Work-life balance and job satisfaction of shipyard industry employees in Surabaya

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ABSTRACT

Job satisfaction is a contented feeling of employees when they are able to fulfill expectations for needs with good work-life balance conditions so that they can work effectively and efficiently. The goal of this study was to find out how workers in the shipyard industry feel about their work-life balance and how happy they are with their jobs. The variables were the characteristics of employees (age, education level, marital status, and years of service). The data were shown in frequency distribution tables and cross tabulations. Chi-square test was employed to analyze the data. The work-life balance of employees was related to their age (sig. 0.039), but not to their level of education (sig. 0.723), marital status (sig. 0.535), or number of years of service (sig. 0.724). The results of statistical tests on the two main factors showed that work-life balance and job satisfaction were linked (sig. 0.019). Overall, employees in the shipyard industry were much happier with their jobs when they had a good balance between work and life. The company is expected to maintain the work-life balance of its employees to increase the job satisfaction of the workers and indirectly increase the achievement of work productivity in the company.

Keywords:
Employees’ characteristics
Job satisfaction
Work-life balance
Work productivity

INTRODUCTION

Job satisfaction of the employees is able to bring a positive influence to the company, such as increasing organizational commitment and work productivity [1]–[3]. Various previous studies have shown that employees who are satisfied with their work are considered more productive than employees who are dissatisfied with their work [4], [5]. Job satisfaction is generally associated with job security and turnover rates [6]. Recently, job satisfaction is an important concern in the field of human resources in a company because lack of job satisfaction is the main factor for employees to quit their jobs [1]–[3]. The employee's family situation is one of the aspects that affect job satisfaction since a worker with a family is expected to be able to balance work with other duties as part of the family [7]. The ability to balance workload and lifestyle is known as work-life balance.

Work-life balance is an individual's perception where activities in work and personal life can be balanced, which will encourage personal growth in accordance with individual life priorities [8]. Wolor [9] reported that increasing the value of work-life balance is very difficult, and it can lead to stress, lower job productivity, and worsen worker welfare. Seeing these problems, the company is encouraged to pay attention to the work-life balance for its employees. The fact that regulations of work in the manufacturing industry are strict and require overtime can result in a poor quality of work-life balance of the employees. A recent study
has [10] revealed that the main cause of the work-life imbalance in the manufacturing industry is the job overload that results in overlapping work roles with family roles where an employee cannot carry out both roles in life properly.

A previous study [11] also said that work performance, work-life balance, and organizational justice are three things that affect how happy employees in the manufacturing industry are with their jobs. But this research shows that work-life balance is the least important factor, while organizational justice is the most important [11]. On the other hand, work-life balance has a positive effect on how satisfied employees are with their jobs. This means that if work-life balance improves, so will employees' job satisfaction. To improve work-life balance, employees need training to help them learn how to balance their workloads at work and in their free time [11]. In a similar way, work-life balance is now one of the things that employees, especially in the manufacturing sector, are judged on when it comes to job satisfaction [10]–[12]. The goal of this study is to figure out how employees in the shipyard industry in Surabaya feel about their work-life balance and how happy they are with their jobs.

2. RESEARCH METHOD

2.1. Study setting

The study took place in shipyard industry located in Surabaya, East Java, Indonesia. The population in this study were all employees in the Maintenance and Repair Department at a shipyard industry in Surabaya, East Java, Indonesia. The minimum number of samples in this research was 110 respondents, to anticipate sample drop out the 10% adjustment was used.

2.2. Procedure of data collection and instruments

In this study, the independent variables were the traits of the employees and the balance between work and life. The employees were described by their age, gender, level of education, marital status, and length of time with the company. This study looked at how work affects work interference personal life (WIPL), personal life interference work (PLIW), work enhancement personal life (WEPL), and personal life enhancement work (PLEW). In this study, the job satisfaction of the employees was the thing that was studied. According to Spector [13], the factors that were used to measure how happy the employees were with their jobs were: wages, promotions, supervision, benefits, rewards, operational procedures, coworkers, job characteristics, and communication. In this study, the main way people gave information was by filling out a questionnaire with statements. Secondary data from the internal company in the form of company profiles and information about the tasks done in the shipyard industry.

