EKOMA: Jurnal Ekonomi, Manajemen, Akuntansi
Vol.5, No.5, Juli 2026

Balancing Track: The Influence of Work-Life Balance, Motivation, Communication, and Work Stress on Job Satisfaction of Jabodebek LRT Drivers

Khoir Sanjaya Siregar[1], Yuli Kartika Dewi[2], Rhema Angela Krisandy[3]
[1,2,3]School of Business and Management, Ciputra University

Article History:
Received: 29 Juni 2026
Revised: 22 Juli 2026
Accepted: 30 Juli 2026

Keywords: *job satisfaction, work-life balance, motivation, communication, work stress*

Abstract: *Job satisfaction is an important component of organizational behavior, especially in high-responsibility professions such as rail transportation, where safety, precision, and performance are essential. This study aims to analyze the influence of work-life balance, motivation, communication, and Work Stress on the job satisfaction of train drivers operating the Jabodebek Indonesia Light Rail Transit (LRT). A quantitative research approach was used, involving 100 Jabodebek LRT drivers who were still active as respondents. Data was collected through a structured online questionnaire and analyzed using multiple linear regression with JASP software to determine the relationships between variables. The results of the study show that work-life balance and motivation have a positive and significant effect on job satisfaction. Work Stress also shows a positive and significant influence on job satisfaction, while communication has no significant effect on job satisfaction. Simultaneously, all independent variables were able to explain 81.6% of the variation in job satisfaction. These findings affirm the importance of managing work-life balance, increasing motivation, and managing work stress in an effort to increase job satisfaction of Jabodebek LRT drivers. These findings underscore the importance of implementing integrated managerial strategies, such as flexible work scheduling, strengthening employee motivation systems, improving internal communication channels, and developing effective stress management programs. This effort is critical to improving employee welfare, maintaining optimal performance, and supporting the sustainability of organizational operations in Indonesia's rapidly growing urban rail transportation sector.*

INTRODUCTION

Transportation in Indonesia plays an important role in supporting national economic growth, regional connectivity, and urban mobility. As the world's largest archipelagic country, Indonesia faces complex transportation challenges arising from rapid urbanization, high population density, and uneven infrastructure development across the region. In large metropolitan areas such as Jakarta, traffic congestion and air pollution have reached critical levels, prompting the government to develop sustainable public transportation alternatives. One of the significant advances in this context is the introduction of the Light Rail Transit (LRT) system. The Jakarta Bogor Depok Bekasi (Jabodetabek) LRT officially started operating in August 2023 managed by PT Kereta Api Indonesia (Persero). The system stretches for about 44.43 kilometers, connecting major urban nodes through 18 stations. According to data from the Ministry of Transportation (2024), LRT has reduced average travel time by 30-40% compared to road-based modes of transportation, while contributing to a 15% decrease in the use of private vehicles along its corridors. Despite these achievements, some challenges remain, especially in terms of operational efficiency, passenger optimization, and employee satisfaction—especially among LRT train drivers. Addressing these human resource factors is critical to ensuring service reliability and long-term sustainability. Therefore, understanding and improving job satisfaction among LRT personnel is an important component of Indonesia's broader transportation modernization agenda.

Working in the public transportation sector presents unique challenges. In the operational context of the Jabodebek LRT, the researcher also found indications of work adaptation challenges for some drivers, especially related to service patterns, shift work systems, and work placements far from their home areas and families. Based on initial observations and informal communication conducted by researchers with several Jabodebek LRT drivers, there are drivers who consider or propose a mutation to their home area due to the factor of personal and work life balance. These conditions show that aspects of work-life balance, motivation, work communication, and work stress are relevant factors to be studied further in relation to the job satisfaction of Jabodebek LRT drivers. If not managed properly, these various factors have the potential to affect the level of job satisfaction of drivers which can ultimately have an impact on the performance of individuals and organizations as a whole.

According to Fisher *et al*. (2009), Work-Life Balance refers to the ideal conditions in which individuals can effectively manage work and personal roles without experiencing role conflicts. This perspective is supported by Fariz and Huddin (2025), whose study of online transportation drivers in Indonesia found that Work-Life Balance has a significant positive effect on job satisfaction. For train drivers, maintaining such a balance is essential, as it directly affects mental health, psychological well-being, and overall job satisfaction. In addition, motivation is a key factor that encourages employees to perform with enthusiasm and commitment. Paramita *et al.* (2018) describe motivation as an internal force that directs work behavior to achieve organizational and personal goals, including increased job satisfaction. This is consistent with the findings of Sutanto *et al*. (2024), which show that motivation and work engagement act as mediating variables between Work-Life Balance and employee performance in the post-pandemic context.

Another important factor is communication. Effective workplace communication allows drivers to understand instructions clearly, report problems accurately, and maintain coordination with supervisors and colleagues. Wahyuni and Andika (2019) argue that effective organizational communication increase’s role clarity, minimizes misunderstandings, and ultimately increases job satisfaction. On the contrary, work stress is a negative factor commonly encountered in high-demand professions. Yuda Novaritpraja (2020) stated that unmanaged work stress can reduce

productivity, negatively impact mental health, and decrease job satisfaction. This is further supported by Fredin-Knutzén *et al.* (2023), who found that work stress among train operators in Sweden was significantly related to their intention to leave the profession. Job satisfaction itself is defined as a positive emotional state resulting from an individual's evaluation of work conditions, social relationships, and the fulfillment of psychological needs (Yasa & Dewi, 2018). Kreitner and Kinicki (2000) emphasize that job satisfaction encompasses both intrinsic and extrinsic aspects of work. In the context of Jabodebek LRT train drivers, job satisfaction is not only a matter of personal welfare, but also a determinant of operational success and service quality. Based on this background, this study aims to examine the influence of Work-Life Balance, Motivation, Communication, and Work Stress on the Job Satisfaction of Jabodebek LRT Drivers by using a quantitative approach through a structured online questionnaire.

LITERATURE REVIEW

Work-Life Balance refers to an individual's capacity to allocate appropriate time, energy, and attention between professional and personal life responsibilities. Achieving this balance results in important benefits, including reducing stress levels, improving mental well-being, and improving job satisfaction (Fisher *et al.,* 2009). Research by Oktosatrio (2020) further shows that employees who maintain a healthy Work-Life Balance tend to show higher levels of motivation and job satisfaction. In high-demand professions such as train operators, Work-Life Balance also serves as a protective factor against emotional exhaustion. Based on this theoretical perspective, the first hypothesis proposes that Work-Life Balance has a positive impact on job satisfaction.

