
Analysis Of Factors Associated With Quality Of Work Life Among Tofu Factory Workers In Jambi City

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Abstract

Quality of Work Life (QWL) is an important aspect that influences worker well-being, satisfaction, and productivity. Workers in the tofu industry face various working conditions that potentially affect the quality of work life. This study aims to analyze factors related to the Quality of Work Life of tofu factory workers in Jambi City in 2026. This study used a quantitative design with a cross-sectional approach. The study population was 45 workers and the entire population was sampled using a total sampling technique. The variables studied included salary, work fatigue, length of service, physical workload, mental workload, and work environment. Data analysis was carried out univariately and bivariate using the Chi-Square test with a 95% confidence level. The results showed that most workers had a low Quality of Work Life. Bivariate analysis showed that salary and length of service were significantly related to Quality of Work Life, while work fatigue, physical workload, mental workload, and work environment did not show a significant relationship. It can be concluded that compensation and work experience are factors that play a role in the quality of work life of tofu factory workers. Therefore, efforts are needed to improve workers' welfare by providing better compensation and managing human resources that can improve the quality of work life.

Keywords: Quality Of Work Life, Salary, Length Of Service, Tofu Factory Workers.

INTRODUCTION

Quality of Work Life (QWL) refers to conditions that reflect an organization's ability to meet employee needs through a work environment that supports well-being, satisfaction, and personal development. According to Dessler, Quality of Work Life is a state in which employees can fulfill their fundamental needs through work activities within the organization. (Shubhangini et al. 2024). Flippo (2005) states that Quality of Work Life represents an organizational effort to enhance effectiveness by supporting individual dignity and development. Cascio adds that Quality of Work Life encompasses organizational conditions and practices that support organizational goals, such as a safe work environment, opportunities for growth, and employee participation. Meanwhile, Nawawi (2008) defines Quality of Work Life as a program aimed at improving employees' quality of life through the creation of better working conditions (Hutubessy 2023).

Globally, the quality of work life remains a challenge. According to Gallup's State of the Global Workplace report, only about 20% of workers worldwide feel engaged in their work, and just 34% report high levels of well-being.⁸ In Indonesia, the employee engagement rate stands at 27%, yet the well-being level is only around 30%, indicating that the quality of work life still needs improvement. (Gallup 2021).

The tofu industry is a sector where issues regarding the Quality of Work Life can arise. Production activities in tofu factories involve various potential hazards—such as slippery floors, the risk of hot water splashes during boiling, the failure to use personal protective equipment (PPE), and non-ergonomic work postures—that can lead to worker fatigue, injury, or health problems (Alamanda et al. 2023). Such conditions can impact the comfort, safety, and quality of work life of the workers.

Several studies indicate that the Quality of Work Life is influenced by various factors. Research by Nurhasanah Bilmona and Ratri Pratiwi (2024) demonstrates a relationship between salary or wages and the Quality of Work Life (Sari 2022). Kenny Aronza Marrung found a link between work fatigue and the Quality of Work Life (Fatahyasin and Yuamita 2024). Research by Nuri Mayang Sari, Syivani Wicesa Archa, and Justine Tanuwijaya (2022) shows a relationship between tenure and the Quality of

Work Life (Sari 2022). Furthermore, Gilang Muhamad Fatahyasin and Ferida Yuamita (2024) state that physical and mental workloads are related to Quality of Work Life. ⁶, Meanwhile, Nurhayani Lubis, Hardi, and Sri Maryanti (2023) found a relationship between the work environment and Quality of Work Life. (Lubis et al. 2023).

Globally, the quality of work life continues to present significant challenges. According to the State of the Global Workplace report released by Gallup, only about 20% of employees worldwide feel engaged in their work, while the remainder have yet to demonstrate optimal work engagement. This situation contributes to low global productivity, estimated to result in economic losses amounting to trillions of dollars annually. Furthermore, only around 34% of global workers enjoy a high level of well-being, while the rest still experience moderate to low levels of well-being in the workplace. (Rahman 2020).

Meanwhile, there is no official data regarding the number of tofu factories in Jambi City, as most are small-scale or home-based industries. Researcher observations identified eight tofu factories employing a total of 45 workers. Findings from observations and interviews indicate that 78.6% of the workers have a low Quality of Work Life, while 21.4% have a high Quality of Work Life. These conditions demonstrate that issues concerning the quality of work life persist among tofu factory workers in Jambi City.

