

The Relationships of Individual Well-Being and Working Environment with Job Satisfaction among Factory Workers in Malaysia

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Abstract: The present study examined the factors influencing job satisfaction in the context of factory workers in Malaysia. The major purpose of the study was to identify the main problems faced by those factory workers. The study also aimed to examine the influence of demographic variables on job satisfaction and the relationships of family income, individual well-being, and perceptions of the working environment with overall job satisfaction among those factory workers. A survey was distributed among 551 factory workers

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working in the Klang Valley area. Results from the survey indicated that the two main problems faced by the factory workers are, fear of the influx of foreign workers that may threaten their jobs, and the relatively low pay, taking into account the high cost of living in the Klang Valley. Findings also indicated that while gender and race did not significantly influence perceptions of the working environment and job satisfaction, job positions did. Those working as security and logistics staff were significantly more satisfied with their working environment than those holding administrative or technical/production posts. Job satisfaction also varied significantly across job positions; those working in security and logistic positions were significantly more satisfied with their jobs compared to the other employees (administrative, managerial/professional, and technical/production). Finally, using hierarchical linear regression, with family income as the control variable, the findings suggested that both individual well-being and perceptions of the working environment emerged as positive. Both of these are significant predictors of perceived job satisfaction among factory workers. The implication of these findings will be discussed within the framework of organizational satisfaction and individual well-being.

Keywords: factory worker, Herzberg's two-factor theory, individual well-being, job satisfaction, working environment

Abstrak: Kajian ini meninjau faktor-faktor yang mempengaruhi kepuasan pekerjaan di dalam konteks pekerja kilang di Malaysia. Tujuan utama kajian ini adalah untuk mengetahui pengaruh demografik ke atas kepuasan pekerjaan dan hubungan pendapatan keluarga, kesejahteraan individu, dan persepsi persekitaran pekerjaan dengan kepuasan pekerjaan di kalangan pekerja kilang. Satu kaji selidik telah dijalankan ke atas 551 pekerja kilang di sekitar Lembah Klang. Dapatan menunjukkan dua masalah utama yang dihadapi oleh pekerja kilang adalah kebanyakan pekerja asing yang mengancam keutamaan mereka dalam pekerjaan serta gaji yang rendah, mengambil kira kos sara hidup yang tinggi di Lembah Klang. Dapatan juga menunjukkan bahawa jantina serta bangsa tidak mempengaruhi persepsi persekitaran pekerjaan dan kepuasan pekerjaan tetapi ainya mempengaruhi jawatan yang disandang. Pekerja dalam jawatan keselamatan dan logistik adalah lebih berpuas hati dengan pekerjaan mereka berbanding pekerja dalam jawatan lain (pentadbiran, pengurusan/professional, dan teknikal/pengeluaran). Akhir sekali, dengan menggunakan hierarchical linear regression, dapatan mencadangkan bahawa setelah menggunakan pendapatan keluarga sebagai pengubah alih kawalan, kesejahteraan individu dan persepsi persekitaran pekerjaan dilihat sebagai positif, peramal yang signifikan terhadap kepuasan pekerjaan di kalangan pekerja kilang. Implikasi dapatan akan dibincangkandi dalam kerangka kepuasan organisasi dan kesejahteraan individu.

Kata Kunci: Pekerja kilang, Teori Herzberg dua factor, kesejahteraan individu, persekitaran pekerjaan

Introduction

Factory workers make up a large number of the population of Malaysian workers. According to a census conducted in November 2015, almost 1.03 million people work in the manufacturing sector (Department of Statistics Malaysia, 2015). This indicates that there are more job opportunities in the manufacturing sector compared to the other sectors. Previous studies showed that job satisfaction among Malaysian employees in the manufacturing sector is the lowest compared to the public and non-profit companies in the United States and Singapore. This, however, may be due to sector variations (Ibrahim, Ohtsuka, Dagang, & Bakar, 2014). As such, it is important for factory management to provide a comfortable work area to keep their workers satisfied with the work environment.

In today's organizations, human capital has been taking an important place and becoming the greatest asset that guarantees its economy (Kiarie, Maru, & Cheruiyot, 2016). Incontrovertibly, the success of an organization relies heavily on its finance; however, the workforce that manages finance resources determines the organization's goal achievement. For this reason, organizations often look for means to get the best human resources to ensure the realization of their goals. Nonetheless, this is only possible when human resources employees are satisfied with their job; as only satisfied employees hold encouraging feelings about work (Rizwan, Khan, Tariq, Ghaffar, Anjum, & Bajwa, 2012), and employ more efforts to achieve organizational objectives (Kiarie et al., 2016).