Motivation is understood as an internal and external force that drives individuals to act towards a specific goal. Paramita *et al.* (2018) highlight that motivation is closely related to individual performance, morale, and satisfaction. Sutanto *et al.* (2024) further suggest that motivation serves as a mediating factor that connects Work-Life Balance and employee performance. In the context of train drivers, strong work motivation can help individuals manage work stress while maintaining a sense of satisfaction. Therefore, the second hypothesis states that motivation has a positive effect on job satisfaction. Communication is defined as the effective exchange of information between individuals or groups within an organization. Wahyuni and Andika (2019) emphasized that effective communication can minimize conflicts, increase collaboration, and ultimately increase job satisfaction. In the train driver profession, clear and accurate communication is essential to overcome operational challenges and ensure smooth workflows. Thus, the third hypothesis suggests that communication has a positive effect on job satisfaction.

Work Stress, on the other hand, represents a negative psychological condition that arises when the demands of the job exceed one's coping capacity. According to Yuda Novaritpraja (2020), unmanaged Work Stress can reduce motivation, interfere with health, and reduce job satisfaction. In professions characterized by heavy workloads and significant responsibilities, such as train driving, stress becomes a critical risk factor. Supporting this view, Fredin-Knutzén et al. (2023) found that Work Stress among train operators in Sweden is strongly associated with intention to leave the profession, reinforcing its negative impact on job satisfaction. Thus, the fourth hypothesis proposes that work stress negatively impacts job satisfaction. Job satisfaction itself is described by Yasa and Dewi (2018) as a positive emotional state resulting from an individual's evaluation of their work. Kreitner and Kinicki (2000) further explain that job satisfaction includes the cognitive, affective, and evaluative dimensions of one's work experience.

Grand Theory

This study uses the Two-Factor Theory proposed by Herzberg, Mausner, and Snyderman (1959) as a theoretical foundation in explaining Job Satisfaction. Herzberg divided the factors that form job satisfaction into motivator factors and hygiene factors. Motivator factors are intrinsic factors that come from the work itself, while hygiene factors are extrinsic factors that come from the work environment such as working conditions, interpersonal relationships, organizational policies, communication, and various conditions that affect individual comfort at work. According to Herzberg, the existence of motivator factors will increase employee job satisfaction, while poor hygiene factors can cause job dissatisfaction. Therefore, job satisfaction is seen as the result of an individual's evaluation of various intrinsic and extrinsic factors experienced during work (Herzberg *et al.,* 1959) .

In the perspective of Two-Factor Theory, Motivation is seen as an intrinsic factor that drives individuals to achieve performance and job satisfaction. Meanwhile, Work-Life Balance, Communication, and Work Stress are related to the conditions of the work environment that affect an individual's perception of their work. Therefore, all research variables have theoretical relevance in explaining Job Satisfaction. Based on this theory, the Job Satisfaction of Jabodebek LRT drivers are seen as the result of various psychological factors and the work environment that work simultaneously. Therefore, Work-Life Balance, Motivation, Communication, and Work Stress are positioned as variables that have the potential to affect the Job Satisfaction of Jabodebek LRT drivers.

Conceptual Foundations of Research

This research is based on Herzberg's Two-Factor Theory which views job satisfaction as the result of an individual's evaluation of various intrinsic and extrinsic factors derived from work and the work environment. In this perspective, job satisfaction is not influenced by a single factor, but rather by multiple determinants that work simultaneously. Therefore, this study uses a multiple determinants of job satisfaction approach that places Work-Life Balance, Motivation, Communication, and Work Stress as direct predictors of Job Satisfaction. This approach is in line with Herzberg's Two-Factor Theory which explains that job satisfaction is the result of an individual's evaluation of various intrinsic and extrinsic factors that work simultaneously. Therefore, Work-Life Balance, Motivation, Communication, and Work Stress are positioned as parallel predictors that directly contribute to the formation of Job Satisfaction of Jabodebek LRT drivers.

Inter-Variable Relationships

Based on the theoretical framework and hypothesis proposed, the relationship between variables in this study is explained through Herzberg's Two-Factor Theory which views job satisfaction as the result of individual evaluation of various intrinsic and extrinsic factors derived from work and work environment. In the context of Jabodebek LRT drivers, Work-Life Balance, Motivation, Communication, and Work Stress are seen as factors that can directly affect employee job satisfaction levels. Work-Life Balance (X1) is hypothesized to have a positive effect on Job Satisfaction (Y). Theoretically, Work-Life Balance reflects an individual's ability to balance the demands of work and personal life so as to minimize role conflicts and maintain the psychological well-being of the individual. When employees are able to maintain a balance between work and personal life, the level of emotional fatigue and psychological stress tends to decrease so that individuals can feel higher comfort and satisfaction with their work. In the context of Jabodebek

LRT drivers who have high operational responsibilities and work schedules that are not always stable, work-life balance is an important factor in maintaining job satisfaction. Fisher *et al*. (2009) explained that Work-Life Balance is closely related to well-being and job satisfaction. This is also supported by research by Fariz and Huddin (2025) which shows that Work-Life Balance has a positive influence on the job satisfaction of workers in the transportation sector.

Motivation (X2) is also hypothesized to have a positive effect on Job Satisfaction (Y). Motivation is an internal and external drive that affects an individual's enthusiasm in carrying out work and achieving organizational goals. Highly motivated individuals tend to show better work involvement, enthusiasm, and organizational commitment so that they can increase satisfaction with the work undertaken. In a public transportation work environment such as the Jabodebek LRT, motivation is an important factor because the driver's job requires high concentration, great responsibility, and consistency in maintaining the safety of passengers. Paramita *et al.* (2018) explain that work motivation contributes to increased job satisfaction through increased work enthusiasm and engagement. In addition, Sutanto *et al.* (2024) also found that motivation and work engagement play a role in increasing employee satisfaction and work performance.

Communication (X3) is hypothesized to have a positive effect on Job Satisfaction (Y). Effective organizational communication allows for information delivery, work coordination, and clear feedback between organizational members. Communication clarity helps employees better understand duties and responsibilities, reduce misunderstandings, and improve operational coordination to create a more comfortable and conducive work environment. In the operation of the Jabodebek LRT, communication has an important role because drivers must coordinate accurately with operations controllers, supervisors, and colleagues to maintain the safety and smooth journey of the train. Wahyuni and Andika (2019) stated that effective organizational communication can increase the clarity of employee roles and job satisfaction through the creation of better working relationships.

