

# Analysis of Factors Influencing The Level of Job Satisfaction of Health Care Medical Laboratory Technology Experts in Kupang City During the Covid-19 Pandemic

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## ABSTRACT

Job satisfaction can be influenced by several factors, such as psychological factors, there are several aspects, such as attitudes towards work, interests, work skills and feelings of work, social factors, there are several aspects of social interaction among employees, social interaction with leaders and social interaction with employees of different types. work, physical factors, aspects of the work environment, physical condition of employees, type of work, working time arrangements, work equipment, air circulation and employee health and financial factors of wages or compensation, social security, benefits and facilities provided. If from each of these aspects employees get satisfaction, employees tend to stay in an organization, even though not all aspects that affect job satisfaction are fulfilled.

The aims of this research are: 1). determine the level of satisfaction of health workers who are medical laboratory technology experts, 2) the factors that influence the level of job satisfaction of health workers who are medical laboratory technology experts in Kupang City during the Covid 19 pandemic.

Based on the results of the research and discussion above, it can be seen that there are two factors, namely psychological factors and social factors that have the most dominant opportunity to emerge from the job satisfaction of health workers who are medical laboratory technologists in Kupang City during the Covid-19 pandemic. Employees will feel satisfied if they can interact with fellow employees and superiors.

**Keywords:** Job Satisfaction, Health Workers, Technologists, Medical Laboratory.

## INTRODUCTION

Human resources are people who provide abilities in terms of talent, creativity, energy and enthusiasm for an organization (Stoner in Imanda et al, 2012). Human resources are a very important element for every organization, company or agency, because the good or bad quality of each of these organizations depends on the performance of the employees themselves. Therefore every organization, company or agency needs competent human resources to be able to carry out every responsibility in it. To maintain the quality of human resources, the organization must be able to manage human resources properly. One of them is job satisfaction.

The problem of satisfaction is not a new thing for the world of work. Because basically humans work to meet or satisfy their life needs. Someone is not satisfied if they have not met their needs and someone else will feel satisfied if they have met their needs. This problem often occurs in a job and ultimately has an impact on the performance of the human resources themselves. The quality of performance that is initially good can decrease if it does not match expectations or expectations. According to Kotler and Keller (2009: 138-139) satisfaction is a person's feeling of pleasure or disappointment that comes from a comparison between what is received and his expectations (Panjaitan and Yuliati, 2016).

According to Sutrisna, 2009:86, a person's job satisfaction can be influenced by several aspects, such as: a. Psychological factors, are factors related to the psychology of employees which include work, attitudes towards work, talents, and skills, b. Social Factors, are factors related to social interaction both among fellow employees, as well as with their superiors, c. Physical Factors, are factors related to the physical condition of employees, including the type of work, timing and rest periods, d. Financial factors, are factors related to guarantees and employee welfare which include the system and the amount of salary, social security, various kinds of benefits, facilities provided, promotions, and so on.

As in the world of health, every health worker such as a doctor, nurse, midwife, health analyst or medical laboratory technologist and other health workers has a fairly important role in a hospital, clinic, health center or other health institution. A big responsibility for someone's safety that makes them have to have extra competence and energy in order to be able to handle patients properly. If what has been done is felt to be not commensurate and not in line with expectations, then what will happen is a decrease in performance, not to mention if the work environment is not conducive, facilities are inadequate and stress for patient care continues to increase. So this is what causes a person's level of satisfaction tends to decrease.

When viewed from world conditions, especially in Indonesia which is being hit by the Covid-19 pandemic, it has had a big impact, bringing changes to human life, especially for every health worker. Since the beginning of the Covid-19 case, these health workers have had quite a hard and tiring job than usual. Besides that, they also have to be able to survive in the midst of patients, so they can avoid the Corona Virus. But the fact is that many health workers also lost their lives while treating these patients. As of December 8, 2021, it was recorded that 2066 health workers in Indonesia died while on duty (report Covid-19, 2021). Therefore, judging from the fact that the current situation is that the risks and workload of these health workers are very large, it is necessary to pay special attention to both internal parties, namely health agencies and external parties, namely the government.

Research by Ramadhan Harahap (2017) with the title Analysis of Employee Job Satisfaction at CV Rezeki Medan, that employee job satisfaction at CV. Medan's Rezeki is considered not good, because the salary/wages received by most employees are not satisfied with meeting the minimum adequacy and their living needs.

The purpose of this study was to identify what factors influenced the level of job satisfaction of medical laboratory technologist health workers during the Covid 19 pandemic in Kupang City and to determine

the level of job satisfaction of health workers as medical laboratory technologists during the Covid 19 epidemic in Kupang City.

Based on the background above, this research was conducted to produce a study that provides input on an overview of the level of job satisfaction of medical laboratory technologists in the city of Kupang during the Covid-19 pandemic in the form of a journal so that it is hoped that it can support the development of science in the field of management, especially human Resources.

### **Formulation of the problem**

The problems to be studied in this are:

1. What factors influenced the level of satisfaction of medical laboratory technology experts during the Covid 19 pandemic in Kupang City.
2. What is the level of job satisfaction of health workers who are medical laboratory technology experts during the Covid 19 pandemic in Kupang City.

### **Research purposes**

Based on the formulation of the problem above, the objectives of this study are:

1. Identify what factors influence the level of job satisfaction of health workers who are medical laboratory technologists during the Covid 19 pandemic in Kupang City
2. Knowing the level of job satisfaction of health workers who are medical laboratory technology experts during the Covid 19 pandemic in Kupang City

Based on the background above, this research was conducted to produce a study that provides input on an overview of the level of job satisfaction of medical laboratory technologists in the city of Kupang during the Covid-19 pandemic in the form of a journal so that it is hoped that it can support the development of science in the field of management, especially human Resources.