2.3. Questionnaire and its analysis

A questionnaire [14] translated into Indonesian was used to measure the work-life balance variable. The total number of statements in this work-life balance questionnaire was 17 items based on the four dimensions of the theory of Fisher et al. [14]. This work-life balance questionnaire consisted of favorable and unfavorable items. The answers to this questionnaire were grouped into four answer options, including strongly disagree (SD), disagree (D), agree (A), and Strongly Agree (SA).

In the favorable statements, the answer choices included SA with a score of 4, A with a score of 3, D with a score of 2 and SD with a score of 1. In the unfavorable statements, the answer choices included SA with a score of 1, A with a score of 2, D with a score of 3 and SD with a score 4. The higher the score, the higher the level of one's work-life balance, and conversely the lower the score obtained, the lower the level of one's work-life balance. The data obtained through primary data and secondary data were later presented in the form of tables and text. Data processing was carried out in several stages, including checking the completeness of the data from the questionnaire, giving codes to the answers, and inputting the questionnaire data. The data that had been entered were then statistically analyzed using two analyses.

a. Univariate analysis

Univariate analysis used a frequency distribution table to interpret the distribution of data from each of the research variables.

b. Bivariate analysis

The results of the univariate analysis were used to do the bivariate analysis. The goal of the univariate analysis was to see how the independent variables affected the dependent variable. The researcher used nominal and ordinal data, so a non-parametric statistical test was the right way to look at the information. The Chi-square Test was used in this study to find out if there was a relationship between the different variables. With $=0.05$, a Chi-square test was done. Here is how the results of the Chi-square test were looked at:

- If sig. $>0.05$, there was no significant relationship between the two variables of research, so the research hypothesis was rejected.
ii. If sig. <0.05, there was a significant relationship between the two variables of research, so the research hypothesis was accepted.

2.4. Ethical issues
Concerning any possible ethical issues with this research, respondents chose to take part in it on their own. The respondents’ names and other personal details were kept confidential. Ethical clearance was registered in January 2021 at number 009/HRECC.FODM/I/2021 by Universitas Airlangga, Health Research Ethics Licensing Commission, Faculty of Dentistry. From February to March 2021, respondents’ information was collected.

3. RESULTS AND DISCUSSION
The findings of this study are reported in the following sections: a) work-life balance; b) job satisfaction; c) the association between employees' characteristics and work-life balance; and d) the relationship between work-life balance and job satisfaction.

3.1. Work-life balance
Work-life balance (WLB) is a variable that shows the balance between work and personal life of employees. The work-life balance variable consists of four dimensions that make up the WLB level of the employees. The WLB variable in this research was measured using the standard work-life balance questionnaire by Fisher et al. [14] and contained 17 statements that covered four dimensions. Based on the measurement results, the WLB frequency distribution of employees in the Maintenance and Repair Department is shown in Table 1.

<table>
<thead>
<tr>
<th>No.</th>
<th>Work-life balance</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Very low</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2</td>
<td>Low</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>3</td>
<td>Moderate</td>
<td>6</td>
<td>5.45</td>
</tr>
<tr>
<td>4</td>
<td>High</td>
<td>98</td>
<td>89.09</td>
</tr>
<tr>
<td>5</td>
<td>Very high</td>
<td>6</td>
<td>5.45</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>110</td>
<td>100</td>
</tr>
</tbody>
</table>

Table 1 shows that the majority of employees in the Maintenance and Repair Department had a high WLB rate, comprising 98 people or 89.09% of the total employees. WLB from the perspective of employees can be interpreted as a choice to manage work and personal life or family responsibilities [15]. The results showed that most of the employees in the Maintenance and Repair Department of a shipyard industry in Surabaya had a high level of WLB. This means that most employees are able to balance work and personal life. These results are in line with previous research in a state-owned company which stated that more than 50% of its workers had high WLB [7]. Previous research also stated that employees in similar companies had high WLB, which means that employees believe in their ability to balance work and personal matters [16].