On the other hand, Work Stress (X4) is hypothesized to have a negative effect on Job Satisfaction (Y). Work Stress arises when the demands of work exceed the individual's ability to manage work pressure, workload, and role conflicts faced. High levels of stress can cause mental fatigue, decreased concentration, emotional disturbances, and decreased work comfort, thus negatively impacting job satisfaction. For Jabodebek LRT drivers, high operational pressure, responsibility for passenger safety, and busy work schedules have the potential to increase the level of Work Stress. Novaritpraja (2020) explained that unmanaged Work Stress can reduce employee productivity and job satisfaction. In addition, Fredin-Knutzén *et al.* (2023) found that Work Stress in train operators is associated with decreased work comfort and increased desire to leave the profession.

This research is based on Herzberg's Two-Factor Theory which explains that job satisfaction is influenced by various intrinsic and extrinsic factors that shape an individual's perception of his or her work. This view is in line with Kreitner and Kinicki (2000) who stated that job satisfaction is the result of an individual's evaluation of various aspects of his work. In line with this perspective, this study places Work-Life Balance, Motivation, Communication, and Work Stress as independent variables that are tested for their direct influence on the Job Satisfaction of Jabodebek LRT drivers. This study does not specifically aim to examine the causal relationship or mediation between independent variables as widely used in the Job Demands-Resources Theory (JD-R) approach, but focuses on identifying the direct contribution of each variable to Job Satisfaction.

Although some previous studies have placed Work-Life Balance as an antecedent of Work

Stress, the two variables are different constructs. Work-Life Balance represents an individual's ability to balance work and personal life, while Work Stress represents an individual's perception of work pressure experienced during their work. Therefore, in accordance with the objectives of the study, Work-Life Balance and Work Stress were positioned as parallel predictors that were tested for their direct contribution to the Job Satisfaction of Jabodebek LRT drivers.

RESEARCH METHOD

This study adopts a quantitative approach that aims to empirically investigate the influence of Work-Life Balance, Motivation, Communication, and Work Stress on the Job Satisfaction of Jabodebek LRT Drivers.

Based on the theoretical framework, the research model identified Work-Life Balance (X1), Motivation (X2), Communication (X3), and Work Stress (X4) as independent variables, while Job Satisfaction (Y) was treated as a dependent variable. This model assumes that higher levels of Work-Life Balance, Motivation, and Communication will lead to increased Job Satisfaction. On the other hand, Work Stress is expected to have a negative influence on Job Satisfaction. Overall, this model describes the direct relationship between four independent variables and a single dependent variable (Creswell, 2017).

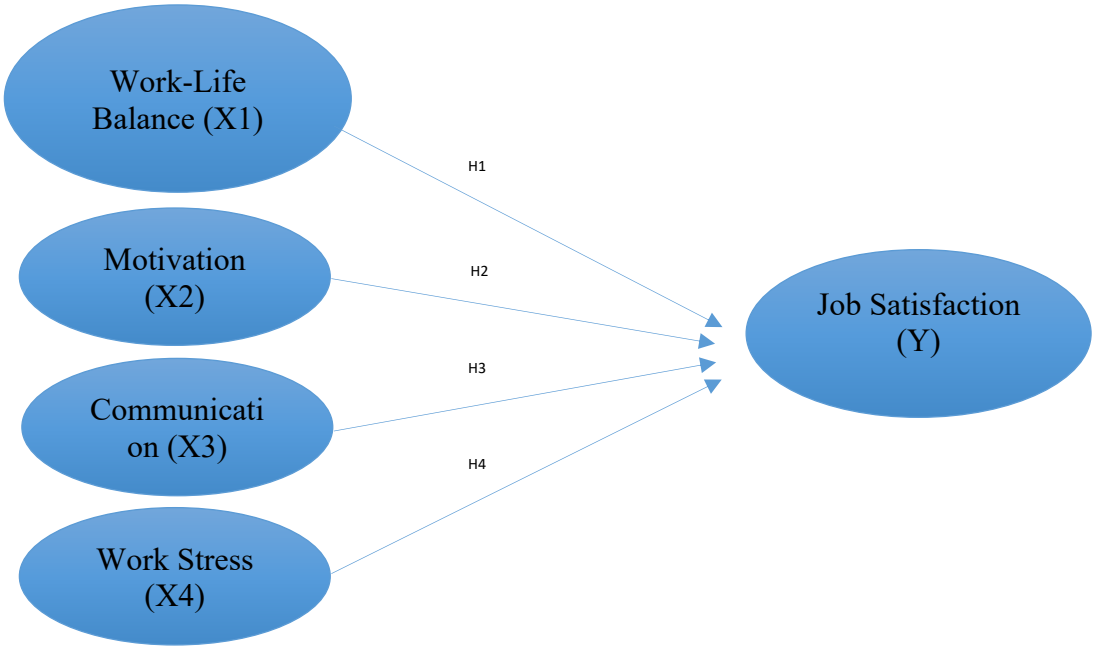

Figure 1. Research Model

Research Hypothesis

Based on the established conceptual framework and supporting theories, the hypothesis of this study is formulated as follows:

Code	Hipotesis
H1	Work-Life Balance (X1) has a positive impact on Job Satisfaction (Y).
H2	Motivation (X2) has a positive effect on Job Satisfaction (Y).
H3	Communication (X3) has a positive impact on Job Satisfaction (Y).
H4	Work Stress (X4) negatively impacts Job Satisfaction (Y).

Research Approach

Quantitative survey design was applied in this study. The quantitative approach was chosen because this study seeks to examine the relationship between variables using numerical data analyzed through statistical techniques. The survey method is considered suitable because it allows the collection of primary data in a systematic, measurable, and general manner directly from respondents (Sugiyono, 2019).

Population and Sample

The population in this study is all active drivers of the Jabodebek LRT which is 120 people. This study uses purposive sampling techniques, which are sampling techniques based on certain criteria that are in accordance with the research objectives (Etikan et al., 2016). The criteria for respondents in this study include: (1) active drivers of the Jabodebek LRT, (2) have a minimum working period of six months, and (3) are still active at the time the study was conducted. The number of samples was determined using the Slovin formula as explained by Sugiyono (2019) with an error tolerance of 5% which is commonly used in social research with a confidence level of 95%. The Slovin formula used is as follows:

$$n = \frac{N}{1 + Ne^2}$$

Description:
n = number of samples
N = total population
e = Error tolerance

With a population of 120 active drivers of the Jabodebek LRT and an error rate of 5%, the following calculations were obtained:

n= 120 / (1 (+ 120(0.05)²)
n = 120 / 1.3
n = 92.3 ≈ 93 respondents

Based on this calculation, the minimum number of samples needed is 93 respondents. This study succeeded in obtaining 100 respondents so that the number of samples was considered representative to describe the research population. The number of samples obtained was also considered adequate to be used in multiple linear regression analysis so that it could provide an overview of the influence of Work-Life Balance, Motivation, Communication, and Work Stress on the Job Satisfaction of Jabodebek LRT drivers.

