

CHAPTER I INTRODUCTION

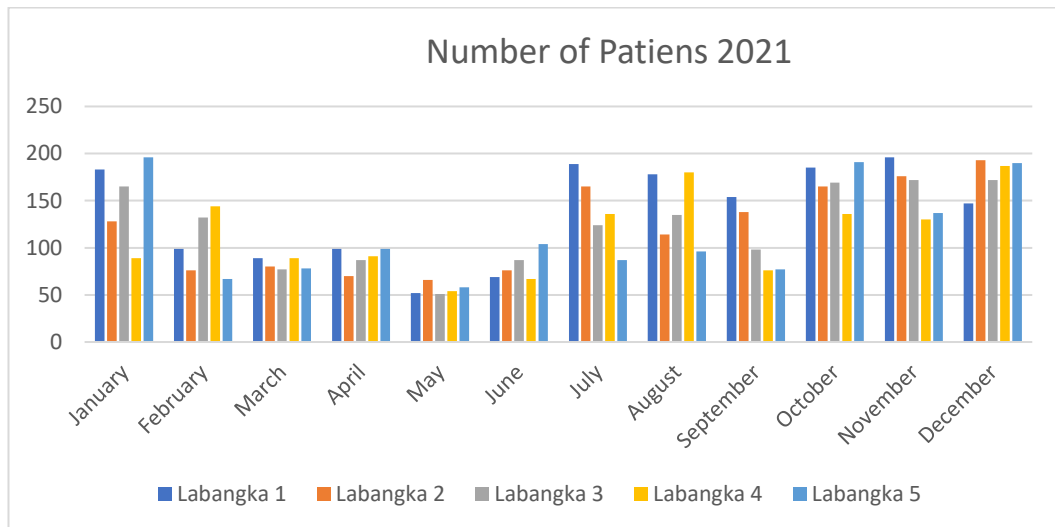
I.1 Background

Human resources are one of the most significant assets for the company. Some things affect the high and low productivity of work and the work activities carried out by someone in a company, one of which is workload. Company works standards have determined a person's workload following the type of work. If most employees work following company standards, then there is no problem. Conversely, the workload is too high if employees work below average. If an employee's work output is below standard, it could mean that the estimated bar is set higher or too high compared to the employee's abilities.

PUSKESMAS Labangka is a government-owned agency under the Ministry of Health, and this agency is engaged in public health and is located in Jalan. Lingkar Selatan Labangka IV, Labangka District, Sumbawa, NTB. Puskesmas is a government agency that is vital in providing health services to the community. PUSKESMAS must improve their performance in providing services to the community. These services must be practical and satisfying to the community so that they can be used as a basis for assessing the quality of service elements that still need to be improved and become the leading force for each service delivery unit to enhance the quality of its services. During the pandemic or COVID-19, the PUSKESMAS is one of the frontlines of the prevention and treatment of COVID-19.

Activities include hospitalization, Posyandu, mental health, health checks, dental health, and many other activities. This PUSKESMAS is supported by experienced experts who have the ability in their respective fields that make it possible to provide integrated services.

It can be seen in the graph below that the number of patients for PUSTU in 5 villages is as follows:



Picture I.1 Total number of patients in 5 villages

Picture I.1 shows that patients served from January to December at Pustu Labangka 4 and Pustu Labangka 3 was low. It can be seen that the accumulation of patients at Pustu Labangka 4 and PUSTU Labangka 3 caused the number of patients served by them to be relatively low. From interviews with some patients, they prefer to go to PUSKEMAS despite the distance because the staff at PUSTU handles patients rather long.

The service hours of the Puskesmas itself are from Monday - Saturday. If there is an emergency can go directly to the ER (Emergency Unit). Where you can see the working hours of the Puskesmas itself can be seen in the table below:

Table I. 1Puskesmas Service Hours

Puskesmas Labangka Service Hours	
Monday - Thursday	08:00 – 13:30 WITA
Friday	08:00 – 10:00 WITA
Saturday	08:00 – 12:00 WITA

And for Labangka PUSTU, the service hours are from Monday to Sunday, and in the event of an emergency, nurses and midwives are always on standby for twenty-four hours in the PUSTU because they are living in the PUSTU. You can see the working hours of the PUSTU on table I.2 below:

Table I. 2 PUSTU Service Hours

PUSTU Service Hours	
Monday - Sunday	08:00 – 20:00 WITA

Human resources at PUSKESMAS Labangka consider their employees as the most valuable asset, appreciate every contribution from employees both individually and in groups, and can do and apply professionalism to achieve the desired targets and good performance. The number of employees at the PUSKESMAS Labangka is 97, divided into 2, namely, 32 PNS and as many as 65 temporary contract employees.