### **LITERATURE REVIEW**

Job satisfaction has an effect on organizational life. Job satisfaction is the attitude (attitudes) positive or negative that is owned by an employee towards his work. This attitude is the result of employees' perceptions of their work (Greenberg & Baron; Ivancevich & Metteson, 2008).

According to Handoko (2011), job satisfaction is an emotional state, both pleasant and unpleasant, in which employees perceive their work. Mathis & Jackson (2006) defines job satisfaction as a positive emotional state and evaluates one's work experience. Dissatisfaction will arise when their expectations are not met. According to As'ad (2000) job satisfaction is an employee's feelings towards his work. Job satisfaction is the result of interaction between employees and their workplace. Each individual will have a different level of job satisfaction according to the values he adheres to. Robbins (2007:148) argues that job satisfaction is as a general attitude of an individual towards his work. Work requires interaction with colleagues or superiors, following organizational rules and policies, meeting work standards, living in working conditions that are often less than ideal, and other similar things.

According to Hasibuan (2015) job satisfaction of an employee can be seen from the following things:

- a) Enjoying His Job. Employees are aware of the direction they are going, have reasons for choosing their goals, and understand how to work. In other words, an employee likes his job because he can do it well.
- b) Loves His Job. In this case the employee does not just like his job but is also aware that the job is in accordance with his wishes.
- c) Positive Work Morale. This is an inner agreement that arises from within a person or organization to achieve certain goals in accordance with the specified quality.
- d) Work Discipline. Conditions that are created and formed through the process of a series of behaviors that show the values of obedience, obedience, loyalty, and order.

### **Value Theory**

The key to satisfaction in this approach is the difference between the aspects of the job one has and one wants. The bigger the difference, the lower people's satisfaction (Wibowo, 2007).

### **Equity Theory**

This theory consists of components of input, outcome and equity in equity. First, inputs are all values received by employees that can support work implementation, for example education, experience, skills, business, personal equipment and number of hours worked. Second, outcomes are all values obtained and felt by employees, for example wages, additional benefits, status symbols, reintroduction and opportunities for achievement or self-expression. Third, equity in equity where according to this theory employee satisfaction or dissatisfaction is the result of comparing his own input-outcomes with the input-outcomes of other employees (Mangkunegara in Hasibuan, 2015).

### **Two Factor Theory**

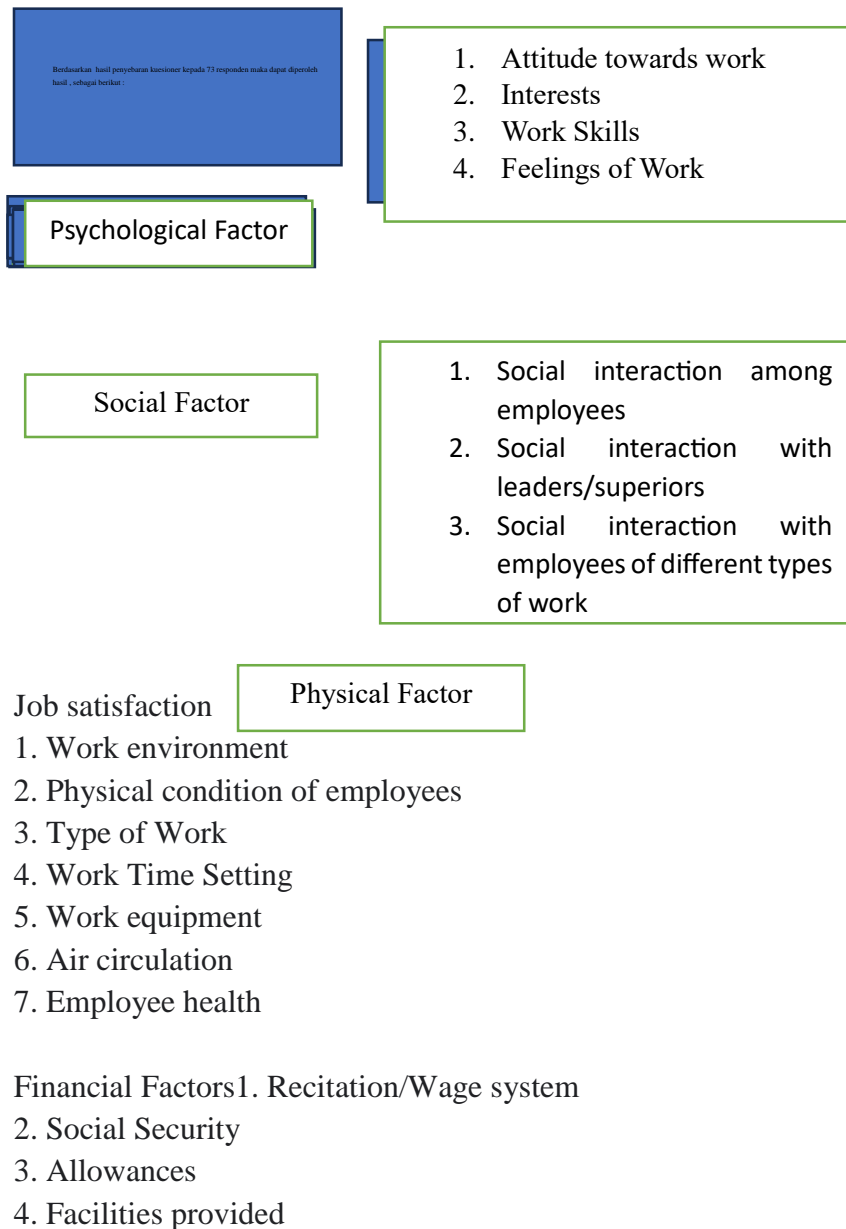
It is called the two-factor theory because it is divided into extrinsic and intrinsic factors. The two factors, namely: First, extrinsic factors, namely "job conditions" (job context) which cause dissatisfaction (dissatisfaction) if these conditions do not exist. These conditions are factors that make people feel dissatisfied. Factors that cause people to be satisfied or dissatisfied are: wages, job security, working conditions, status, company procedures, quality of technical supervision and quality of interpersonal relationships among colleagues, with superiors and with subordinates. Second, the intrinsic factor, namely "job satisfaction" (job content) which, when found in a job, will drive a strong level of motivation that can result in good job performance. If this condition does not exist, then this condition does not cause excessive dissatisfaction. This series of factors are called satisfiers or motivators which include achievement, recognition, responsibility, progress of the work itself and the possibility of growth (Herzbergh in Hasibuan 2015).