Since decades ago, performance and productivity have been some of the major concerns among managers in organizations. To materialize organizational goals, management strives to make the working culture productive and help employees to achieve it. On that premise, two basic critical tasks of a manager are to communicate with, and motivate the workers (Drucker, 1985). At this juncture, employees are increasingly more important for organizational success and competitiveness (Saari & Judge, 2004), thus motivating them is essential. Motivation is a vital concept that has been the focus of many organizational scholars

for decades. Realizing its importance, many motivational theories have emerged in the areas of organizational behavior and management since the 1950's. The main goal of any organization is to be profitable. Maximizing profit, however, can only be obtained if the organization contemplates on its employees and takes care of them (Ravichandran, Rajan, & Kumar, 2015). Employee job satisfaction is imperative as employees play a vigorous role in production.

The purpose of this study is to examine what motivates factory workers and their levels of job satisfaction using Herzberg's motivation-hygiene factor theory. Specifically, this study aims (i) to explore the main problems faced by factory workers; (ii) to identify the levels of their job satisfaction; and (iii) to understand the relationships of individual well-being and working environment with job satisfaction among factory workers in Malaysia.

Literature Review

Studies on job satisfaction have gained the attention of many scholars since decades ago. Researchers studied job satisfaction from various aspects including organizational commitment (Smith, Gregory, & Cannon, 1996), job security and well-being (Daud, 2017), leader traits (Kiarie et al., 2016), role of job and family involvement (Konradt & Garbers, 2016), and quality work life (Noor & Abdullah, 2012), among others. In a study conducted by Eilickson and Logsdon (2001), job satisfaction is associated with positive organizational outcomes such as increased output, efficiency of and loyalty to the organization, and reduced absenteeism. A popular definition of job satisfaction, as provided by Locke (1976), is "...a pleasurable or positive emotional state resulting from the appraisal of one's job or job experiences" (p. 1304). Apart from the organizational outcomes, job satisfaction is also associated with factors related to the workforce. From this, job satisfaction can be defined as 'feelings and thoughts employees have about their work and place of work' (Rizwan et al., 2016, p. 30). Despite the various definitions of job satisfaction by scholars, many agreed that job satisfaction is very important for employee well-being (Daud, 2017; Ibrahim, Dagang, & Bakar, 2014; Noor & Abdullah, 2015). As a matter of fact, employees spend two-thirds of their time at the workplace; hence, job satisfaction has a major impact on employees either at work or home (Ibrahim et al., 2014).

A study conducted by Ravichandran, Rajan, and Kumar (2015), of 160 employees working in manufacturing industries in Puducherry, found that employees are satisfied with their job. In their study, job satisfaction was divided into three factors: working condition, promotion, and work environment. Their research findings revealed that promotion contributes to maximum job satisfaction to the employees. In addition, their findings suggested that industries should concentrate on the working environment so that employees will feel safe and secure at the workplace. This leads to significant improvements in production.

In a recent study conducted by Aini Maznina et al. (2016) on factory workers and their level of satisfaction at work, it was found that the levels of satisfaction among factory workers in Malaysia are mostly moderate in many areas. Some of these areas included, the relationships among workers, their working environment, safety condition, facilities provided, relationship with the management, as well as services provided by the factory management for its workers. In terms of salary, most are moderately satisfied regarding the basic salary received including allowance for overtime work. The study also revealed that in terms of overall job satisfaction, most are moderately satisfied with their job as factory workers.

Leadership is considered the most significant factor of job satisfaction among the manufacturing employees in North Malaysia. Therefore, researchers suggest that manufacturing companies and other companies should plan for the smart optimal strategy to become more competitive and improve leadership within the company itself (Yusof, Misiran, & Harun, 2014).

Thus, the different levels of job satisfaction may be due to different factors. Different parts of the world would have different factors that determine job satisfaction among factory workers.