RESEARCH METHODS

This study employed a quantitative, cross-sectional design, with data collection conducted as a single measurement between May and June 2026. The study aimed to identify factors associated with the Quality of Work Life among tofu factory workers in Jambi City. The variables examined were salary, work fatigue, tenure, physical workload, mental workload, and the work environment. The study population consisted of all tofu factory workers in Jambi City, with a total sample of 45 workers selected using the total sampling method. Data analysis involved both univariate and bivariate analyses; univariate analysis was used to describe the frequency distribution of each variable, while bivariate analysis aimed to determine the relationship between independent and dependent variables. The bivariate analysis utilized the Chi-Square test, with a p-value < 0.05 indicating a significant relationship and a p-value > 0.05 indicating no significant relationship between the variables.

RESULTS AND DISCUSSION

Univariate Analysis Results

Table 1. Frequency Distribution of Research Variables among Tofu Industry Workers in Jambi City, 2026

Variable	Category	Frequency (n)	Percentage (%)
Age	20 – 29	19	42,2
	30 – 39	13	28,9
	≥40 year	13	28,9
Education	Elementary School	22	48,9
	Junior high school	19	42,2
	Senior High School	4	8,9
Years of service	No Risk (≤5 years)	17	37,8
	At Risk (>5 years)	28	62,2
Quality Of Worklife	Not Enough	31	68,9
	Good	14	31,1
Wages	Low (< Rp. 3.868.963)	37	82,2
	High (≥ Rp. 3.868.963)	8	17,8
Work-related fatigue	Severe (skor 61-120)	29	64,4
	Mild (skor 30-60)	16	35,6
Physical workload	High if % CVL ≥ 30 %	35	77,8
	Low if % CVL < 30	10	22,2
Mental workload	Severe (if score >80)	34	75,6

	Moderate (if score 50–80)	7	15,6
	Mild (if score <50)	4	8,9
Work environment	Poor if the score is 31–75	25	55,6
	Good if the score is 0–30	20	44,5

Source: Processed primary data, 2026

Table 1 presents the characteristics of 45 tofu factory workers in Jambi City: 19 respondents (42.2%) were aged 20–29, 13 (28.9%) were aged 30–39, and 13 (28.9%) were over 40 years old. Regarding education, 22 respondents (48.9%) had an elementary school (SD) education, 19 (42.2%) had a junior high school (SMP) education, and only 4 (8.9%) had a senior high school (SMA) education. In terms of tenure, 17 respondents (37.8%) had worked for less than 5 years, while 28 (62.2%) had worked for 6 years or more. The majority of respondents (29 individuals or 64.4%) experienced severe work fatigue, whereas 16 (35.6%) experienced mild work fatigue. Based on the Cardiovascular Load (CVL) method, the majority of respondents (35 individuals or 77.8%) had a high physical workload, while 10 (22.2%) had a low physical workload. Regarding the mental workload variable measured using NASA-TLX, the majority of respondents (34 individuals or 75.6%) experienced a high mental workload, followed by 7 (15.6%) with a moderate mental workload and 4 (8.9%) with a low mental workload. Furthermore, the majority of respondents (25 individuals or 55.6%) rated the work environment as poor, while 20 (44.4%) rated it as good.

Bivariate Analysis Results

Table 2. Results of Bivariate Analysis of Factors Associated with Quality of Work Life

Variable	Quality Of Worklife				PR (95% CI)	p-value
	Not enough		Good			
	n	%	n	%		
Wages	23 8	62,2 100	14 0	37,8 0	0,622 (0,483 – 0,799)	0,037
Low High						
Work-related fatigue	19 12	65,5 75,0	10 4	34,5 25,0	0,874 (0,593 – 1,286)	0,738
Severe Mild						
Years of service	17 14	100 50,0	0 14	0 50,0	2,000 (1,381 – 2,297)	<0,001
No Risk At Risk						
Physical workload	24 7	68,6 70	11 3	31,4 30,0	0,980 (0,616 – 1,557)	1,000
High Low						
Mental workload	24 3 4	70,6 42,9 100	10 4 0	29,4 57,1 0	0,790 (0,512 – 1,278)	0,131
Severe Moderate Mild						
Work environment						
Poor Good	15 16	60,0 80,0	10 4	40,0 20,0	0,750 (0,509 – 1,105)	0,132

Source: Processed primary data, 2026

The analysis results in Table 2 indicate that the variables of salary and length of service have a significant relationship with Quality of Work Life ($p < 0.05$). Meanwhile, the variables of work fatigue, physical workload, mental workload, and work environment do not show a significant relationship ($p > 0.05$).