### **RESEARCH MODEL**

For a description of all the variables raised in this study, a research model framework can be created as shown in the following figure:

Figure 1. Research Framework

Source: Data processed by researchers (2022)



### Research Hypothesis Formulation

The hypotheses are prepared based on the theories and frameworks that have been described previously, so from the theories and frameworks several hypotheses can be compiled as follows:

1. There is an influence of psychological factors on the level of job satisfaction of medical laboratory technologists in Kupang during the Covid-19 pandemic
2. There is an Influence of Social Factors on the Level of Job Satisfaction of Medical Laboratory Technologists in Kupang City During the Covid-19 Pandemic
3. There is an Influence of Physical Factors on the Level of Job Satisfaction of Medical Laboratory Technologists in Kupang City During the Covid-19 Pandemic

4. There is an influence of financial factors on the level of job satisfaction of medical laboratory technologists in Kupang during the Covid-19 pandemic

**RESULTS AND DISCUSSION**

Characteristics of Respondents

**Age**

**Table 1 Characteristics of respondents based on age**

No	Age	Frequency	Percentage %
1.	23 - 25	27	36,99
2.	26 - 28	13	17,81
3.	29 - 31	11	15,07
4.	32- 34	17	32,29
5.	35-37	2	2,74
6	38 - 40	2	2,74
7	41- 43	1	1,37
Total		13	100

Source: Data processed in 2022

**1. Psychological Factors**

What is meant by psychological factors are factors related to the psychology of employees which include work, attitudes toward work, talents, and skills.

**Table 2 Frequency Distribution of Respondents' Answers on Psychological Factors (X1)**

Variable	Item	Response									
		SS	%	S	%	KS	%	TS	%	STS	%
Psychological Factors	X1.1	25	34.3	41	56,2	7	9,6	0	0	0	0
	X1.2	15	20,5	45	61,6	8	10,9	5	6,9	0	0
	X1.3	20	27,4	50	68,5	3	4,1	0	0	0	0
	X1.4	20	27,4	52	71,2	1	1,4	0	0	0	0

Based on the statement (X1.1), namely attitude towards work, it is known that the majority of respondents answered that they agreed, namely 41 people (56.2%) and the second highest number was the answer that strongly agreed with 25 people (34.3%), while the rest, namely respondents who answered disagree namely 7 people (9.6%), disagree and strongly disagree, that is, no respondents answered.



Statement (X1.2), namely Interest, the highest respondent's answer in the agree category is 4 people or equal to (61.6%), the two respondents in the category strongly agree are 15 people or (20.5%), while 8 people or ( 10.9%) chose the less agree category, the rest for answers with the disagree category as many as 5 people or (6.9%), and in the strongly disagree category no respondents chose. Statement (X1.3), namely work skills, it is known that most of the respondents answered agree, namely 50 people (68.5%) and the second highest number was the answer that strongly agreed 20 people (27.4%), while the rest, namely respondents answered disagree namely 3 people (4.1%), disagree and strongly disagree no respondents answered. respondents who choose. Statement (X1.4), namely feelings of work, it is known that the majority of respondents answered agree 52 people or (71.2%), the second order of the two categories of answers strongly agreed were 20 people or (27.4%), then the category disagreed was 1 person or (1.4%), for the disagree and strongly disagree categories, no respondents answered

**2. Social Factors**

Social Factors, are factors related to social interaction both among fellow employees, as well as with their superiors

**Table 3 Frequency Distribution of Respondents' Responses to Social Factors (X2)**

Variable	Item	Response									
		SS	%	S	%	KS	%	TS	%	STS	%
Social Factors	X2.1	15	20,5	57	78,1	1	1,4	0	0	0	0
	X2.2	4	5,5	63	86,3	2	2,7	4	5,5	0	0
	X2.3	7	9,6	64	87,7	2	2,7	0	0	0	0

Source: Processed Data (Questionnaire), 2022

Based on the statement (X2.1), namely social interaction among employees, it is known that the majority of respondents answered that they agreed, namely 57 people (78.1%) and the second highest number was the answer that strongly agreed, 15 people (20.5%), while the rest were respondents answered that they did not agree, namely 1 person (1.4%), did not agree and strongly disagreed, namely that no respondents answered. Statement (X1.2), namely social interaction with leaders / superiors, the highest respondent's answer is in the agree category as many as 63 people or (86.3%), the two respondents' answers in the very agree category are 4 people or (5.5%), while 2 people or (2.7%) chose the less agree category, the rest for answers with the disagree category were 4 people or (5.5%), and in the strongly disagree category no respondents chose. Statement (X2.3), namely social interaction with employees of different types of work, it is known that the majority of respondents answered that they agreed, namely 64 people (87.7%) and the second highest number was the answer that strongly agreed, 7 people (9.6%), while the rest, namely respondents who answered disagree, namely 2 people (2.7%), disagreed and strongly disagreed, none of the respondents answered. respondents who choose.