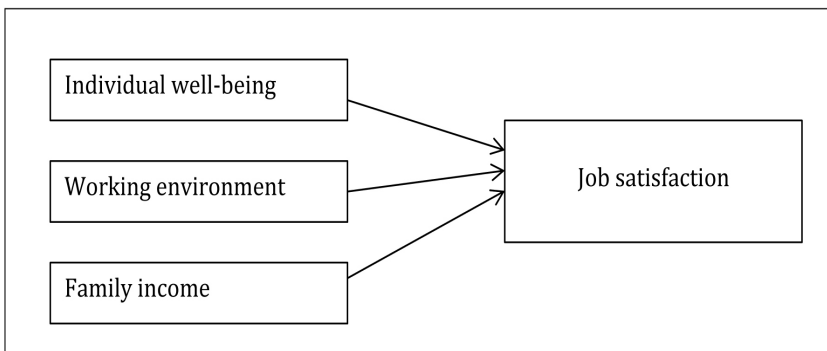
An important factor that could be the main contributor to job satisfaction is the working environment. Many studies have been conducted to understand the influence of the working environment on job satisfaction or vice versa. This research area has been steadily gaining attention among researchers until today. According to Raziq and Maula-Bakhsh (2015, p.718), the working environment can be discussed in two aspects: work and context. Work includes all the different characteristics of the job, such as, the way the job is carried

out and completed, involvement in tasks such as task activities training, control of one's own job-related activities, a sense of achievement from work, variety in tasks, and the intrinsic value of the task. Most studies conducted on the workplace environment and intrinsic aspect of job satisfaction found a positive relationship. On the other hand, the second category of the working condition that is referred to as "context" refers to the physical and social conditions of the workplace. Despite the various variables studied by researchers on working condition, most agree that the working environment is crucial in determining job satisfaction, thus leading towards the achievement of goals in organizations.

Promoting elements that sustain a healthy work environment fosters satisfied and engaged employees. An ideal work setting involves components such as stimulating work projects, assurance of personal and organizational well-being, and dedicated teammates (SHRM, 2015, p.31).

Apart from the working environment, employee well-being plays a crucial role in determining job satisfaction at the workplace. Researchers provide various definitions of well-being, ranging from personal health to prosperity at the workplace (Daud, 2017). Well-being is an important aspect for individuals at work, as good well-being makes them happy and feel relished, leading to a higher quality of life. For individuals, well-being is more than having a good life, but rather the feeling that their life is meaningful, and they tend to use their "self-potential to the fullest and experiencing more meaningful life" (Daud, 2017, p. 28). Based on the explanation above, researchers propose a research model as shown in Figure 1.

Figure 1: The research model



Herzberg's Two-Factor Theory

This study uses the two-factor theory introduced by Herzberg (1959), popularly known as Herzberg's two-factor theory. The two main concepts attributed to this theory are motivation and hygiene factors. The main assumption of this theory concerns the distinction between these two factors. While motivation factors operate only to increase job satisfaction, hygiene factors, on the other hand, operate to decrease job satisfaction (Ruthankoon & Ogunlana, 2003). Motivation factors refer to the six 'job content', which encompasses achievement, recognition, work itself, responsibility, advancement, and the possibility of growth. On the other hand, hygiene factors refer to the 'job context' that comprise company policy, supervision, relationship with supervisors, work conditions, relationship with peers, salary, personal life, relationship with subordinates, status, and job security.

Specifically, the intrinsic motivators, known as job content factors, define things that people actually do in their work in terms of their responsibilities and achievements. These factors can contribute a great deal to the level of job satisfaction an employee feels at work. The job context factors, on the other hand, are the extrinsic factors that an employee does not have much control over; they relate more to the environment in which people work than to the nature of the work itself (Riley, 2005).

Herzberg et al. (1959; pp. 113–114) explained:

Among the factors of hygiene, when the factors deteriorate to a level below that which the employee considers acceptable, then job dissatisfaction ensues. However, the reverse does not hold true. When job context can be characterized as optimal, we will not get dissatisfaction but neither we will get much in the way of positive attitudes. It should be understood that both kinds of factors meet the needs of the employees; but it is primarily the "motivators" that serve to bring about the kind of job satisfaction, the kind of improvement in performance that industry is seeking from its workforce.

This theory has been used in many studies of various occupations, but those studies show different findings. Interestingly, Herzberg's (1959) study itself showed different percentages for different occupations

(engineers and accountants) on some factors such as the appearance of advancement, work itself, relationships with subordinates, and relationships with peers. Based on the previous studies, it is possible that studies using Herzberg's theory in different industries show different results (Ruthankoon & Ogunlana, 2003). The present study uses Herzberg's theory in a factory setting.