The statement of the research results is in line with the conditions felt by the employees in the field. The Maintenance and Repair Department provides its workers with various policies that can improve their quality of life. The policies can be in the form of wage and reward policies. The basic wages earned by employees are above the average of Surabaya minimum wage. In addition, there is overtime pay, and if accumulated in one month of work it can be equal to or even more than the basic wage. Along with the accumulation of basic wages and overtime pay, employees will be able to easily meet the needs of their personal lives without fear of feeling deprived or confused. Apart from wages, there are other policies that can affect the WLB of workers. The policies are given in the form of rewards. Rewards in this case are usually realized by holding a family gathering for all employees twice a year. However, due to the COVID-19 pandemic since 2020, the family gathering has been replaced with other gifts according to what the employees need. Giving rewards like this can have an indirect impact on the level of WLB of employees because even though the context is in the environment of people at work, employees can still fulfill their psychological needs to temporarily relieve fatigue from the workload. Thus, the WLB of the employees can be formed properly.
3.2. Job satisfaction
The dependent variable in this study is job satisfaction, which shows how happy employees are with all parts of their jobs. The standard job satisfaction survey questionnaire by Spector [17] was used to find out how happy employees were with their jobs. It had 36 statements about nine different parts of work. Table 2 shows that the majority of employees in the Maintenance and Repair Department were satisfied with their jobs. However, more than a quarter of the total, or 39 employees (35.5%) expressed doubts about their job satisfaction. The remaining three workers or 2.7% of the total workers expressed dissatisfaction with their work.

Table 2 Distribution of work satisfaction levels of employees

<table>
<thead>
<tr>
<th>Work satisfaction levels</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dissatisfied</td>
<td>3</td>
<td>2.7</td>
</tr>
<tr>
<td>Hesitant</td>
<td>39</td>
<td>35.5</td>
</tr>
<tr>
<td>Satisfied</td>
<td>68</td>
<td>61.8</td>
</tr>
<tr>
<td>Total</td>
<td>110</td>
<td>100</td>
</tr>
</tbody>
</table>

The results showed that most of the employees in the Maintenance and Repair Department of a shipyard industry were satisfied with their job. The results of this research are in line with several previous studies in several public sectors which also stated that most of the employees were satisfied with their work [18], [19]. The job satisfaction of the employees in the Maintenance and Repair Department is mainly influenced by wages, benefits, and supervision.

The average amount of wages earned by employees in the Maintenance and Repair Department of a shipyard industry is far above the standard minimum wage of Surabaya, Indonesia. Employees can thereby address their personal, family, and other demands with this money. When the life needs of employees can be fulfilled, employees will tend to feel satisfied with their work. Slišković and Penezić [20] in their research also stated that most of employees were most satisfied with the aspect of wages or compensation. The second dominant aspect that supports the job satisfaction of employees is allowance. This allowance can be in the form of various things, such as longer paid leave, position allowance or pension allowance along with more appropriate family facilities [19]. For workers in the shipyard industry, the allowance that are more likely to affect job satisfaction is longer paid leave because of transparency of work attendance which allows employees to know the amount of annual leave they have, so they can wisely use the paid leave that does not violate company regulations.

Furthermore, the aspect of supervision occurs in two forms, which are technical supervision and personnel supervision carried out by the leadership [21]. In this aspect, the leader plays an important role in providing stimulus to the workforce to be more satisfied with their work. According to a brief interview with several employees who were met randomly, it was found that the majority of Maintenance and Repair Department employees liked their supervisors. The majority of employees feel that the supervisors being able to demonstrate their skills at work are fair to all employees and often pay attention to the opinions or input from staff as a form of two-way communication between workers and leaders.