**3. Physical Factors**

Physical Factors, are factors related to the physical condition of employees, including the type of work, timing and rest periods,

**Table 4 Frequency Distribution of Respondents Answers Physical Factors (X2)**

Variable	Item	Response									
		SS	%	S	%	KS	%	TS	%	STS	%
Physical factors	X3.1	25	34,2	46	63,0	2	2,7	0	0	0	0
	X3.2	17	23,3	51	69,7	4	5,5	1	1,4	0	0
	X3.3	21	28,8	43	58,9	5	6,7	4	5,5	0	0
	X3.4	20	27,4	49	67,1	4	5,5	0	0	0	0
	X3.5	15	20,5	45	61,6	13	17,8	0	0	0	0
	X3.6	8	11,0	65	89,0	0	0	0	0	0	0
	X3.7	5	6,8	60	82,2	8	10,9	0	0	0	0

Source: Processed Data (Questionnaire), 2022

Based on table 5.3 above, the statement (X3.1), namely the Work Environment, the respondents answered agree, namely 46 people (63.0%) and the second highest number was the answer that strongly agreed, 25 people (34.2%), while the rest were respondents answered that they did not agree, namely 2 people (2.7%), did not agree and strongly disagreed, namely that no respondents answered. Statement (X3.2), namely the physical condition of employees, the highest respondent's answer in the agree category was 51 people or (69.7%), the two respondents in the category strongly agreed were 17 people or (23.3%), while 4 people or (5.5%) chose the less agree category, the rest for answers in the disagree category as many as 1 person or (1.4%), and in the strongly disagree category no respondents chose. Statement (X3.3), namely the type of work, it is known that most of the respondents answered agree, namely 43 people (58.9%) and the second highest number was the answer that strongly agreed, 21 people (28.8%), while the rest, namely respondents, answered disagree namely 5 people 6.8%), disagree as many as 4 people or (5.5%) and strongly disagree no respondents answered. Statement (X3.4), namely Working Time Arrangements, it is known that the highest category of respondents' answers is in the category of agreed answers as many as 49 respondents or (67.1%), the second highest in the category of answers strongly agree as many as 20 respondents or (27.4%) and the third category is disagree as many as 4 people or (5.5%), for the category disagree and strongly disagree no respondent has it. Statement (X3.5), namely Work Equipment, it can be seen that the respondent's answer is that the highest answer in the agree category is 45 respondents or (61.6%), the second is the answer category strongly agrees as many as 15 respondents or (20.5%), then there were 13 respondents who answered the disagree category or (17.8) and the strongly disagree category had no respondents. For statement (X3.6), namely Air Circulation, it is known that 65 respondents answered the agree category or (89.0%), in the second order the answers strongly agreed as many as 8 respondents or (11%), while for the two answer categories lastly no respondent chose the answer item. Statement (X3.7), namely Health of Employees/Employee, it is known that the answers of the most respondents are in the agree category as many people or (82.2%), the second most answer is in the category of strongly agree as many as 5 respondents or (6.8%) , then there were 8 respondents or (11%) in the disagree category, and for the disagree and very disagree categories there were no respondents who chose it.

Based on the table above, the results of the respondents' answers can be described that the respondents' answers strongly agree (SS) with a score of 5 totaling 83 or 28.4%, the respondents' answers agree (S) with a score of 4 totaling 189 or 64.7%, the respondents' answers did not agree (KS) with a score



of 3 totaling 15 or 5.1%, the respondents' answers did not agree with a score of 2 totaling 7 or 1.8%, while for the respondents' answers they strongly disagreed (STS) no respondents answered them.

**4. Financial Factors**

Financial Factors, are factors related to guarantees and employee welfare which include the system and the amount of salary, social security, various kinds of benefits, facilities provided, promotions, and so on

**Table 5 Frequency Distribution of Financial Factor Respondents Answers (X4)**

Variable	Item	Response									
		SS	%	S	%	KS	%	TS	%	STS	%
Financial Factors	X1.1	11	15,1	37	50,7	20	27,4	5	6,8	0	0
	X1.2	5	6,8	21	61,6	42	28,8	5	6,8	0	0
	X1.3	1	1,4	52	71,2	2	2,7	18	24,7	0	0
	X1.4	12	16,4	45	61,6	16	21,9	0	0	0	0