Many studies have been conducted on various industries using Herzberg's theory. For example, Ruthankoon and Ogunlana (2003) conducted a study on the construction industry. They asserted that the major aspects that should be seriously considered are interpersonal relations and salary as both contribute to satisfaction and dissatisfaction. They also suggested "project managers should create strong relations among project members such as talking nicely to subordinates, solving conflicts among subordinates, and creating an atmosphere for teamwork. In addition, salary, the rate of salary increase, and annual bonus should be structured at appropriate levels based on industry conditions" (Ruthankoon & Ogunlana, p. 340). They also advocated that good support by managers to construction engineers and foremen by engaging them with new techniques, job rotation, job enrichment and training, as well as encouraging mentoring system among senior and junior staff, will increase job satisfaction. On the other hand, laying off employees should be avoided as it will lead to job dissatisfaction.

Based on the literature review, the following research questions and hypotheses are proposed for this study:

RQ1: What are the main problems and challenges faced by factory workers?

$H_1(a)$: Gender significantly influences individual well-being, job satisfaction, and the working environment.

$H_1(b)$: Race significantly influences individual well-being, job satisfaction, and the working environment.

$H_1(c)$: Job position significantly influences individual well-being, job satisfaction, and the working environment.

RQ2: What are the relationships of family income, individual well-being, and the work environment with job satisfaction?

Research Methodology

Data Collection and Sampling

This study used a survey method. Data collection was done through structured interviews where 551 factory workers were interviewed by trained interviewers regarding their job satisfaction, individual well-being, and the work environment. The respondents were selected based on stratified random sampling. The interviews were conducted in the industrial area in Klang Valley, Malaysia. The factory workers interviewed consisted of various races including the Malays, Chinese, and Indians, irrespective of their religion. The main languages used during the interviews were Malay and English depending on the preference of the respective respondent. The interviews were conducted within two months.

Respondents consisted of factory workers including line workers, operators, and supervisors. Most of the interview sessions were conducted during their lunch hour and rest time. The duration for each interview session was between 30 and 40 minutes. The data collected were analyzed using the SPSS program.

Research Instrument

A series of interview questions were constructed as the main instrument for data collection. The research instrument consisted of seven sections. However, for this paper, only four sections will be analyzed: (a) respondent's background, (b) working environment, (c) job satisfaction, and (d) individual well-being.

Respondent's background. In the first section, the respondents were asked about their demographic background: gender, race, religion, age, the highest level of education, marital status, the current position in the factory, the type of house they lived in, and salary per month. Each question was provided with a multiple choice of answers to be selected by the respondents. Job position was recoded into four different categories: administrative, professional and managerial, logistics and security, and technical and production.

Problems at factories. To find out the main problems faced by the factory workers, the respondents were given open-ended questions that allowed them more freedom to voice out their concerns. The first

question asked about their main problems as factory workers and the second was an open-ended question regarding problems faced by the factories in their working area. Respondents were also asked for possible solutions to the problems.

Working environment. In this section, the questions focused on the respondents' working environment where questions asked concerned their work instruments, facilities provided, work atmosphere, safety at the workplace, their relationship with the management and between workers, the reward and benefit system practiced by the factory, salary, allowance, overtime pay, comparison between salaries received by local and foreign workers, and the future of factory workers. Using a five-point Likert scale, the response items ranged from 1-Strongly disagree, 2-Disagree, 3-Moderate, 4-Agree, to 5-Strongly Agree. The next question asked was also regarding their overall job satisfaction with the scale given from 1 to 5 where: 1-Very dissatisfied, 2-Dissatisfied, 3-Moderate, 4-Satisfied, and 5-Very satisfied. Lastly, an open-ended question was included to get the respondents' suggestions on improving the current working situation within the factory where they worked.

Individual well-being. This life quality section consisted of questions concerning the factory workers' satisfaction in terms of their job, health, relationship with their neighbors, family living condition, housing area, family income, social life, and their ambitions. The respondents were also asked regarding their daily mode of transport to work. The response item for the five-point Likert scale also ranged from 1 to 5: 1-Very dissatisfied, 2-Dissatisfied, 3-Moderate, 4-Satisfied, 5-Very satisfied.

