins & Judge, 2017). Numerous empirical studies have shown that high levels of job stress can lead to decreased job satisfaction, burnout, and, ultimately, a greater intention to quit (Yuliana, Mardiana, & Gunawan, 2022; Susanti & Wijayanti, 2023). Job stress can stem from various sources, including excessive workload, time pressure, a lack of managerial support, and role conflict. Evidence from a JobStreet (2022) report in Indonesia indicates that 61% of employees experience job stress, driven by these factors. This makes understanding the relationship between job stress and turnover intention a crucial step for organizational sustainability.

Research Problems

In the Indonesian manufacturing industry, particularly at PT. X, job stress presents a complex problem, especially within departments with high-precision demands like Quality Assurance (QA). Employees in this department frequently face immense pressure to maintain strict product quality standards under tight deadlines. If not managed effectively, this can lead to high stress levels. Initial observations at the QA department of PT. X revealed indications of a high rate of turnover intention, supported by employee complaints about heavy workloads, excessive pressure, and limited career development opportunities. These issues align with research by Marpala & Endri (2024), who found that workload and pressure are key drivers

of turnover intention among millennial employees. Similarly, Putra & Pratiwi (2020) confirmed that unsupportive work environments can exacerbate the impact of stress on employee performance and intentions to leave.

Although the link between job stress and turnover intention has been extensively studied, there is a need to contextualize these findings within specific industries and departments, particularly in the Indonesian manufacturing sector. Prior research has often been general or focused on specific generations of workers, without specifically addressing the unique dynamics of technical departments like QA. For example, studies by Lestari & Margarethaa (2021) highlight job satisfaction as a mediator between stress and turnover intention, while Nasution (2017) adds the role of organizational commitment. However, a research gap exists in the lack of focus on how stress factors specific to the QA function—such as non-negotiable quality demands and pressure from production targets—directly influence employees' intentions to leave. Therefore, a focused study is essential to provide an in-depth understanding of this specific context.

Research Objective, Urgency, and Novelty

The present study aims to empirically analyze and test the effect of job stress on turnover intention among employees in the Quality Assurance department at PT. X. The urgency of this research is significant, as its findings can serve as a foundation for PT. X's management needs to design effective interventions to mitigate job stress and, consequently, reduce the high rate of employee turnover. By specifically identifying the dominant stressors within the QA department, the company can take proactive measures, such as adjusting workloads, improving managerial support, or implementing mental wellness programs. The novelty of this research lies in its specific focus on the Quality Assurance department of an Indonesian manufacturing company. While similar studies exist, this research offers a more detailed perspective on the relationship between job stress and turnover intention within a unique functional context where demands for quality and precision are exceptionally high. Thus, this study not only enriches the human resource management literature but also provides significant practical contributions to the manufacturing industry in Indonesia.

II.   METHODS

This study adopted a quantitative approach with a causal-comparative design to examine the effect of job stress on turnover intention. This design was chosen for its suitability in statistically measuring the relationship and influence between variables using numerical data (Sugiyono, 2018; Emzir, 2021). The research was conducted at PT. X, focusing on the Quality Assurance (QA) department. The study's population consisted of all 64 employees of the QA department, and a total sampling technique was employed to select all members of the population as respondents (Sudaryono, 2017). This method was appropriate given the relatively small size of the population, ensuring that all available data were collected to provide a comprehensive analysis.The primary data collection instruments were two standardized psychological scales based on the Likert scale format. To measure turnover intention, the six-item Turnover Intention Scale (TIS-6), originally developed by Bothma & Roodt (2013), was used. This scale had previously been translated and adapted into Indonesian by Hasan (2024), ensuring its validity and reliability within the local context. Example items from this scale include "I often think about leaving this job" and "I am actively looking for a new job outside this company." For measuring job stress, the Indonesian version of the Perceived Stress Scale (PSS-10), as utilized in research by Hakim et al. (2024), was employed. This ten-item scale is designed to assess the degree to which individuals perceive their lives as unpredictable, uncontrollable, and overwhelming.