**Source: Processed Data (Questionnaire), 2022**

Berdasarkan pernyataan (X4.1) yaitu Sistem Pengajian/Upah, diketahui bahwa sebagian besar responden menjawab setuju yaitu 37 orang (50,7%) dan angka tertinggi kedua adalah jawaban sangat setuju 11 orang (15,1%), sedangkan sisanya yaitu responden menjawab kurang setuju yaitu 20 orang (27,4%), responden yang menjawab tidak setuju sebanyak 5 orang responden atau (6,8%), dan sangat tidak setuju tidak ada responden yang menjawab. Pernyataan (X4.2), yaitu Jaminan Sosial, jawaban responden tertinggi pada kategori setuju sebanyak 21 orang atau sebesar (61,6%), kedua jawaban responden kategori sangat setuju sebanyak 5 orang atau (6,8%), sedangkan 42 orang atau (28,8%) memilih kategori kurang setuju, sisanya untuk jawaban dengan kategori tidak setuju sebanyak 5 orang atau (6,8%), dan kategori sangat tidak setuju tidak ada responden yang memilih. Pernyataan (X4.3) yaitu Tunjangan, diketahui bahwa sebagian besar responden menjawab setuju yaitu 52 orang (71,2%) dan angka tertinggi kedua adalah jawaban sangat setuju 1 orang (1,4%), sedangkan sisanya yaitu responden menjawab kurang setuju yaitu 2 orang (2,7%), tidak setuju 18 orang responden atau (24,7%) dan sangat tidak setuju tidak ada responden yang menjawab.. Pernyataan (X4.4) yaitu Fasilitas yang diberikan, diketahui bahwa sebagian besar responden menjawab setuju 45 orang atau (61,6%), urutan ke dua kategori jawaban sangat setuju sebanyak 12 orang atau (16,4%), selanjutnya kategori kurang setuju sebanyak 16 orang atau (21,9%), untuk kategori sangat tidak setuju tidak ada responden yang menjawab

**5. Identification of any factors that influence the level of satisfaction of medical laboratory technology experts during the Covid 19 pandemic in Kupang City**

1. X1 = Attitude towards work
2. X2 = Interest
3. X3 = work skills
4. X4 = feeling of work
5. X5 = Social interaction among employees
6. X6 = Social interaction with leaders
7. X7 = Social interaction with employees of different types of work

- 8. X8 = Work environment
- 9. X9 = Physical condition of employees
- 10. X10 = Type of work
- 11. X11 = Working time setting
- 12. X12 = work equipment
- 13. X13 = Air circulation
- 14. X14 = Employee health
- 15. X15 = payroll system
- 16. X16 = social security
- 17. X17 = Allowances
- 18. X18 = Facilities provided

a. Variable Selection

Prior to analysis, variables need to be selected and selected. Furthermore, testing the feasibility of the variables is carried out by conducting validation and reliability tests on the previous variables. In this study to measure the value of validation and reliability, an initial sample of 73 was used with  $df = n-2$ , with a significance level of 0.05

**a1. Validation Test**

Validity test is needed in a study, especially those using questionnaires. In the data, the validity test is intended to determine the validity regarding the understanding between concepts and empirical reality. According to Umar (2003: 104), validity indicates the extent to which a measurement tool can measure what it wants to measure. According to Singarimbun and Effendi (1989:132), the way to test construct validity is by calculating the correlation between each question and the factor score using the (r) Product Moment correlation technique. Testing criteria to accept or reject the hypothesis with a valid question or not, can be done by: If the correlation coefficient obtained is 0.3610 and is significant, it can be stated that the instrument used is valid. In this study, the validity test was carried out by taking 73 respondents which can be seen in the attachment. And as presented in table 5.5, this is a validity test with 73 respondents or all the samples taken by the researcher.

**Table 6 Instrument Item Validity Test**

Variable	Item			Information
		R	Sign	
Psychological Factors (X1)	X1.1	0,877	0,000	Valid
	X1.2	0,631	0,000	valid
	X1.3	0,399	0,000	Valid
	X1.4	0,877	0,000	Valid
Social Factors (X2)	X2.1	0,877	0,000	Valid
	X2.2	0,815	0,000	Valid
	X2.3	0,645	0,000	Valid
	X3.1	0,452	0,000	Valid
	X3.2	0,319	0,000	Valid
	X3.3	0,603	0,000	Valid

Physical Factors (X3)	X3.4	0,037	0,791	Invalid
	X3.5	0,476	0,000	Valid
	X3.6	0,393	0,000	Valid
	X3.7	0,264	0,000	Valid
Financial Factors (X4)	X4.1	0,877	0,000	Valid
	X4.2	0,631	0,000	Valid
	X4.3	0,397	0,000	Valid
	X4.4	0,877	0,000	Valid

**Data Source: Processed Data (2022)**

Based on table 6 above, it can be seen that there is 1 invalid statement or instrument, namely the variable, X3.4, because the r is smaller than 0.195, while the variables X1.1, X1.2, X1.3, X1.4, X2.1, X2.2, X2.3, X3.1, X3.2, X3.3, X3.5, X3.6, X3.7, X4.1, X4.2, X4. 3 and X4.4. the statement items or research instruments are valid, because the R value generated by each item is greater than 0.195 with a significance value of 0.000, it can be concluded that the questionnaire used in this study is representative, thus the data measurement can be trusted.

**b. Reliability Test**

In this study, the Cronbach's alpha reliability test was used for each instrument for each variable. The instrument used in this variable is said to be reliable if it has an alpha > 60% or 0.60 (Lupiyoadi, 2001: 202). Where statistically the correlation number is compared with the critical value table correlation value. The following presents the results of the instrument item reliability

**Table 7 Statistical Reliability Testy**

**Reliability Statistics**

Cronbach's Alpha	N of Items
,659	18

Based on table 7 above, it is obtained that the Cronbach's Alpha coefficient is 0.659 which indicates a value greater than the value of 0.196 and shows that the 18 statement items are quite reliable or it can be said that the results of measuring these variables are reliable for use in further analysis, namely factor analysis

Attitude towards work Then these variables will be analyzed further to determine the adequacy of the correlation between the initial variables. This correlation can be seen in the correlation matrix between the initial variables. The statistical tests used are the Measure of Sampling Adequacy (MSA), the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and the Bartlett test of sphericity.