A reliability test was performed to check the consistency and accuracy of the measurement scales. Table 1 indicates that the results of Cronbach's alpha coefficient are satisfactory (between .95 and .98), indicating the questions in each construct are measuring a similar concept and they are internally consistent (Cronbach, 1951).

Table 1 Reliability analysis for selected variables

Variables	No. of items	Cronbach's alpha
Working environment	14	.95
Individual well-being	8	.98

Statistical Analyses

Hypotheses 1 is tested using *t*-tests and ANOVA while hypothesis 2 is analyzed using the hierarchical regression analysis. Specifically, the independent sample *t*-tests are used to analyze gender differences in terms of job satisfaction, and the one-way ANOVA is utilized for the significant difference in job satisfaction across race and job positions. The post-hoc analyses of statistically significant ANOVA are performed using Tukey HSD tests to confirm where the differences occur between groups with the alpha level set at $\alpha = 0.05$. Finally, a hierarchical regression is run to analyze the relationships of family income, individual well-being, and perceptions of the working environment with job satisfaction.

Findings

Profile of respondents

Of the 551 respondents, 63 percent are females while 37 percent are males. The Malays, which make up 75%, are the majority in terms of the race of the factory workers. In terms of religion, most are Muslims aged between 20 and 30 years old. Their highest level of education is quite high as most have achieved the level of form 4 and above. Most respondents interviewed are skilled workers. The profile of the respondents is depicted in Table 2.

Table 2 Socio-Demographic Profile of respondents

Socio-Demographic Profile	Percentage	Frequency
Gender		
Male	63	346
Female	37	205
Race		
Malay	75	416
Chinese	10	56
Indian	13	74
Others	0.9	5
Religion		
Muslims	74	409
Christians	3	16

Buddhists	7	38
Hindus	11	58
Taoists	4	22
Confucians	0.5	3
Age		
20–30	52	288
31–40	33	182
41–50	11	60
51–60	3	17
60 and above	0.4	2
No response	0.4	2
Highest Education Level		
No Schooling	1	3
Standard 1–6	2	11
Form 1–3	5	28
Form 4–5	38	28
Form 6/Certificate/Diploma	34	186
Degree	20	111
No response	1	5
Working Position		
Administration	6	32
Professional	9	49
Semi-professional	13	72
Skilled workers	51	278
Support	6	34
Others	9	52
No response	6	34

Problems Faced By The Factory Workers

Based on the descriptive analyses, most respondents reveal allowance or salary as their main problem where 20 percent state that ‘it is not enough’ or ‘the amount is too small’. A total of 13 percent rate ‘too many foreign workers’ as among the main problems faced by them. A total of 7 percent of the respondents choose factory closedown or loss

of workers while factory management and discipline or social problems among factory workers both score 4 percent. The high cost of living is also among the main problems faced by the factory workers followed by problems in terms of communication, job opportunities among local factory workers, and 'not enough day off'. They also face problems related to workers' welfare and politics at the workplace.

Importantly, the findings suggest the main problem is the allowance or salary received by the factory workers. This may be due to the high-cost living that makes the factory workers feel that the allowance or salary received is not enough. The presence of many foreign workers may also add to this problem since this could result in a lower salary for the local workers. They would also have to compete with the foreign workers for job opportunities in the factory.

Job Satisfaction among Factory Workers

Findings reveal 46 percent of the respondents are satisfied with their job followed by 27 percent who are just slightly satisfied with their job. A total of 18 percent are very satisfied while only 5 percent state that they are not satisfied with their job. The least is 3 percent who are very dissatisfied with their job. Thus, it shows that the majority of the respondents are satisfied with their job as factory workers.

Specifically, most of the respondents (29 percent) rate the "moderate" and agree on levels of satisfaction regarding their future as factory workers, as they feel they are secure and guaranteed in their career. Regarding the similarity between local and foreign workers in terms of salary or payment received, 33 percent state a moderate level of satisfaction followed by 25 percent who agree with the statement that Malaysian workers are being paid equal to the foreign workers. In addition, most of the respondents agree on receiving a reasonable basic salary followed by 30 percent who rate a moderate level of satisfaction on the statement regarding their basic salary.

Regarding overtime allowance received, the highest is 35 percent who respond with 'agree' to 'overtime allowance received is reasonable' while in terms of whether they receive a suitable amount of salary based on their knowledge and skills, 33 percent are at the moderate level followed by 31 percent who agree they have received a suitable salary based on their knowledge and skills. Other than that, 33 percent give

a moderate rating regarding whether their salary received is suitable to their position, while 31 percent agree that they have received an acceptable salary.