Research Instruments

Data were collected using a structured questionnaire developed from indicators adopted from previous research and adjusted to the context of the Jabodebek LRT. All items were measured using a five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). The Likert scale was chosen because it effectively captures the level of agreement respondents have with the given statement (Sekaran & Bougie, 2016).

Table 1. Operationalization of Research Variables

Variabel	Indicator	Source
Work-Life Balance (X1)	Work-life balance; energy balance; Work-life balance and non-work role involvement	Fisher et al. (2009); Oktosatrio (2020)
Motivation (X2)	Intrinsic motivation (satisfaction from the job itself); extrinsic motivation (incentives, rewards, career paths); Organizational commitment	Paramita et al. (2018); Sutanto et al. (2024)
Communication (X3)	Clarity of work instructions; coordination between employees; feedback from superiors; Information Disclosure	Wahyuni & Andika (2019)
Work Stress (X4)	Excessive workload; time and schedule pressures; physical and mental tension due to work; Role conflicts	Yuda Novaritpraja (2020); Fredin-Knutzén dkk. (2023)
Job Satisfaction (Y)	Overall job satisfaction; satisfaction with supervision; satisfaction with the working relationship; Satisfaction with career opportunities	Kreitner & Kinicki (2000); Yasa & Dewi (2018)

Data Collection Techniques

Data was collected through the distribution of an online questionnaire using Google Forms to respondents who met the purposive sampling criteria. The use of online survey instruments is intended to facilitate wider distribution, increase efficiency, and speed up the data collection process while maintaining the reliability and accuracy of respondents' answers (Sekaran & Bougie, 2016).

Data Analysis Techniques

The collected data is analyzed using JASP software. The analysis procedure begins with data preparation, including cleansing and coding, ensuring that Likert scale items are correctly assessed and demographic variables are categorized as nominal or ordinal. This is followed by checking for missing data and ensuring consistency across response categories. The quality of the instrument was then assessed using Cronbach's alpha and McDonald's omega to evaluate reliability, along with the Corrected Item-Total Correlation to confirm the validity of the item. Descriptive statistical analysis, including means, standard deviations, and minimum-maximum values, was performed, in addition to frequency distributions for demographic variables. Hypothesis testing was carried out by multiple linear regression, with Job Satisfaction (Y) as the dependent variable and Work-Life Balance (X1), Motivation (X2), Communication (X3), and Work Stress (X4) as independent variables.

Before interpreting the regression results, several classical assumption tests were performed, including residual normality (using Shapiro-Wilk tests and Q-Q plots), multicollinearity (assessed through Inflation Factor Variance and tolerance values), and heteroskadasticity (checked through residual scatter plots). When certain assumptions are not fully met, robust estimation techniques, such as strong standard errors, are applied to strengthen the analysis. The significance level is set at $\alpha = 0.05$. The main statistical outputs reported included regression coefficients (β), t-values, p-values, determination coefficients (adjusted R^2 and R^2), and F-tests to assess the overall suitability of the model, consistent with standard practice in quantitative research (Sekaran & Bougie, 2016; Sugiyono, 2019). Key outputs, such as Model Summary, ANOVA tables, and Coefficient tables from the JASP regression module, are interpreted to determine the direction and magnitude of the influence of each independent variable.

In practice, the data collection involved 100 respondents who were active train drivers with at least six months of work experience. The questionnaire items were adapted from established instruments used in previous studies and modified to fit the context of this study. Each variable

was measured using a five-point Likert scale ranging from strongly disagree to strongly agree. The final analysis uses multiple linear regression to evaluate the contribution of each independent variable to job satisfaction.

RESULTS AND DISCUSSION

Results

Once the necessary data is collected, the analysis is carried out in accordance with the standard procedures implemented in JASP. The following section presents the results of data processing along with explanations and interpretations based on the outputs produced. The results of the reliability test showed a McDonald's Omega value (ω) of 0.963 with a standard error of 0.012 and a 95% confidence interval in the range of 0.931 to 0.979. These values indicate a very high level of internal consistency. In addition, the results of the construct validity show that the statement item meets the measurement criteria of the research variables.

Table 2. Demographic Characteristics of Respondents

Variabel	Category	Frequency	Total	Proportion
Age	25–30 Years	53	100	0.530
	31–35 Years	11	100	0.110
	<25 Years	35	100	0.350
	>35 Years	1	100	0.010
Gender	Male	83	100	0.830
	Women	17	100	0.170
Work Experience	10–15 Years	7	100	0.070
	3–5 Years	30	100	0.300
	5–10 Years	30	100	0.300
	<3 Years	32	100	0.320
	>15 Years	1	100	0.010
Marital Status	Unmarried	54	100	0.540
	Married	46	100	0.460
Residence	Bekasi	40	100	0.400
	Bogor	5	100	0.050
	Cibubur	1	100	0.010
	Yogyakarta	1	100	0.010
	Depok	24	100	0.240
	Jakarta	22	100	0.220
	Others	1	100	0.010
	Palembang	3	100	0.030
	Solo	1	100	0.010
	Surabaya	2	100	0.020

The largest proportion of respondents were aged between 25 and 30 years (53%), while male respondents accounted for 83% of the sample. Based on work experience, most respondents had less than 10 years of service, indicating that the respondents were generally within the productive

age group and possessed considerable operational experience. In terms of residence, most respondents resided in Bekasi (40%), followed by Depok (24%) and Jakarta (22%). Furthermore, the distribution of marital status was relatively balanced, with 54% of respondents being unmarried and 46% being married. Overall, the demographic characteristics provide an overview of the profile of active LRT Jabodebek drivers who participated in this study.

To provide a more comprehensive understanding of respondent characteristics, descriptive comparisons were conducted based on gender, marital status, and age groups. These comparisons were intended to identify patterns in the distribution of Work-Life Balance, Work Stress, and Job Satisfaction scores across different demographic groups.