**1. Variable Interdependence Test**

The variable interdependence test is a test of whether the variables are related to each other or not. Where there is a possibility that more than two variables are correlated. The variables used for further analysis are only variables that have a correlation with other variables and variables that have almost no correlation

with other variables, then these variables will be excluded from the analysis. Tests were carried out by observing the sampling adequacy measure (MSA), KMO values and Bartlett test results

**a. Sampling Adequacy Test/Measures of Sampling Adequacy (MSA)**

The MSA value is an index that is owned by each variable to explain whether the sample taken in the study is sufficient to make the existing variables partially related to each other. Variables that have a small MSA value (<0.5) must be excluded from the analysis, because the minimum value that can be tolerated for adequacy of sampling is 0.5, which means that the minimum value of a variable is said to have a real contribution to the factors considered by the staff. the health of medical laboratory experts in the city of Kupang in fulfilling satisfaction is 50%. From the output results using SPSS version 21, the MSA value is obtained as follows:

**Table 8 Value of Measure of Sampling Adequacy (MSA)**

Item	MSA value
X1.1	0,781
X1.2	0708
X1.3	0,633
X1.4	0,790
X2.1	0,690
X2.3	0,759
X3.1	0,598
X3.3	0,565
X3.4	0,511
X3.5	0,614
X3.6	0,509
X4.1	0,711
X4.2	0,646
X4.3	0,701
X4.4	0,832

Based on the output of version 21, it can be seen that 15 items each have an MSA value of more than 0.5. So it can be concluded that the statement items in each variable are sufficient for further analysis.

**b. Kaiser-Meyer-Olkin (KMO) Value of Sampling Adequacy and Bartlett's**

The step taken after each initial variable to be included in the analysis is obtained, namely testing the adequacy of the sample through the Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy index and the Bartlett's Test of Sphericity significance value. This index is used to examine the accuracy of the use of factor analysis. If the KMO value is between 0.5 to 1 and the significance of Bartlett's Test of Sphericity is less than the significance level ( $\alpha$ ) used, it means that factor analysis is appropriate. From the output of SPSS 21, the KMO value was 0.0688 and the Bartlett's Test of Sphericity significance value was 0.000 so that it can be concluded that factor analysis is appropriate to use to simplify the collection of 15 statement items for each of these variables. The following is table 5.8 Results of KMO and Bartlett's Test of Sphericity.

**Tabel 9**  
**KMO and Bartlett's Test**

<i>Kaiser-Meyer-Olkin Measure of Sampling Adequacy.</i>		,688
<i>Bartlett's Test of Sphericity</i>	<i>Approx. Chi-Square of df</i>	474,667
	<i>Sig.</i>	153,000

**c. Factor Formation**

After the variables have been determined and selected and the correlation calculations have met the requirements for analysis, the next step is to form factors to find the structure that underlies the relationship between these initial variables. The method used in factor formation is the principal component analysis method. The two main steps in factor formation are the determination of the number of factors and the rotation of the factors formed.

**1. Determination of the number of factors**

The number of factors to be formed is determined by combining several criteria to get the number of factors that best fits the research data.

**Table 10 Total Variance Explained**

Factor	Intial Eigenvalues			Extracion Sum of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4,587	25,483	24,483	4,587	25,483	25,483
2	2,083	11,575	37,058	2,083	11,575	37,058
3	1,655	9,194	46,252	1,655	9,194	46,252
4	1,249	6,939	53,191	1,249	6,939	53,191
5	1,185	6,583	59,774	1,185	6,583	59,774
6	1,074	5,968	65,742	1,074	5,968	65,742
7	1,001	5,562	71,304	1,001	5,562	71,304

The first criterion used is the eigenvalue. Factors that have an eigenvalue of more than 1 will be retained and factors that have an eigenvalue of less than 1 will not be included in the model. Based on table 4.9 above, it is obtained that the eigenvalues are greater than 1 in the statement items for each factor item 1.1, 1.2, 1.3, 1.4, 2.1, 2.2, 3.2. With this criterion, it is obtained that the number of factors used is 2 factors, namely Psychological Factors and Social Factors.

The first criterion used is the eigenvalue. Factors that have an eigenvalue of more than 1 will be retained and factors that have an eigenvalue of less than 1 will not be included in the model. From the table above, it is obtained that the eigenvalues are greater than item 1 to item 7 of the factor statement. With this criterion, the number of factor items used is 7 factor items.