Table I. 3 Number of employees at PUSKESMAS Labangka

No.	Tupoksi	Status of Employment	
		PNS	Contract
1	General Practitioner	2	1
2	Dentist	1	-
3	Midwife	8	22
4	Nurses	12	21
5	Dental Nurse	-	2
6	Nutrition	1	4
7	Environmental Health	1	0
8	Health Analyst	1	3
9	Medical Records	-	-
10	Pharmacist	1	2
11	Health prom	-	5
12	Guard Service	1	-
13	Administration	2	4
14	Driver	1	1
Total		31	65

Table I.3 shows the employees and the number of employees at the PUSKESMAS Labangka in 2021, where accepted employees were determined according to their previous majors, such as nurses, nutritionists, midwives, and others. And for civil servants, it has been selected by the Regional Government itself.

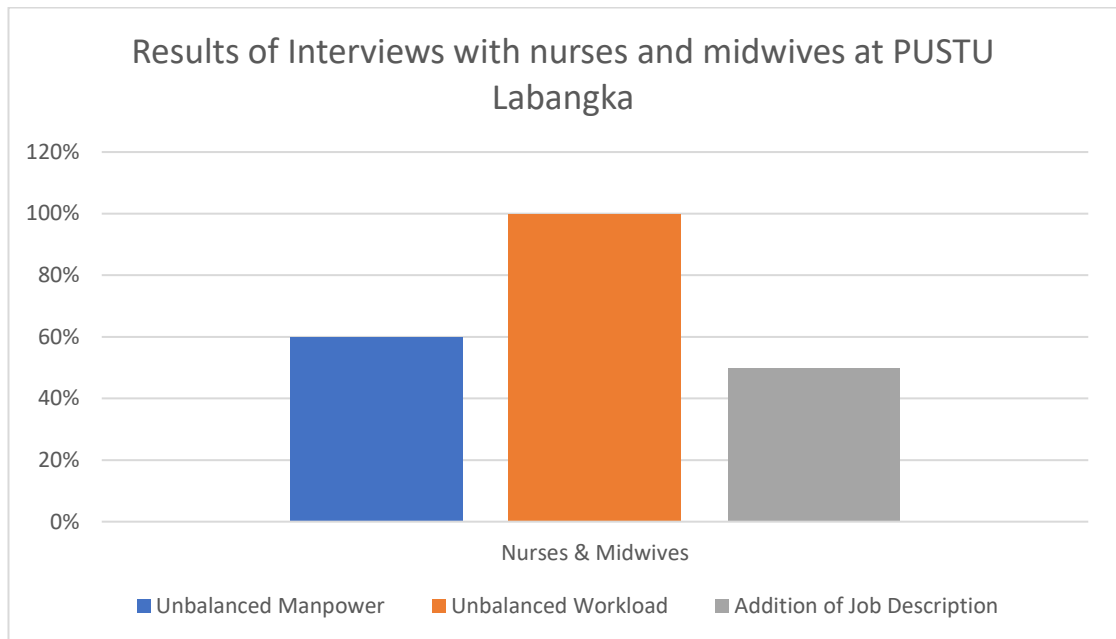
Table I. 4 Number of employees at PUSTU Labangka

Group	Name	Position	Total
A	Okto Prawira Wijaya Amd.Kep.	PUSTU Nurse	1
	Nuriyanti Amd.Keb.	Midwife	1
B	Maskanah Amd.Kep.	PUSTU Nurse	1
	Desi Ariyanti Amd.Keb.	Midwife	1
C	Rohani Amd.Kep.	PUSTU Nurse	1
	Dina Hasidanti Amd.Keb.	Midwife	1
D	Ns. Gede Enter S.Kep.	PUSTU Nurse	1
	Eni Rafitna Dewi Amd.Keb.	Midwife	1
E	Ns. Nurman S.Kep.	PUSTU Nurse	1
	Evi Nurindah Sari Amd.Keb.	Midwife	1

Table I.4 shows the employees and the number of employees at the PUSTU Labangka in 2021, where accepted employees were determined according to their previous majors, such as nurses and midwives.