Besides that, most of the respondents are in the moderate and agree levels of satisfaction regarding the benefit and reward system as well as service received from the management of the factory since all scored more than 30 percent in the moderate and agree levels of satisfaction. In addition, 35 percent of the respondents agree that factory workers have a good relationship with management. Most of the respondents also feel their safety is guaranteed and agree to the good relationship between workers. Regarding the working environment, the highest is 35 percent, comprising of respondents who agree on having a happy working environment while most are also satisfied with the facilities provided by the factory; 39 percent agree that they have an adequate working equipment.

The influence of demographic variables on individual well-being, job satisfaction, and the working environment

The next set of analyses aims to examine the influence of demographic variables (i.e. gender, race, and job position) on individual well-being, job satisfaction, and perceptions on the working environment. A *t*-test was performed for gender differences while for the differences across race and job positions, the one-way ANOVA was carried out.

Individual well-being, job satisfaction, and working environment across gender

Three independent-samples *t*-tests were conducted to compare male and female in terms of individual well-being, job satisfaction, and working environment. The results indicate that there is no significant difference in the scores for male ($M = 6.31, SD = 14.44$) and female ($M = 7.61, SD = 18.51$); $t(549) = -.91, p = 0.36$ for individual well-being. These results suggest that gender does not have an effect on individual well-being. Specifically, our results suggest that there is no difference between male and female for individual well-being.

In addition, the results indicate no significant difference between male ($M = 6.13, SD = 15.2$) and female ($M = 8.22, SD = 20.63$); $t(549) = -1.26, p = 0.21$ with regard to their job satisfaction. Similarly, there is no significant difference between male ($M = 6.8, SD = 12.90$) and female

($M = 8.09$, $SD = 16.62$); $t(549) = -1.01$, $p = .31$ on their perceptions towards the working environment. Overall, the results suggest that individual well-being, job satisfaction, and the working environment of factory workers do not vary significantly across gender. Therefore, H1a is not supported.

Table 3 Job satisfaction by gender (Independent Sample T-test)

Dependent Variable	Male		Female		$t(549)$
	M	SD	M	SD	
Well-being	6.31	14.44	7.61	18.51	-.914
Job Satisfaction	6.13	15.23	8.22	20.63	-1.26
Working Environment	6.80	12.90	8.09	16.62	-1.01

Individual well-being, job satisfaction, and working environment across race

A comparison among the races (Malay, Chinese, and Indian) is made for individual well-being, job satisfaction, and working environment. The findings indicate that there is no significant effect of race at the $p < .05$ level for individual well-being [$F(2, 542) = 0.43$, $p = 0.65$], job satisfaction [$F(2, 542) = 1.11$, $p = 0.33$], and the working environment [$F(2, 542) = 1.05$, $p = 0.35$].

Taken together, these results suggest that race does not have an effect on individual well-being, job satisfaction, and the working environment among factory workers. Specifically, our results suggest that there is no significant difference across race in terms of perceived individual well-being, level of satisfaction at the workplace, and the working environment. Therefore, H1 (b) is also not supported.

Table 4 One-Way Analysis of Variance of Individual Well-Being, Job Satisfaction, and Working Environment by Race

	Source	Df	SS	MS	F	p
Well-being	Between Groups	2	212.731	106.365	0.432	0.649
	Within Groups	542	1333309.905	245.959		
	Total	544	133522.636			
Job Satisfaction	Between Groups	2	612.509	306.254	1.109	0.331
	Within Groups	542	149742.490	276.278		
	Total	544	150354.998			
Working Environment	Between Groups	3	373.809	186.905	1.051	0.350

Within Groups	547	96397.912	177.856
Total	550	96771.721	

Individual well-being, job satisfaction and working environment across job positions

A series of one-way analysis of variance (ANOVA) is also conducted to compare the effects of participants' job position in administrative, professional and managerial, logistics and security, and technical and production on individual well-being, working environment, and job satisfaction. First, the results for the one-way ANOVA indicate a non-significant trending in the predicted direction, indicating no significant effects of the four categories of job positions on individual well-being [$F(3, 547) = 2.03, p = 0.11$]. Thus, perceptions on individual well-being are not dictated by job positions.