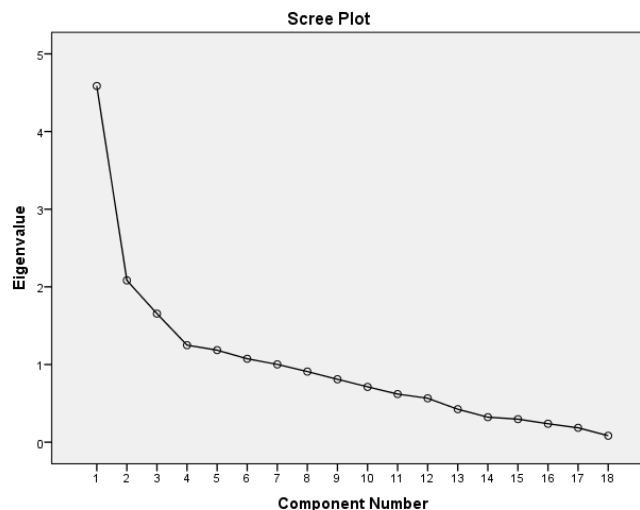
The second criterion is the determination based on the percentage value of the total variance which can be explained by the number of factors to be formed. From the table above it can be interpreted related to the cumulative total variance of the sample. If the variables are summarized into several factors, then the total value of the variance that can be explained is as follows:

- a. If the 15 items are extracted into 7 factor items, the total variance that can be explained is  $4.587 / 15 \times 100\% = 30.58\%$ .
- If the 15 variables are extracted into 7 factors, the total variance that can be explained is  $2.083 / 15 \times 100\% = 13.87\%$ ,
- If the 15 variables are extracted into 7 factor items, the total variance that can be explained is  $1.655 / 15 \times 100\% = 11.03\%$ ,
- If the 15 variables are extracted into 7 factor items, the total variation that can be explained is  $1.249 / 7 \times 100\% = 8.33\%$ ,
- If the 15 variables are extracted into 7 factor items, the total variance that can be explained is  $1.185 / 15 \times 100\% = 7.9\%$ ,
- If the 15 variables are extracted into 7 factor items, the total variance that can be explained is  $1.074 / 15 \times 100\% = 7.16\%$ ,
- If the 15 variables are extracted into 7 factor items, the total variance that can be explained is  $1.001 / 7 \times 100\% = 6.67\%$ ,
- and the cumulative total variance for 7 factor items is  $2.573\% \times 14.244\% = 66.817\%$

By extracting the initial variables into 7 factor items, a fairly large cumulative total variance was produced, namely 71.304%, meaning that the 7 factor items formed can already represent 15 items of health worker satisfaction variable which explains approximately 71.304% of health worker satisfaction. Thus the extraction of the 7 factors obtained can be stopped and meets the second criterion.

The third criterion is a determination based on scree plots. Scree plot is a plot of the eigenvalues of the number of factors extracted. The point at the place where scree begins to form indicates a number of precise factors. This point occurs when the scree starts to look flat. In Figure 5.1 it is known that the scree plot starts to flatten in the extraction of the initial variables into 7 factor items.

**Figure 1 Scree Plots**





Thus, from the three combinations above, it can be concluded that the most appropriate extraction of factor items is 7 factor items.

**2. Communality**

Communality is basically the amount of variance of a variable that can be explained by existing factors. More details can be seen in the following table: (Output with SPSS 21 )

**Tabel 11 Communalities**

	X1	X2	X3	X4	X5	X6	X7
<i>Initial</i>	1,000	1,000	1,000	1,000	1,000	1,000	1,000
<i>Extraction</i>	0,859	0,915	0,787	0,815	0,535	0,496	0,603

**3. component matrix**

Once it is known that 7 factors are the most optimal number, the component matrix table shows the distribution of the 7 item variables on the seven factor items formed while the numbers in the table are factor loadings, which show the correlation between a variable and factor items 1 to factor 7. The process of determining which variable will be included in which factor, is done by comparing the magnitude of the correlation of each line. More details can be seen in the following table: (Output with SPSS 21)

**Table 12 Component Matrix**

		X1	X2	X3	X4	X5	X6	X7
Factor	1	0,892	0,922	0,844	0,851	0,454	0,555	0,616
	2	-0,253	-0,256	-0,273	-0,301	0,574	0,434	0,473

**4. Rotation**

The purpose of the rotation process in the results of this study is to obtain factors with factor loading that are clear enough for interpretation. The rotation matrix component (rotated component matrix) is a correlation matrix that shows a clearer and more real distribution of variables than the component matrix. More details can be seen in the following table: (Output with SPSS 21)

**Tabel 13 Rotated Component Matrix**

		X1	X2	X3	X4	X5	X6	X7
Factor	1	0,887	0,913	0,857	0,879	0,071	0,231	0,261
	2	0,271	0,285	0,228	0,208	0,728	0,666	0,731

The results obtained indicate that the factor loading values between a variable and several factors have been sufficiently differentiated and are ready for interpretation. All variables have a high factor loading on one of the factors and have a fairly small factor loading on the other factors.

**1. Interpretation of Factor Analysis Results**

The next step is to determine the significance of factor loading values to determine the grouping of variables into the appropriate factors. According to experts in the multivariate field, a factor loading value of 0.55 is considered significant for a sample size of 100 respondents at a significance level = 0.05. Based on this, in the interpretation all factor loadings will be considered significant if the others are 0.55 or more. The following is a grouping of the initial variables into the 2 factors that have been formed.

Based on table 5.12 it can be seen that variable X1 has the highest factor loading value on factor 1, which is 0.887. According to the guidelines above, the value has been considered significant because it is greater than 0.55. While the value of factor loading with factor 2 is very small, so this variable is included in factor 1. Variable X2 has the highest factor loading value on factor 1, namely 0.913. According to the guidelines above, the value has been considered significant because it is greater than 0.55. While the value of factor loading with factor 2 is very small, so this variable is included in factor 1. Likewise in determining other variables.