Table 3. Descriptive Analysis of Variables by Gender

Statistics	Total WLB		Total WS		Total JS	
	Male	Women	Male	Women	Male	Women
Mean	13.37	13.59	22.31	21.94	21.13	20.76
Std. Deviation	2.009	1.734	2.909	2.249	2.858	3.545

Based on Table 3, slight variations in the mean scores of each research variable were observed across gender groups. In the Work-Life Balance variable, female respondents had a slightly higher average score (13.59) than male respondents (13.37). In the Work Stress variable, male respondents had an average score of 22.31, while female respondents were 21.94. Meanwhile, in the job satisfaction variable, male respondents reported a mean score of 21.13, while female respondents reported a mean score of 20.76. The standard deviation values indicate that respondents' responses within each gender group were relatively consistent.

Table 4. Descriptive Analysis of Variables Based on Marital Status

Statistics	Total WLB		Total WS		Total JS	
	Unmarried	Married	Unmarried	Married	Unmarried	Married
Mean	13.53	13.26	22.19	22.33	21.08	21.07
Std. Deviation	1.967	1.960	2.842	2.781	3.339	2.516

Based on Table 4, unmarried respondents had an average Work-Life Balance score of 13.53, slightly higher than married respondents of 13.26. In the Work Stress variable, married respondents had an average score of 22.33, slightly higher than unmarried respondents of 22.19. Meanwhile, in the job satisfaction variable, the two groups showed relatively similar values, namely 21.08 in unmarried respondents and 21.07 in married respondents. These findings indicate that job satisfaction scores were relatively similar between unmarried and married respondents. The standard deviation values in each group were also relatively small, suggesting that respondents' answers in the same group tended to be less varied.

Table 5. Descriptive Analysis of Variables by Age (WLB)

Statistic	< 25 Years	25–30 Years	31–35 Years	> 35 Years
Mean	13.37	13.54	13.00	12.00
Standard Deviation	2.211	1.914	1.342	–

Note: The standard deviation for respondents aged over 35 years was not available in the provided data and is therefore indicated by a dash (–).

Based on Table 5, the age group of 25–30 years had the highest average Work-Life Balance

score of 13.54. Furthermore, it was followed by the age group under 25 years old at 13.37, the age group of 31-35 years old at 13.00, and the age group over 35 years old at 12.00. The results indicate that respondents aged 25–30 reported the highest mean Work-Life Balance score among all age groups.

Table 6. Descriptive Analysis of Variables by Age (WS)

Statistics	< 25 Years	25–30 Years	31–35 Years	> 35 Years Old
Mean	21,94	22,53	22,09	20,00
Standard deviation	3,152	2,743	1,868	–

Note: The standard deviation value for the age group above 35 years is not available in the given data, so it is marked with a dash (–).

Based on Table 6, the 25–30-year age group had an average score of 22.53, which was the highest score compared to other age groups. The 31–35-year-old age group had an average score of 22.09, the less than 25 years age group of 21.94, while the age group above 35 years had an average score of 20.00. Descriptive differences in mean Work Stress scores were observed across age groups, although the magnitude of the differences was relatively small.

Table 7. Descriptive Analysis of Variables by Age (JS)

Statistics	< 25 Years	25–30 Years	31–35 Years	> 35 Years Old
Mean	20,91	21,19	21,09	20,00
Standard deviation	3,801	2,949	2,468	–

Note: The standard deviation value for the age group above 35 years is not available in the given data, so it is marked with a dash (–).

Based on Table 7, the age group of 25–30 years has the highest average job satisfaction of 21.19. Furthermore, the age group under 25 years old has an average of 20.91, the age group of 31-35 years old is 21.09, and the age group over 35 years old is 20.00. The results show that respondents aged 25–30 reported the highest mean job satisfaction score among the age groups included in this study. However, the average difference between age groups is relatively small, so further analysis is needed to determine the significance of the difference.

Table 8. Model Summary

Model	R	R^2	R^2 Customized	RMSE	R^2 Changes	df1	DF2	p
M_0	0.000	0.000	0.000	2.797	0.000	0	97	–
M_1	0.904	0.816	0.808	1.224	0.816	4	93	<,001

Note: M_1 includes Total COM (Communication), Total WLB (Work-Life Balance), Total MTV (Motivation), and Total WS (Work Stress).

A regression model combining Communication (COM), Work-Life Balance (WLB), Motivation (MTV), and Work Stress (WS) accounted for 81.6% of the Job Satisfaction (JS) variance, as shown by an R^2 value of 0.816, with an Adjusted R^2 of 0.808. The correlation coefficient (R = 0.904) indicates a very strong relationship between the independent and Job Satisfaction, The RMSE value of 1.224 indicates that the model has a relatively low prediction error in estimating Job Satisfaction scores. In addition, the model was statistically significant ($p < 0.001$). These findings suggest that the variables included in the model together contribute to influencing job satisfaction.

Table 9. ANOVA Regression

Model	Source	Sum of Squares	df	Square Average	F	p
M_1	Regression	619.3	4	154.821	103.3	<0.001
	Residual	139.3	93	1.498	–	–
	Total	758.6	97	–	–	–

Note: M_1 includes Total COM (Communication), Total WLB (Work-Life Balance), Total MTV (Motivation), and Total WS (Work Stress). The intercept model was eliminated because it did not provide meaningful information.

The ANOVA results show that the regression model is statistically significant, with $F(4, 93) = 103.3$ and $p < 0.001$. This shows that models that include predictor variables provide a much better match than models without predictors. In other words, the independent variables jointly contribute to explaining variations In Job Satisfaction.

Table 10. Coefficients

Model	Variabel	Non-Standard	Std. Error	Standard	t	p
M_0	(Intercept)	22.255	0.282	–	78.780	<,001
M_1	(Intercept)	1.494	1.106	–	1.351	.180
	Total COM	0.045	0.089	0.043	0.510	.611
	Total WLB	0.298	0.109	0.209	2.742	.007
	Total MTV	0.553	0.087	0.567	6.329	<,001
	Total WS	0.148	0.059	0.172	2.522	.013

Based on the results of the regression coefficient test in Table 10, the MTV variable (Motivation) had a positive and significant effect on Job Satisfaction, with a standardized coefficient value of 0.567 and a significance value of $p < 0.001$, indicating that motivation was the most dominant variable influencing the Job Satisfaction of LRT Jabodebek drivers. The Work-Life Balance (WLB) variable also showed a positive and significant effect, with a standardized coefficient value of 0.209 and $p = 0.007$. In addition, the Work Stress (WS) variable showed a significant effect, with a standardized coefficient value of 0.172 and $p = 0.013$. Meanwhile, the Communication variable (COM) did not have a significant effect on Job Satisfaction ($\beta = 0.043$; $p = 0.611$). These findings indicate that motivation, work-life balance, and Work Stress contribute more substantially to Job Satisfaction than Communication within the operational context of LRT Jabodebek drivers. Although Work Stress showed a positive and significant relationship with Job Satisfaction, this finding should not be interpreted as indicating that higher levels of Work Stress generally increase job satisfaction. Rather, it may reflect respondents' ability to manage work-related pressures within the operational environment of LRT Jabodebek.