On the other hand, the results of one-way ANOVA regarding the effects of participants' job position in administrative, professional and managerial, logistics and security, and technical and production on job satisfaction are statistically significant [$F(3, 547) = 5.52, p < 0.01$]. Post-hoc analyses using Tukey's HSD indicate that job satisfaction is significantly higher for participants working in the category of security and logistics ($M = 12.33, SD = 27.67$) compared to those in the administrative positions ($M = 3.71, SD = .93$), managerial and professional positions ($M = 5.53, SD = 13.45$), and technical and production positions ($M = 6.11, SD = 15.38$).

Similarly, the results of one-way ANOVA regarding the effects of participants' job position in administrative, professional and managerial, logistics and security, and technical and production on the working environment are also statistically significant [$F(3, 547) = 5.94, p < .01$]. Post-hoc analyses using Tukey's HSD indicate that participants working in the category of security and logistics have a significantly more positive perception on the working environment ($M = 11.94, SD = 23.64$) compared to those in the administrative positions ($M = 4.83, SD = 2.62$), managerial and professional positions ($M = 7.08, SD = 13.98$), and technical and production positions ($M = 6.03, SD = 10.27$). Therefore, overall, H1c is partially supported.

Table 5 One-Way Analysis of Variance of Individual Well-Being, Job Satisfaction, and Working Environment by Job Position

	Source	Df	SS	MS	F	p
Well-being	Between Groups	3	1563.984	521.328	2.029	0.109
	Within Groups	547	140519.271	256.891		
	Total	550	142083.254			
Job Satisfaction	Between Groups	3	4916.676	1638.892	5.516	0.001
	Within Groups	547	162515.603	297.103		
	Total	550	167432.279			
Working Environment	Between Groups	3	3597.359	1199.12	5.941	0.001
	Within Groups	547	110398.58	201.826		
	Total	550	113995.939			

Relationships of Family Income, Individual Well-Being, and Working Environment with the Level of Job Satisfaction

Multiple hierarchical regression analysis is used to answer Research Question 2. In Step 1, to control for the influence of income on job satisfaction, the respondents' average monthly income is entered into the equation. In Step 2, individual well-being is entered into the equation. Finally, in Step 3, perceptions of the working environment are entered in the equation. Job satisfaction serves as the dependent variable in this analysis.

In Step 1, monthly family income ($\beta = .15, p < .001$) emerges as a significant, positive predictor of job satisfaction. In Step 2, it remains a positive, significant predictor of job satisfaction ($\beta = .17, p < .001$) while individual well-being also emerges as a significant, positive predictor of job satisfaction ($\beta = .74, p < .001$); the *F* change is significant ($p < .001$). Finally, in Step 3, all three variables remain as significant, positive predictors of job satisfaction among factory workers, comprising family income ($\beta = .07, p < .001$), individual well-being ($\beta = .35, p < .001$), and working environment ($\beta = .48, p < .001$). The *F* change is significant ($p < .05$).

The final equation accounts for 64% of the variance explained in predicting the level of job satisfaction among factory workers in Malaysia.

Table 6 Summary of Regression Analysis for Predicting Job Satisfaction Among Factory Workers in Malaysia

Predictors	Level of Job Satisfaction		
	<i>B</i>	<i>SE B</i>	β
Step 1			
Family income	.55	.15	.15*
Step 2			
Family income	.63	.10	.17***
Individual well-being	.80	.03	.74***
Step 3			
Family income	.24	.10	.07**
Individual well-being	.38	.05	.35***
Perception of the working environment	.58	.06	.48***

Note. $N = 551$. $R = 0.15$, $R^2 = 0.22$, $F(1, 549) = 12.61$, $p < .001$, for Step 1; $R = 0.75$, $R^2 = 0.56$, $\Delta R^2 = 0.27$, $F(2, 548) = 354.10$, $p < .001$, for Step 2; $R = 0.80$, $R^2 = 0.64$, $\Delta R^2 = 0.07$, $F(4, 624) = 321.30$, $p < .001$, for Step 3 * $p < .05$, ** $p < .01$, *** $p < .001$.