3.3. Relationship between employees’ characteristics and work-life balance
3.3.1. Relationship between age and work-life balance
Analysis of the relationship between age and work-life balance of employees of the Maintenance and Repair Department was carried out using Chi-square non-parametric statistical tests with the results shown in the Table 3. Based on the results of the analysis using the Chi-square test between the age variable and WLB, it was found that there were more than 20% that had an expected value of less than 5, so the significance value (p-value) used was the Fisher’s Exact Test value with a sig. value of 0.039 <(α = 0.05). Then, H₀ was rejected, which means there was a relationship between age and the WLB level of employees.

Related to the cross-tabulation analysis in the table, all employees in the age group of 20–24 years old, 40–44 years old, and 55 years old had high WLB rates. There were 24 out of 25 employees aged 25–29 years old who also had high WLB rates, and the other had very high WLB rates. There were 19 employees out of 21 employees aged 30–34 years old who had a high WLB level, and the rest had a very high WLB level. Among employees in the 35–39 years old group, three of them had a moderate WLB level, and five employees had a high WLB level. For employees in the 45–49 years old group, there were two employees with moderate WLB and four employees with high WLB. The rest of the employees were in the 50–54-year-old group, in which 31 employees had high WLB, three employees had very high WLB, and one employee had moderate WLB.
The results showed that the characteristics of employees based on age had a relationship with the WLB level of employees in the shipyard industry. In this study, it was found that the age group above 50 years old was able to have a high level of WLB. Thus, it is known that the older the age of the employees, the better the management of the WLB. Richert-Kaźmierska and Stankiewicz [22] mentioned that age was significantly associated with the level of WLB of workers. Previous research also explained that the older the employee is, the more he/she can manage the balance between work and his/her personal life [22]. Previous research also stated that age had a relationship with the level of WLB employees. The research also stated that employees aged 55 years old were better in managing the balance between work and personal life compared to workers in the younger age group [23].

3.3.2. Relationship between level of education and work-life balance

Analysis of the relationship between the latest education level and the work-life balance of employees was carried out using Chi-square non-parametric statistical tests with the results shown in Table 4. Based on the results of the analysis using the Chi-square test between the education level variable and WLB in Table 4, it was found that there were more than 20% that had an expected value of less than 5, so the significance value (p-value) used was the Fisher’s Exact Test value with a sig. value of 0.732 > (α = 0.05). Then, H₀ was accepted, which means there was no relationship between education level and WLB employees in the Maintenance and Repair Department of a shipyard industry. Table 4 also shows that 58 employees with the latest education level of senior high school or equivalent had high WLB and the rest had moderate and very high WLB with three employees each. In the level of higher education group (college) or equivalent, there were 40 employees with high WLB and the rest had moderate and very high WLB with three employees each.

Table 4. Relationship between education level and work-life balance

<table>
<thead>
<tr>
<th>Level of education</th>
<th>M</th>
<th>H</th>
<th>VH</th>
<th>Total</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Senior high school*</td>
<td>3</td>
<td>2.7</td>
<td>58</td>
<td>52.7</td>
<td>3</td>
</tr>
<tr>
<td>College*</td>
<td>3</td>
<td>2.7</td>
<td>40</td>
<td>36.4</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>6</td>
<td>5.45</td>
<td>98</td>
<td>89.1</td>
<td>6</td>
</tr>
</tbody>
</table>

*or equivalent

The results showed that the characteristics of employees based on their level of education had nothing to do with their WLB level. The results of this study showed that employees with a higher level of education don't always have a higher WLB level. Previous research showed that there was no link between a worker's level of education and their WLB. [24]. The strict requirements for hiring workers in this company have an impact on equal distribution of workers' education, ensuring that employees will perform to a high standard and possess the necessary professional competencies and skills. On the other hand, the level of education is not a reason that can affect the ability of workers to balance work with their personal lives.

3.3.3. Relationship between marital status and work-life balance

Chi-square non-parametric statistical tests were used to look at the relationship between employees in the Maintenance and Repair Department's marital status and their work-life balance. The results are shown in Table 5. Based on the results of the Chi-square test between the variables of marital status and WLB in Table 5, more than 20% had an expected value of less than 5, so the Fisher's Exact Test value with a sig. value
of \(0.535>(\alpha=0.05)\). Then, \(H_0\) was accepted, which means there was no relationship between marital status and WLB of employees in the Maintenance and Repair Department.