Discussion

The results show that work-life balance, motivation, and work stress have positive and significant effects on job satisfaction, while communication does not have a statistically significant effect on the job satisfaction of Jabodebek LRT drivers. Taken together, these findings support the view that job satisfaction develops through employees' evaluation of multiple intrinsic and extrinsic aspects of their work. This interpretation is consistent with Herzberg's Two-Factor Theory, which distinguishes motivational factors related to the content of work from hygiene factors associated with the surrounding work environment (Herzberg et al., 1959). The discussion below has been strengthened with relevant literature in each subsection.

The research model demonstrates strong explanatory power, as indicated by an R value of 0.904, an R^2 of 0.816, and an adjusted R^2 of 0.808. These values indicate that work-life balance, motivation, communication, and work stress jointly explain a substantial proportion of the variation in job satisfaction among Jabodebek LRT drivers. The F-test value of 103.3 with a significance level of $p < 0.001$ further confirms that the model is statistically significant and appropriate for explaining job satisfaction. The simultaneous influence of these variables is consistent with the multidimensional view of job satisfaction, which recognizes that employee attitudes are shaped by the interaction of personal, psychological, and organizational conditions rather than by a single determinant (Judge et al., 2017; Spector, 1997). This study adopts a multiple-determinants approach by positioning the four independent variables as direct predictors of job satisfaction. Such an approach is appropriate when the research objective is to estimate the unique contribution of each predictor while controlling for the effects of the remaining variables. Although the Job Demands–Resources model explains occupational well-being through the interaction between job demands and job resources, the present model focuses on the direct statistical contribution of each determinant to job satisfaction (Bakker & Demerouti, 2007; Demerouti et al., 2001).

The Effect of Work-Life Balance on Job Satisfaction

The results show that work-life balance has a positive and significant effect on the job satisfaction of Jabodebek LRT drivers. This finding indicates that drivers who are better able to balance occupational demands with personal and family responsibilities tend to report higher levels of job satisfaction. Work-life balance allows employees to allocate sufficient time, energy, and psychological attention across work and nonwork domains, thereby reducing role conflict and emotional exhaustion. This result is consistent with Fisher et al. (2009), who conceptualized work-life balance through the interaction between work interference with personal life, personal-life interference with work, and mutual enhancement between the two domains. Employees experience greater occupational well-being when the demands of one domain do not continuously deplete the resources needed in another. Meta-analytic evidence likewise shows that work–family conflict is negatively associated with job satisfaction and broader indicators of psychological well-being (Amstad et al., 2011).

The result is particularly relevant to Jabodebek LRT drivers because their work involves strict operational schedules, high concentration, passenger-safety responsibilities, and limited tolerance for error. Transportation employees who work irregular, rotating, or demanding schedules may encounter difficulties maintaining family routines, rest periods, and social activities. Under these circumstances, organizational policies that provide predictable schedules, adequate recovery time, and reasonable shift arrangements can improve employees' evaluation of their jobs. The finding also supports the study by Fariz and Huddin (2025), which reported a positive relationship between work-life balance and job satisfaction in the transportation sector. However, work-life balance in modern public transportation should not be interpreted solely as an equal division of working and personal time. It also reflects the employee's ability to recover psychologically, maintain meaningful personal relationships, and preserve physical and emotional functioning amid demanding operational responsibilities. Therefore, work-life balance constitutes an important organizational resource for sustaining driver satisfaction and occupational well-being.

The Effect of Motivation on Job Satisfaction

The findings demonstrate that motivation has a positive and significant effect on job satisfaction and constitutes the most dominant predictor in the research model. This result indicates

that drivers who possess stronger internal and external motivation are more likely to evaluate their jobs positively. Motivation directs employees' effort, persistence, concentration, and willingness to fulfil organizational responsibilities. According to Herzberg et al. (1959), intrinsic motivational factors such as achievement, recognition, responsibility, advancement, and the meaningfulness of work can generate positive attitudes toward employment. When employees perceive their duties as meaningful and believe that their contributions are recognized, they are more likely to experience satisfaction. In the context of Jabodebek LRT drivers, motivation is particularly important because the occupation requires discipline, vigilance, technical competence, and sustained responsibility for passenger safety.

Self-Determination Theory further explains that high-quality motivation develops when the work environment supports employees' needs for autonomy, competence, and relatedness. The fulfilment of these psychological needs strengthens internalized motivation, engagement, persistence, and well-being (Ryan & Deci, 2000). Drivers who feel competent in operating the train, connected to colleagues and supervisors, and trusted to carry out their responsibilities may experience greater satisfaction with their work. The findings are also consistent with Paramita et al. (2018), who described motivation as an internal and external force influencing work behaviour and employee satisfaction. Similarly, Sutanto et al. (2024) found that motivation and work engagement contribute to improved job satisfaction and employee performance. The dominant role of motivation in this study suggests that employees' psychological interpretation of their work has considerable influence within a high-pressure operational environment. This result carries an important managerial implication. Increasing job satisfaction among Jabodebek LRT drivers requires more than material incentives. Management should also strengthen recognition, career-development opportunities, professional competence, participation, and appreciation for safe operational performance. These practices can help employees interpret their work as valuable, professionally meaningful, and aligned with personal achievement.

The Effect of Communication on Job Satisfaction

The findings show that communication does not have a statistically significant effect on the job satisfaction of Jabodebek LRT drivers. This means that differences in respondents' perceptions of communication did not produce meaningful differences in their reported job satisfaction after work-life balance, motivation, and work stress were statistically controlled. The result differs from much of the previous literature, which generally associates effective internal communication with role clarity, trust, organizational commitment, and employee satisfaction. Communication that is timely, transparent, and reciprocal can help employees understand organizational expectations and feel included in workplace decisions (Vermeir et al., 2018). Previous research has also found that satisfaction with internal communication is associated with various dimensions of job satisfaction, although the strength of the relationship can differ across organizational settings (Men, 2014; Verčič et al., 2021).

The nonsignificant finding may be explained by the highly standardized operational environment of Jabodebek LRT. Communication among drivers, control centres, supervisors, and other operational personnel is governed by formal protocols designed to maintain safety and service consistency. Consequently, respondents may receive relatively similar messages, instructions, and communication procedures. Limited variation in communication experiences can reduce the statistical ability of this variable to distinguish between employees with higher and lower job satisfaction.