Discussion and Conclusion

The main purpose of this study is to explain the level of job satisfaction among factory workers in Malaysia and the factors that contribute towards it. The relationships of individual well-being, working environment, gender, race, job positions and family income with job satisfaction were examined. The study found that factory workers are generally satisfied with their job despite their dissatisfaction with the amount of salary they receive, and their disappointment about unfair treatment of the benefits received by the locals in comparison to the foreign workers. These findings are consistent with the study by Aini Maznina et al. (2016), which highlighted that respondents of their study were not highly satisfied with the amount of pay and incentives they received. Therefore, the factory management needs to give more attention to the salary and incentives as well as fair treatment of local and foreign workers to ensure high productivity in the factory. In addition, employees who work in security and logistics were found to be more satisfied than employees of other segments of the factory. This may be

due to the nature of their job which does not require them to deal with a lot of people, thus making them feel more relaxed and less stressed out. Unlike employees in production, administrative and management whose job require them to deal with many people and stick to very tight time management.

Working condition and individual well-being were found to be significant factors that contribute to high job satisfaction among factory workers. Family income, while initially important, when considering individual well-being and working environment, has reduced influence on job satisfaction. Therefore, the findings indicate that external factors such as family income are not contributing factors that motivate employees to perform better and feel satisfied at work. Rather, factors that are related to the working environment and employees' good feelings towards themselves are more important, which determine their satisfaction at work. The results of this study are consistent with Raziq and Maula-Bakhsh (2015), SHRM (2015), and Daud (2017) who identified the working environment and employee well-being as important determinants of job satisfaction. Hence, it is important for the factory management to provide a conducive working environment in ensuring high productivity among factory employees.

Essentially, by applying Herzberg's two-factor theory in a factory setting, this study extends this theory to an organizational communication study. Many researchers have carried out studies using Herzberg's two-factor theory in diverse organizations and different groups, and their studies have produced varying results, which do not necessarily support or fully reject Herzberg's propositions. The purpose of the present study was to gauge the extent of Herzberg's research findings and see if they had any application to the factory workers in Malaysia by looking at the levels of influence that hygiene and motivation factors might have on factory workers' job satisfaction.

Theoretically, findings of this study suggest that job position, working condition, and individual well-being are important constructs that need to be taken into account when studying job satisfaction in organizations. Conversely, depending on various contextual factors, the motivation factors of employees may be different (Ruthankoon & Ogunlana, 2003). The results showed that when the motivator and hygiene factors were tested together with job position, working environment, and individual

well-being, those factors had a positive, and significant, effect on job satisfaction among factory workers in Malaysia. This result supports the study by Chu and Kuo (2015), where both motivators and hygiene were sources for satisfaction. Hence, the results are different from Herzberg's study, which found that hygiene factors were sources of dissatisfaction.

Limitations and Future Research

There are several limitations to the study. First, as the sample used in the present study was limited to employees of several factories in the Klang Valley, which is a small area in Selangor, findings of this study cannot be generalized to a wider population. As such, a replication of this study with employees at other factories in other parts of the country or world should be accomplished in order to have a higher degree of generalization or to discover if different results occur.

Second, the difficult access to factory workers created a challenging atmosphere during the data collection phase. The tight work schedule, especially among the line workers, created struggles for the researchers to interview them. The researchers only managed to interview them during their lunch and tea times, while they struggled between responding to the survey questionnaire and eating. The questionnaire was designed to be as simple as possible to allow them to complete the survey questionnaire within the limited period. As such, it is recommended that future studies plan better strategies to get access to the factory workers such as interviewing the line workers at their hostel and the managers at their office at their convenient times.

A replication of this study can be conducted using a different methodology for data collection and analysis with a similar population of factory employees. This kind of study may help to further clarify and extend the findings.

Notwithstanding the fact that a number of motivational studies directly related to Herzberg's motivation-hygiene theory have been carried out since Herzberg's original study was introduced in 1959, there are still numerous conflicting findings and conclusions. Additional studies in several areas and organizational settings are necessary to refine the dispute.

It is hoped that more studies are conducted using Herzberg's two-factor theory in different work settings to see the different

factors contributing to job satisfaction. This study is limited to an understanding of individual and work-related factors only. Further studies using different constructs need to be carried out to understand better about job satisfaction in organizations. Empirical relationships between motivation-hygiene factors and job performance, teamwork, and relationships with leaders are recommended for future research.

Furthermore, the researchers had difficulties in getting the literature for well-being and the working environment among factory workers in the Malaysian context due to the limited information resources in this area. Most of the information obtained was derived from Western studies.

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