Table 5 also shows that in the group of married employees’ group there were 81 employees with high WLB and had moderate and very high WLB with six employees each. Meanwhile, the group of unmarried employees had high WLB, consisting of 17 employees. The results showed that the characteristics of employees based on marital status did not have a relationship with the WLB level. Previous research also stated similar results, suggesting that the marital status of a worker was not significantly related to the level of WLB [25]. Ummah [26] explained that there is no difference between the marital status of workers and the WLB level because it returns to the ability of each employee to balance work affairs with personal affairs. However, previous research conducted in the banking industry stated that the marital status of these employees proved to have a significant effect on the WLB of workers [27]. This is due to the fact that married workers must prioritize their family or personal requirements, and they may be more sensitive to work that requires a lot of time and energy, which ultimately interferes with their position in the family [27].

### Table 5. Relationship between marital status and work-life balance of employees

<table>
<thead>
<tr>
<th>Marital status</th>
<th>Work-life balance</th>
<th>Total</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>H</td>
<td>VH</td>
</tr>
<tr>
<td>Married</td>
<td>6</td>
<td>5.45</td>
<td>81</td>
</tr>
<tr>
<td>Unmarried</td>
<td>0</td>
<td>0</td>
<td>17</td>
</tr>
</tbody>
</table>

#### 3.3.4. Relationship between years of service and work-life balance

Analysis of the relationship between years of service and work-life balance of employees in the Maintenance and Repair Department was carried out using Chi-square non-parametric statistical tests with the results shown in Table 6. Based on the results of the analysis using the Chi-square test between the variables of years of service and WLB in Table 6, it was found that there were more than 20% that had an expected value of less than 5, so the significance value (p-value) used was the Fisher’s Exact Test value with a sig. value of 0.724\((\alpha=0.05)\). Then, \(H_0\) was accepted, which means there was no relationship between years of service and WLB of employees in the Maintenance and Repair Department. Table 6 also shows that all employees with years of service less than three years and three to five years had a high WLB, with 13 employees each. Meanwhile, in the group of employees with more than five years of service, 72 employees had high WLB and the rest had medium and very high WLB with six employees each.

### Table 6. Relationship between years of service and work-life balance of employees

<table>
<thead>
<tr>
<th>Years of service</th>
<th>Work-life balance</th>
<th>Total</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>S</td>
<td>T</td>
<td>ST</td>
</tr>
<tr>
<td>&lt; 3 years</td>
<td>0</td>
<td>0</td>
<td>13</td>
</tr>
<tr>
<td>3-5 years</td>
<td>0</td>
<td>0</td>
<td>13</td>
</tr>
<tr>
<td>&gt; 5 years</td>
<td>6</td>
<td>5.45</td>
<td>72</td>
</tr>
<tr>
<td>Total</td>
<td>6</td>
<td>5.45</td>
<td>98</td>
</tr>
</tbody>
</table>

The results showed that the WLB level had nothing to do with the characteristics of employees based on how long they had worked there. The results of this study agree with those of other studies that found no link between the number of years of service and the level of WLB [25]. In-site circumstance of working period in the Maintenance and Repair Department does not affect the quality of workers’ acceptance of their work, especially if it is related to their employment status. This can happen because a longer working period of employees does not necessarily guarantee their employment status as permanent employees, there are still many pros and cons and even psychological conflicts regarding tenure, employment status and acceptance of workers. As a result, it can be said that having worked for a company for a longer period of time does not necessarily mean that employees are becoming more adept at juggling their personal and professional lives.

#### 3.3.5. Relationship between work-life balance and job satisfaction

Analysis of the relationship between work-life balance and job satisfaction of employees in the Maintenance and Repair Department was carried out using Chi-square non-parametric statistical tests with the results shown in Table 7. This table also shows that four employees in the moderate WLB group were hesitant.
with their job satisfaction, one person was dissatisfied, and one person was satisfied with his work. In the high WLB group, there were 35 people who doubted with their satisfaction at work, two people were dissatisfied, and 61 people were satisfied with their work. In the very high WLB group, there were six people who were satisfied.