According to the head of the Puskesmas, the Labangka Puskesmas is a Puskesmas in a remote area where this Puskesmas covers five villages, namely Labangka 1, Labangka 2, Labangka 3, Labangka 4, and Labangka 5 with a total area of 24,308 km² and with a population of 15,022 people. The number of controlled villages requires a considerable distance from one village to another, and the Puskesmas is located in Labangka 4, where Labangka 4 is the center of health workers. And in each village, there is a PUSTU (Puskesmas Pembantu) which is only given one midwife and one health nurse, which has an impact on employees who have difficulty controlling their workload and results in many of the patients having to go far away to the center, namely the Labangka Puskesmas, which takes quite a long time. Direct Interview, Head of Puskesmas, Rusli, October 26, 2021).

The Head of the Puskesmas said there was a shortage of employees at the Puskesmas, which impacted patients who had to seek treatment. This is based on the results of an interview conducted via telephone with the Head of the PUSKESMAS Labangka on October 26, 2021.



Picture I.2 Results of Interviews with nurses and midwives at PUSKESMAS Labangka

In the interview of nurses and midwives of PUSKESMAS Labangka. Picture I.2 there are three important points from the results of interviews conducted with ten nurses and midwives of PUSTU Labangka. It is known that there are 100% of people feel that the workload experienced is not balanced because of the surge in patients who come and the use of personal protective equipment that is used very much and in three hours, must take a breath outside the room, 50% of nurses who feel that there is an increase in the volume of work that makes the workload increase, and 60% others think that the workforce is still not suitable because of the surge in the number of patients, this indicates that the indicator used is a benchmark in doing a job with a workforce that is still lacking.

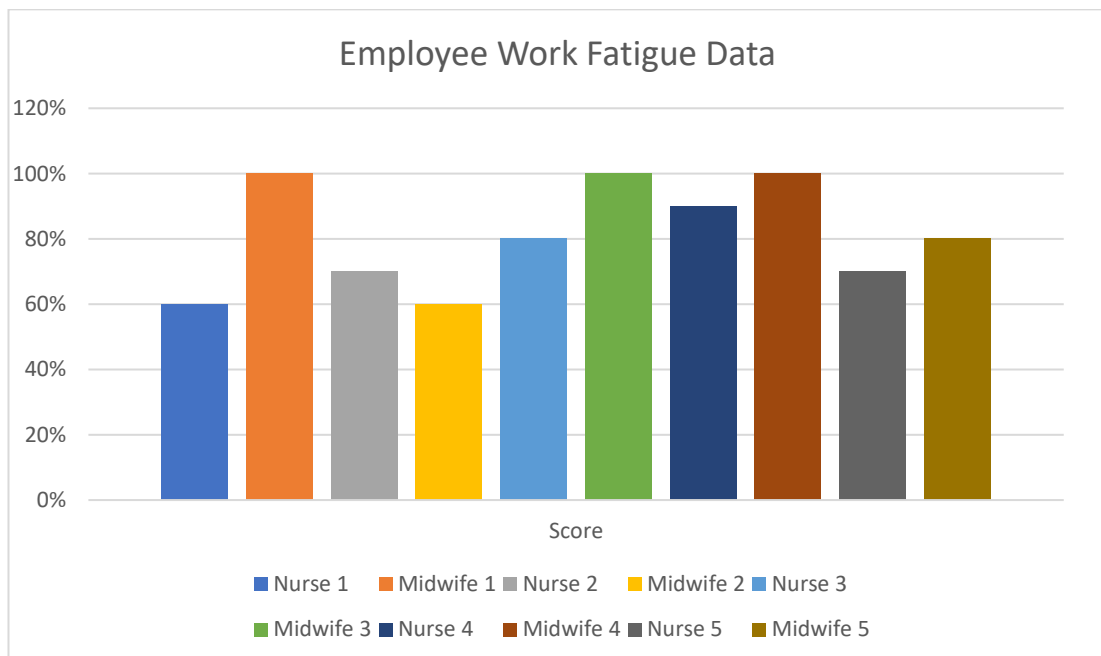
Table I. 5 variable symptoms experienced

No	Nurses and Midwives	Symptoms
1.	3	Three midwives experienced severe fatigue symptoms that caused them to miscarry or abort.