Example items include "In the last month, how often have you felt that you were unable to control the important things in your life?" and "In the last month, how often have you felt that you were unable to cope with all the things that you had to do?" Both scales utilized a 0-4 Likert scale, with responses ranging from 0 = Never to 4 = Very Often.Data analysis was conducted using IBM SPSS version 25.0. Before hypothesis testing, prerequisite tests were performed. A normality test was conducted using the Kolmogorov-Smirnov method to determine if the data were normally distributed, a key assumption for classical linear regression analysis (Ghozali, 2018). The results showed a significance value of 0.200, which is greater than

the 0.05 threshold, confirming that the data were normally distributed. A linearity test was also performed to confirm a linear relationship between the variables, with the results showing a significance value of 0.000 (< 0.05), indicating a significant linear relationship between job stress and turnover intention. The study's hypothesis was tested using simple linear regression analysis to assess the influence of job stress on turnover intention. Finally, a coefficient of determination (R^2) test was conducted to determine the percentage of variance in the dependent variable (turnover intention) that could be explained by the independent variable (job stress).

III.   RESULTS AND DISCUSSION

Based on the data obtained from the total respondents, as many as 64 employees of the QA department of PT. X, the analysis of respondent characteristics in this study is focused on two aspects, namely gender and age. The data on the characteristics of the respondents can be seen in the following table 1:

Table 1. Characteristics of Respondents

No	Karakteristik	Keterangan	Jumlah
1	Jenis kelamin	Laki-laki	11
		Perempuan	53
2	Usia	19-21 tahun	10
		22-24 tahun	40
		25-28 tahun	14

Based on the explanation above, it can be concluded that the data analysis that has been carried out by more female respondents with an age range of 22-24 years. In this study, SPSS version 25 software was used to process the data. A prerequisite test was carried out, namely a normality test using *Kolmogorov-Smirnov* to determine the normality of the data in the research, by paying attention to the value of the mean level >0.05; then the data was distributed normally, but if the value of the significance was 0.05, it was said to be abnormally distributed. The following is the calculation of the data normality test.

A. Normality Test

Table 2. Normality Test Result

	Kolmogorov Smirnov[a]		
	Statistic	df	Sig.
Stres Kerja	0,093	64	.200*
Turnover Intention	0,089	64	.200*

Based on the table of normality test results above using SPSS version 25, from 64 respondents, a significant value was obtained with residual data of 0.200 on the *Kolmogorov-Smirnov* table. Because the value is greater than 0.05, it can be said that the data is distributed normally. These findings indicate that the condition of the normality assumption is met, which is one of the conditions in classical linear regression analysis (Ghozali, 2018)

B. Linearity Test

Table 3. Linearity Test

			Sum of Square	Df	Mean Square	F	Sig.
		ANOVA Table					
Turnover Intention* Stres kerja	Between Groups	(Combined)	1443.117	19	75,954	10,169	.000
		Linearty	1347.220	1	1347,22	180,376	.000
		Deviation from Linearity	95.896	18	5,328	0,713	.779
	Within Groups		328.633	44	7.469		
	Total		1771.75	63			

Based on the results of the test using the help of SPSS version 25 above, it can be said that the variable of work stress has a significant influence on turnover *intention* with *a significance. The linearity value* achieved of 0.000 < 0.05, which shows that there is a linear influence of work stress on *turnover intention.*

C. Hypothesis Test

Table 4. Hypothesis Test Results (Simple Regression)

Coefficients[a]						
	Unstandardized Coefficients		Standardized Coefficients			
Model	B	Std.Error	Beta	T	Sig.	
1 (*Constant*)	2.143	2.123		1.01	.317	
Stres Kerja	.995	.068	.872	14.027	.000	

The results of the regression test showed that work stress had a significant effect on employee turnover intention in the QA department of PT. X. A constant value of 2.143 indicates the baseline level of turnover intention when work stress is absent. A work stress regression coefficient of 0.995 indicates that every one-unit increase in the level of work stress will increase turnover intention by 0.995 units. The t-calculated value of 14.63 with a significance of $p = 0.000 < 0.05$ confirms that the effect of work stress on turnover intention is statistically significant.These findings are in line with the theory of Robbins and Judge (2015), which states that work stress can reduce employees' emotional attachment to their work. This condition has the potential to cause mental fatigue (burnout), which encourages employees to look for healthier and supportive work environment alternatives.