Based on the results of the analysis using the Chi-square test between the WLB variables and job satisfaction in Table 7, it was found that there were more than 20% that had an expected value of less than 5, so the significance value (p-value) used was the Fisher’s Exact Test value with a sig. value of 0.019 (<α=0.05). Then, H0 was rejected, which means there was a relationship between WLB and job satisfaction of employees. The results of this research indicate that job satisfaction will tend to increase along with the increase in the WLB value of employees.

### Table 7. Relationship between work-life balance and job satisfaction of employees

<table>
<thead>
<tr>
<th>Work-life Balance</th>
<th>Dissatisfied</th>
<th>Hesitant</th>
<th>Satisfied</th>
<th>Total</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moderate</td>
<td>1 0.9</td>
<td>4 3.6</td>
<td>1 0.9</td>
<td>6 5.4</td>
<td>0.019</td>
</tr>
<tr>
<td>High</td>
<td>2 1.8</td>
<td>35 31.8</td>
<td>61 55.5</td>
<td>98 89.1</td>
<td></td>
</tr>
<tr>
<td>Very high</td>
<td>0 0</td>
<td>0 0</td>
<td>6 5.6</td>
<td>6 5.6</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>3 3.7</td>
<td>39 35.4</td>
<td>68 61.8</td>
<td>110 100</td>
<td></td>
</tr>
</tbody>
</table>

The results showed that there was a relationship between WLB and job satisfaction of employees in the Maintenance and Repair Department of a shipyard industry. The study’s results show that in line with research conducted in the previous shipbuilding industry which stated that WLB had a significant positive relationship to the job satisfaction of workers [12]. Employees that are able to balance work and their home lives tend to be happier with their employment, according to the conditions of employees in the sector. Based on the data obtained, it was found that the dimension that most influences the WLB of the employees is the WIPL dimension. This dimension includes the duration of work, the intensity of the employees meeting with their family, and period that the employee has to meet personal needs. The data in this research indicate that the value of the WIPL dimension is small, so it affects the high WLB of employees because the influence between these two variables is negative [14]. The small value of the WIPL dimension means that work has minimal negative impact on workers’ personal lives [14].

Research data on the job satisfaction variable showed that there were three of nine aspects that had a significant effect on job satisfaction of employees. These aspects included wages, benefits, and supervision. Previous research stated that WLB and job satisfaction were interrelated [28]. Even though workers stated that they had to work overtime, they were still able to balance their work and personal life which then got commensurate rewards at work [28]. Other studies also stated that WLB was a variable that had a significant effect on job satisfaction of 37%, while the rest were other variables [29].

Psychological research also stated that WLB functions as a psychological mechanism that allows employees to feel harmonious job satisfaction [30]. This means that when a person feels a good balance between work and personal life, psychologically it can affect the assumption that the employee is satisfied with his/her job [30]. Other studies also showed that WLB had an effect on job satisfaction either directly or mediated by the burnout variable [5]. Research conducted by Rafsanjani et al. [31] stated that WLB had a positive and significant effect on job satisfaction.

### 4. CONCLUSION

In conclusion, most people who worked in the Maintenance and Repair Department of a shipyard in Surabaya, Indonesia had a good balance between work and life. Most of the workers were happy with their jobs. The statistical test of the relationship between employee characteristics and work-life balance showed that most employee characteristics didn’t have anything to do with work-life balance, except for age, which did. There was a significant positive link between work-life balance and job satisfaction. The company is expected to be able to formulate and implement programs regarding work-life balance in three forms, including policies, services, and benefits. The WLB program in the form of policies includes leave and work schedules. Forms of services include facilities for shuttle, counseling, and front office facilities to improve the quality of psychological health of workers as it will increase worker satisfaction, and ultimately the company’s work productivity can be achieved.
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REFERENCES


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