The significant relationship between salary and Quality of Work Life (QWL) indicates that the salary levels received by employees do not yet align with their workloads and living expenses. This situation diminishes job satisfaction, increases financial pressure, and leaves employees feeling undervalued. Consequently, this impacts the Quality of Work Life (QWL), as economic well-being is a key component in shaping the quality of work life. These findings align with research by Pramudita et al. (2023), which demonstrates that salary satisfaction has a significant effect on Quality of Work Life (QWL), evidenced by a p-value of 0.003 (Pramudita et al. 2025). Similarly, research by

Hermawati (2021) indicates that salary significantly influences Quality of Work Life (QWL); the analysis confirms that a superior compensation system—such as salaries and incentives commensurate with workload—leads to better outcomes (Hermawati 2021).

There is no relationship between work fatigue and the Quality of Work Life (QWL) among the workers. The absence of a link between work fatigue and QWL may be attributed to the fact that QWL is influenced not only by fatigue but also by various other factors, such as compensation and tenure. Tofu factory workers, accustomed to physical labor, may have adapted to job demands, meaning the fatigue they experience does not directly affect their perception of QWL. These findings align with the study conducted by Muhammad Abdul Hafizh and Ni Luh Putu Hariastuti (2021), which also demonstrated no relationship between work fatigue and QWL ($p\text{-value} = 0.603$). Similarly, research by Charly Hongdiyanto et al. (2025) indicated no relationship between work fatigue and QWL.

The significant relationship between tenure and Quality of Work Life indicates that the longer an individual works, the greater their experience, understanding, and adaptability to the work environment. Research conducted by Dina Nurliani, Rooswita Santia Dewi, and Rendy Alfiannoor Achmad (2022) confirms the existence of a relationship between tenure and Quality of Work Life (Nurliani et al. 2022). This aligns with research by Nurul Laila Salsabila, which also identifies a relationship between tenure and Quality of Work Life (Salsabila & Mulyana 2022).

There is no relationship between physical workload and the quality of work life among the workers. This may be attributed to the fact that the majority of workers share relatively similar job types, work environments, and job demands; consequently, the variation in physical workload among workers was insufficient to influence the statistical test results. These findings align with research conducted by Valentinus Denny et al. (2025), which indicated no significant relationship between physical workload and quality of work life (Denny et al. 2025). Similarly, a study by Gusti Meinari Girda Ariani (2023) also found no significant relationship between physical workload and quality of work life (Ariani and Amelia 2023).

There is no relationship between mental workload and Quality of Work Life (QWL) among the workers. This may be attributed to the fact that the job characteristics of the tofu factory workers are relatively uniform, particularly regarding the nature of the work and the work systems employed. This finding aligns with research conducted by Putra and Purbo Jadmiko (2023), which reported no significant relationship between mental workload and Quality of Work Life ($p\text{-value} = 0.30946$). This is further supported by Dewi Anggraini et al. (2023), whose study also found no significant relationship between mental workload and Quality of Work Life (Anggraini et al. 2023). Similarly, research by Ardisa Putri Valensiana Utari et al. (2024) indicated that there is no significant relationship between mental workload and Quality of Work Life (Utari & Perdhana 2024).

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There is no relationship between the work environment and the Quality of Work Life (QWL) among the workers. This may be attributed to the fact that a hot work environment is a condition shared by all tofu factory workers due to the boiling processes and the use of heat sources during production. Since this condition is experienced uniformly by the workers, differences in the perception of the work environment are minimal, resulting in no significant relationship with QWL. This study aligns with research conducted by Hijir Yoesryna Meutia (2025), which found no relationship between the work environment and Quality of Work Life (Meutia et al. 2025). These findings are also

consistent with Sarip and Mustangin (2023), who stated that the work environment has no significant relationship with Quality of Work Life (Sarip and Mustangin 2023).

CONCLUSION

Based on the research findings, it can be concluded that the Quality of Work Life of tofu factory workers in Jambi City is associated with salary and length of service. Adequate wages and greater work experience contribute to a better quality of work life. Conversely, factors such as work fatigue, physical and mental workloads, and the work environment do not show a significant relationship with the quality of work life. Therefore, efforts to improve the quality of work life should focus on implementing a fair compensation system that aligns with workload, as well as human resource management that supports the development of work experience, thereby continuously enhancing worker well-being, satisfaction, and productivity.

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