This is also consistent with the study of Yuliana, Mardiana, and Gunawan (2022), which shows that time pressure and role conflicts are the main sources of work stress that significantly increase turnover intention.Looking at the work dynamics in the QA department of PT. X, heavy workloads, pressure to maintain high-quality standards, and strict production targets are a real source of stress for employees. Without adequate managerial support and proportionate workload management, this stress level can increase, driving *turnover intention.* International research also supports these findings, where high work stress and *burnout* have been shown to increase employees' intention to resign (Frontiers in Psychology, 2024; Brown & Lee, 2023; Smith & Johnson, 2024).Based on these results, management needs to implement stress management strategies, such as adjusting workloads, increasing managerial support, and providing stress coping programs. This intervention is important to maintain job satisfaction, prevent burnout, and reduce the risk of *turnover intention*, especially in employees who are the backbone of the company's operations.

D. Coefficient of Determination Test (R2)

This study applied a determination coefficient test to determine the extent to which independent variables have an effect on dependent variables. The results of the determination coefficient test in this study are as follows:

Table 5. Determination Coefficient Test

Model Summary					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	
1	.872[a]	.760	.757	2.617	
a.	*Predictors: (Constant)* , Stres Kerja				
b.	*Dependent Variable* : *Turnover Intention*				

Based on the results of the determination coefficient test above, an R-squared value of 0.760 was obtained. This means that work stress (variable X) has an effect of 76.0% on *turnover intention* (variable Y) in employees of the QA department of PT. X.The results of this study show that work stress has a significant and positive influence on *turnover intention*. The higher the level of work stress an employee experiences, the more likely they are to leave the job. These findings are in line with previous research that states that work stress can decrease job satisfaction, increase emotional fatigue, and be one of the main driving factors in the intention to quit a job. In addition, work stress has been proven to be the dominant factor that affects *turnover intention*, although there are still other factors that play a role, such as job satisfaction, organizational commitment, and the social environment in the workplace. The data of this study also shows

that the relationship between work stress and *turnover intention* is linear, and the data used have met the assumption of normality. Overall, these findings reinforce the importance of managing work stress in the company environment to reduce *turnover intention* rates and improve employee well-being and retention.

IV.   CONCLUSION

This study found a significant and positive effect of job stress on turnover intention among employees in the QA department at PT. X. The results indicate that as employees' perceived job stress increases, their inclination to leave the organization also significantly rises. This finding aligns with and strengthens previous research, which consistently identifies job stress as a primary catalyst for decreased job satisfaction, heightened emotional fatigue, and, consequently, a greater intention to quit. The coefficient of determination (R2) value of 0.760 further highlights that job stress is a dominant factor, explaining a substantial 76% of the variance in turnover intention within this specific employee group.

Despite this strong influence, the remaining 24% suggests that other variables not examined in this study, such as job satisfaction, organizational commitment, and workplace social support, also contribute to turnover intention. The primary limitation of this research is its use of a cross-sectional design and its focus on a single department within one company, which may limit the generalizability of the findings to other contexts or industries. Future research could benefit from adopting a longitudinal approach to track the effects of stress over time and expanding the scope to include a wider range of variables and different industries. This would provide a more nuanced understanding of the complex factors driving turnover intention. Overall, the findings underscore the critical importance of company management to proactively identify and manage sources of job stress to create a healthier work environment, thereby improving employee retention and well-being.

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