Communication may also function as a necessary operational condition rather than a

motivational feature. In a safety-critical transportation system, accurate instructions, reporting procedures, and confirmation protocols are expected components of the job. Employees may therefore consider communication important for operational reliability without interpreting it as a principal source of personal satisfaction. Another possibility is that communication influences job satisfaction indirectly through organizational support, motivation, trust, or work engagement. Research has shown that the effects of internal communication can operate through employee motivation and other psychological mechanisms rather than through an exclusively direct relationship (Pacheco et al., 2024). Future studies could examine these indirect relationships through mediation or moderation analysis. Accordingly, the nonsignificant result should not be interpreted as evidence that communication is unimportant. It indicates that communication did not emerge as a direct statistical determinant of job satisfaction within the present model and sample. Its role may be embedded in operational coordination or transmitted through other organizational variables.

The Effect of Work Stress on Job Satisfaction

The results indicate that work stress has a positive and significant effect on the job satisfaction of Jabodebek LRT drivers. This finding differs from the conventional expectation that increasing occupational stress generally reduces employee satisfaction. Previous studies commonly show that excessive workload, role conflict, emotional strain, and inadequate job control are associated with lower job satisfaction and poorer occupational well-being (Faragher et al., 2005; Novaritpraja, 2020). The positive coefficient requires careful interpretation. It should not be understood as evidence that increasing harmful stress will automatically increase job satisfaction. One possible explanation concerns the distinction between challenge stressors and hindrance stressors. Challenge stressors include demanding responsibilities, time pressure, and complex tasks that may be appraised as opportunities for achievement and professional development. Hindrance stressors include role ambiguity, organizational politics, unnecessary administrative barriers, and conditions that obstruct goal attainment. Meta-analytic evidence shows that hindrance stressors are negatively related to job satisfaction, whereas challenge stressors can display more favourable relationships with work attitudes under certain circumstances (Podsakoff et al., 2007).

For Jabodebek LRT drivers, concentration demands, operational discipline, and responsibility for passenger safety may be perceived as inherent features of professional work. When drivers possess adequate training, clear procedures, supportive supervision, and sufficient competence, a certain level of pressure may be interpreted as meaningful responsibility rather than as an uncontrollable burden. This interpretation may help explain why the measured stress variable shows a positive association with job satisfaction. The result could also be affected by the construction and coding of the instrument. When questionnaire items are positively worded, reverse-scored, or oriented toward employees' ability to manage pressure, a higher total score may represent stronger stress-management capacity rather than more severe dysfunctional stress. Therefore, the direction of item coding, scale labels, and operational definitions should be re-examined before drawing a substantive conclusion.

Another possible explanation is statistical suppression. Because work stress was estimated simultaneously with work-life balance, motivation, and communication, the sign of its regression coefficient may differ from its zero-order correlation with job satisfaction. Examining the correlation matrix, tolerance values, variance inflation factors, and regression coefficients across alternative models would help determine whether the positive relationship reflects a substantive effect or the interaction among predictors. Accordingly, the fourth hypothesis is not supported

when it originally predicted a negative effect of work stress on job satisfaction. The empirical result demonstrates a significant relationship in the opposite direction. This discrepancy should be presented as a contextual and measurement-sensitive finding, not as a general recommendation to increase work pressure. Excessive or prolonged occupational stress remains associated with adverse psychological and organizational outcomes, particularly when demands exceed employees' resources and control (Bakker & Demerouti, 2007; Podsakoff et al., 2007).

Research Position and Contribution

Overall, this study confirms that job satisfaction in the public transportation sector is shaped by a combination of psychological and organizational conditions. Work-life balance and motivation make particularly important contributions, while communication does not emerge as a direct determinant in the tested model. The positive coefficient of work stress introduces a contextual finding that requires interpretation through the nature of operational demands, employee appraisal, scale construction, and potential statistical suppression. The study contributes to the literature by applying Herzberg's Two-Factor Theory to the specific occupational setting of Jabodebek LRT drivers. The findings indicate that motivational and hygiene-related conditions may operate differently in a safety-critical, highly regulated, and standardized transportation environment. Motivation emerges as the strongest determinant, suggesting that achievement, professional meaning, competence, and recognition remain central to job satisfaction even when work activities are tightly governed by formal procedures.

The study also extends existing research by showing that organizational communication may function primarily as an operational infrastructure rather than as an immediate source of job satisfaction. In addition, the unexpected direction of work stress illustrates that occupational demands should be distinguished according to whether employees interpret them as manageable challenges or obstructive pressures. From a practical perspective, management should prioritize motivational development, predictable scheduling, adequate rest, professional recognition, and psychologically supportive working conditions. Communication systems should remain accurate and standardized while also providing opportunities for feedback and employee participation. Work-stress interventions should focus on preventing chronic overload and hindrance stressors without removing the professional challenges that can strengthen competence and occupational meaning.

CONCLUSION

This study shows that job satisfaction among Jabodebek LRT train drivers is shaped by the dynamic interaction of various factors that affect their work experience. Work-life balance and motivation have been proven to have a positive and significant effect on job satisfaction of Jabodebek LRT drivers. Work Stress also showed a positive and significant influence on job satisfaction. Meanwhile, communication was not shown to have a significant effect on job satisfaction in the context of this study. These results highlight that job satisfaction arises from the simultaneous interaction of factors that facilitate and limit complex work environments. For drivers who operate under a high level of responsibility, achieving job satisfaction is closely related to maintaining a healthy work-life balance, having strong motivation, supported by an effective operational communication system, and being able to manage work pressure effectively to support the implementation of tasks and job satisfaction. In addition, the research model explains a substantial proportion of variations in job satisfaction, offering a strong empirical foundation for the management of the Jabodebek LRT to design policies that prioritize employee welfare.

Nevertheless, some limitations must be considered. First, this study focuses exclusively on one public transportation provider, namely the Jabodebek LRT, which limits the generalization of the findings to other sectors. Second, the use of online surveys involving 100 respondents can create participation bias, especially since it is likely that only certain individuals choose to fill out the questionnaire. Third, reliance on purely quantitative approaches limits the depth of insight into the subjective experiences of train drivers, especially regarding their perceptions of work-life balance, motivation, communication, stress, and overall job satisfaction.The implications of this study emphasize that improving LRT driver job satisfaction requires a holistic managerial approach that integrates work-life balance, motivation, communication, and stress management. Strategies such as flexible scheduling, recognition and reward systems that support work motivation, and mental health support and work stress management need to be management's concern to improve employee well-being, performance, and service quality. Meanwhile, effective two-way communication still needs to be maintained as a factor supporting operations and work safety even though this study has not been proven to have a significant effect on job satisfaction. This study has limitations related to scope, sample size, and quantitative design. Future research is recommended to be extended to other transport sectors, applying mixed methods, and incorporating mediation or moderation variables for deeper analysis. In conclusion, job satisfaction among LRT drivers is influenced by technical and psychosocial factors, highlighting the need for a comprehensive, employee-centric management policy.