For variable X3, it has a factor loading value of factor 2, which is 0.857. According to the guidelines above the value has been considered significant because it is greater than 0.55. For variable X4, it has a factor loading value of factor 2, each of which is 0.879. According to the guidelines above the value has been considered significant because it is greater than 0.55. For the X5 X3 variable, it has a factor loading value of factor 2, which is 0.071, less than 0.55. So this variable is not included in the grouping of variables into the formed factors. The following is table 5.13 the results of grouping variables into factors.

**Table 14 Results of Grouping Variables into Factors**

Faktor	Variabel
1	X1, X2, X3, X4
2	X5, X6, X7

## CONCLUSIONS AND RECOMMENDATIONS

### Conclusion

Based on the results of the research and discussion above, the conclusions that can be drawn on the level of satisfaction of health workers who are medical laboratory technology experts at each health agency in Kupang City during the Covid-19 pandemic can be summarized as follows:

1. Out of 18 sub-sets of variables (indicators can be reduced to 4 factors, namely Psychological Factors which consist of indicators of attitudes towards work (X1.2), interest (X1.2), work skills (X1.3) and feelings of work (X1. 4) The second factor is Social Factor which consists of sub-variables or empirical indicators: social interaction among employees (X2.1), social interaction with management (X2.2), and social interaction with employees of different types of work (X2.3). The third factor is physical factors consisting of sub-variables (empirical indicator of work environment X3.1), physical condition of employees (X3.2), type of work (X3.3), setting of working time (X3.4), work equipment (X3 .5), air circulation (X3.6), employee health (X3.7).The fourth factor is financial factors consisting of the payroll system (X4.1), social security (X4.2), benefits (X4.3) and facilities provided (X4.4)
2. Psychological factors and social factors that are most dominant have the opportunity to emerge from the job satisfaction of health workers who are medical laboratory technologists in Kupang City during the Covid 19 pandemic. According to Robbins (2007: 148) suggests that job satisfaction is a general attitude of an individual towards his work , demanding interaction with colleagues or superiors, following the rules and policies of the organization. Employees will feel satisfied if they can interact with fellow employees/bosses

### Suggestion

After drawing conclusions as described, the researcher provides suggestions that can be seen as follows:

1. Basically, human resources themselves work or do a job because they want to meet the needs of their lives or those of other people who are their responsibility. Therefore, health agencies should be able to provide and create good satisfaction in several aspects, one of which is the provision of commensurate and proper wages for ATLM health workers.
2. Health agencies in the City of Kupang must be able to improve the performance of leaders or superiors by paying attention to ways and attitudes in leading, and giving strict sanctions to any leaders who do not carry out their duties and responsibilities properly and correctly.
3. There are many health workers who are medical laboratory technology experts in Kupang City who do not receive Covid-19 incentives in a fair and equitable manner. Therefore, local governments should be able to give appreciation in a fair and equitable manner in terms of providing the established Covid-19 incentives

### BIBLIOGRAPHY

- a. Arikunto, Suharsimi, 2002. Research Procedures, A Practice Approach. Jakarta : PT. Rineka Cipta
2. Covid19.go.id. 2021. "Government Ensures Payment of Health Incentives for Health Workers to be Fast and Right on Target", <https://covid19.go.id/p/berita/government-pastikan-payment-insentif-nakes-cepat-dan-tepat-target>, accessed on 05 December 2021 at 21.30.
3. Ilyas, Y. 2017. Performance. Depok: University of Indonesia.
4. Kreitner and Kinicki. 2005. Organizational Behavior. Jakarta: Salemba Empat.
5. Mangkunegara, A.P. 2005. Company Human Resource Management PT. Rosdakarya youth. Bandung.
6. Indonesian Minister of Health. 2020. Decree of the Minister of Health concerning Providing Incentives and Death Benefits for Health Workers Handling Covid-19. Jakarta : Minister of Health of the Republic of Indonesia.
7. Nurbahar, Restyahana. 2015. Employee Job Satisfaction at PT. POS Indonesia (PERSERO) Kebumen Yogyakarta Branch. Yogyakarta: Yogyakarta State University.
8. Robbins SP. 2008. Organizational Behavior. Jakarta (ID): Prenhalindo.
9. Sedarmayanti. 2001. Human Resources and Work Productivity. Bandung: CV. Mander Forward.
10. Siadari, Coki. 2019. "Understanding Customer Satisfaction According to Experts", [https://www.kumpulanpengertian.com/2019/01/pengertian-kepuasan-customer-according to.html](https://www.kumpulanpengertian.com/2019/01/pengertian-kepuasan-customer-according-to.html) , accessed on 05 October 2021 at 00.45.
11. Soehardi Sigit, 1999, Introduction to Social Business Management Research Methods, First Edition, Likman Offset. Yogyakarta.
12. Sopiah. 2008. Human Resource Management. Jakarta: PT. Indonesian Ghalia. Sugiyono. (1997). Administration Research Methodology. Yogyakarta: CV Alfabeta. Sugiyono. (2011). Quantitative Qualitative Research Methods and R&D. Alfabeta. Sugiyono. (2018). Quantitative Research Methods, Qualitative, and R&D. Alfabeta. Unusa.2020. "The Role of Health Analyst for Corona Virus", <https://unusa.ac.id/peran-nalis-kesehatan-atasi-virus-corona/>, accessed December 5, 2021 at 01.47.
13. Wibowo. 2007. Performance Management. Jakarta: Rajawali Press.
14. Viyata, Bhakti. 2014. "Success to Become a Health Analyst", <https://iik.ac.id/blog/sukses-jadi-analis-kesehatan/>, accessed on 08 October 2021 at 00.34.