REFERENCES

Amstad, F. T., Meier, L. L., Fasel, U., Elfering, A., & Semmer, N. K. (2011). A meta-analysis of work–family conflict and various outcomes with a special emphasis on cross-domain versus matching-domain relations. *Journal of Occupational Health Psychology, 16*(2), 151–169. https://doi.org/10.1037/a0022170

Auliani, S., Puspasari, M. A., Mahachandra, M., Susilo, Y. O., & Iridiastadi, H. (2024). Fatigue among Indonesian freight train drivers: A study that took advantage of blinking duration and changes in facial expressions. *Transportation Research Interdisciplinary Perspectives, 24*, Article 101056. https://doi.org/10.1016/j.trip.2024.101056

Bakker, A. B., & Demerouti, E. (2007). The job demands–resources model: State of the art. *Journal of Managerial Psychology, 22*(3), 309–328. https://doi.org/10.1108/02683940710733115

Demerouti, E., Bakker, A. B., Nachreiner, F., & Schaufeli, W. B. (2001). The job demands–resources model of burnout. *Journal of Applied Psychology, 86*(3), 499–512. https://doi.org/10.1037/0021-9010.86.3.499

Etikan, I. (2016). Comparison of convenience sampling and purposive sampling. *American Journal of Theoretical and Applied Statistics, 5*(1), 1–4. https://doi.org/10.11648/j.ajtas.20160501.11

Faragher, E. B., Cass, M., & Cooper, C. L. (2005). The relationship between job satisfaction and health: A meta-analysis. *Occupational and Environmental Medicine, 62*(2), 105–112. https://doi.org/10.1136/oem.2002.006734

Fariz, M., & Huddin, A. (2025). Work-life balance, workload, and job satisfaction among ride-hailing drivers in Banten. *Journal of Global Scientist Management Studies, 7*(1), 45–47.

Fisher, G. G., Bulger, C. A., & Smith, C. S. (2009). Beyond work and family: A measure of work/nonwork interference and enhancement. *Journal of Occupational Health Psychology, 14*(4), 441–456. https://doi.org/10.1037/a0016737

Fredin-Knutzén, J., Olsson, N., Rosberg, T., Thorslund, B., & Lidestam, B. (2023). Train work-

related stress and driver job satisfaction. *Journal of Occupational and Environmental Medicine, 65*(9), 775–782. https://doi.org/10.1097/JOM.0000000000002903

Herzberg, F., Mausner, B., & Snyderman, B. B. (1959). *The motivation to work* (2nd ed.). John Wiley & Sons.

Judge, T. A., Weiss, H. M., Kammeyer-Mueller, J. D., & Hulin, C. L. (2017). Job attitudes, job satisfaction, and job affect: A century of continuity and of change. *Journal of Applied Psychology, 102*(3), 356–374. https://doi.org/10.1037/apl0000181

Kreitner, R., & Kinicki, A. (2000). *Organizational behavior*. McGraw-Hill Higher Education.

Men, L. R. (2014). Strategic internal communication: Transformational leadership, communication channels, and employee satisfaction. *Management Communication Quarterly, 28*(2), 264–284. https://doi.org/10.1177/0893318914524536

Novaritpraja, Y. (2020). The effect of work stress on employee job satisfaction. *Journal of Management Science, 8*(1), 55–64.

Oktosatrio, S. (2020). *Investigating the relationship between work-life balance, public service motivation, and job satisfaction in the context of the public sector in Indonesia* [Thesis]. Research Repository.

Pacheco, A., Baptista, N., & Duarte, J. (2024). The mediating effect of motivation between internal communication and job satisfaction. *Administrative Sciences, 14*(4), Article 69. https://doi.org/10.3390/admsci14040069

Paramita, A. D., Supartha, I. W. G., & Dewi, I. G. A. M. (2018). The effect of motivation on job satisfaction and employee performance. *E-Journal of Management of Udayana University, 7*(4), 1824–1853.

Podsakoff, N. P., LePine, J. A., & LePine, M. A. (2007). Differential challenge stressor–hindrance stressor relationships with job attitudes, turnover intentions, turnover, and withdrawal behavior: A meta-analysis. *Journal of Applied Psychology, 92*(2), 438–454. https://doi.org/10.1037/0021-9010.92.2.438

Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist, 55*(1), 68–78. https://doi.org/10.1037/0003-066X.55.1.68

Sekaran, U., & Bougie, R. (2016). *Research methods for business: A skill-building approach* (7th ed.). John Wiley & Sons.

Spector, P. E. (1997). *Job satisfaction: Application, assessment, causes, and consequences*. SAGE Publications. https://doi.org/10.4135/9781452231549

Sugiyono. (2019). *Metode penelitian pendidikan: Pendekatan kuantitatif, kualitatif, dan R&D*. Alfabeta.

Sutanto, E. M., Sari, R. N., & Prasetyo, A. (2024). The mediating role of employee engagement and job satisfaction in the relationship between work-life balance and post-COVID-19 employee performance. *Indonesian Journal of Business and Management Research, 12*(3), 101–113.

Verčič, A. T., Verčič, D., & Sriramesh, K. (2021). Internal communication: Definition, parameters, and the future. *Public Relations Review, 47*(1), Article 101998. https://doi.org/10.1016/j.pubrev.2020.101998

Vermeir, P., Downs, C., Degroote, S., Vandijck, D., Tobback, E., Delesie, L., Mariman, A., De Veugele, M., Verhaeghe, R., Cambré, B., & Vogelaers, D. (2018). Intraorganizational communication and job satisfaction among Flemish hospital nurses: An exploratory multicenter study. *Workplace Health & Safety, 66*(1), 16–

23. https://doi.org/10.1177/2165079917703411
Wahyuni, S., & Andika, D. (2019). Communication in organizations and its influence on job satisfaction. *Journal of Communication and Organization, 11*(2), 101–112.
Yasa, I. K. G. M., & Dewi, I. A. (2018). The effect of job satisfaction on employee performance. *E-Journal of Management of Udayana University, 7*(2), 1129–1156.