Table I. 5 variable symptoms experienced (continued)

No	Nurses and Midwives	Symptoms
2.	7	Three nurses and four midwives said they had experienced a shortage of rest for several months due to the increase in the number of patient visits in each village.

Table I.5 shows that three midwives experience very severe symptoms of fatigue which cause them to miscarry. Seven people experience a lack of rest due to an increase in the number of patient visits and lack of rest time. Due to the symptoms experienced by midwives and nurses that can be seen in table I.2, it is necessary further to identify the level of work fatigue in these PUSTUs. A preliminary study was made to identify job fatigue using an employee fatigue questionnaire. This questionnaire uses to get the value of job fatigue through the symptoms of fatigue felt by midwives and nurses.



Picture I.3 Employee work fatigue data

In Picture I.3, fatigue data, there are ten variables of nurses' and midwives' work fatigue. Very high, there are six nurse samples with a ratio of 60%. At a high level,

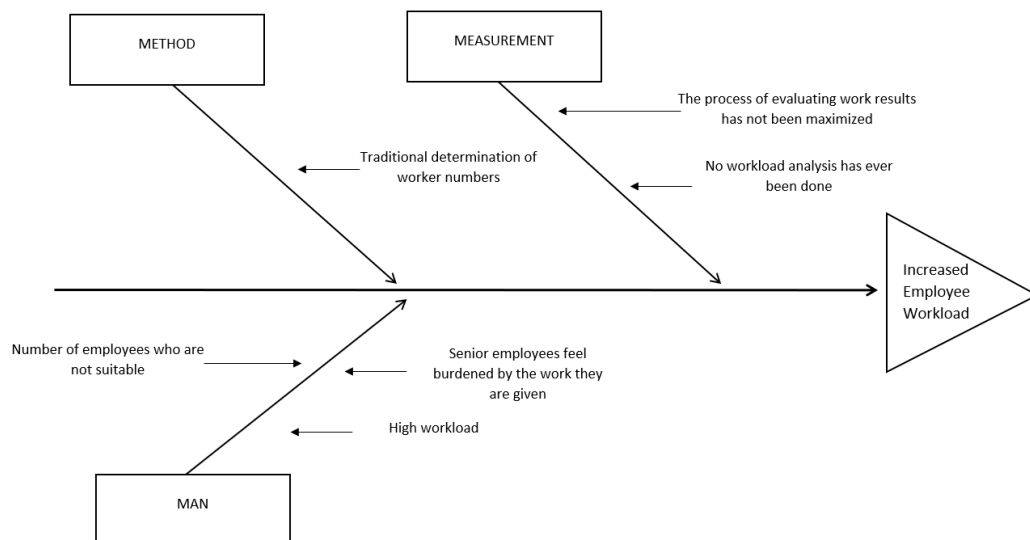
there were four nurse samples with a ratio of 40%. So, fatigue can be seen from the percentage of the results of the subjective self-rating test questionnaire above.

Table 1. 6 variable score data of employee work fatigue

Work Fatigue Variable	n	%
Very High	6	60
High	4	40
Average	0	0
Low	0	0

Table 1.6 above explains the variable scores in figure I.3 Work Fatigue Data, where the variable employee work fatigue is very high, where the percentage is 60%, and the average employee experiences very high work fatigue.

Some of the things mentioned above are the background of the current research, and the following is a fishbone diagram showing the causes of the problems that occur at the PUSTU Labangka can be seen in Picture I.4.:



Picture I.4 Fishbone Problems

Based on Picture I.4, the problems that occur at the PUSTU are as follows:

Table I. 7 Problem Fishbone Description

No	Aspects that affect	Factors
1	Man	The workload is too high and based on interviews. It is known that many employees cannot utilize work time effectively and tend to be unproductive due to a lack of supervision from superiors.
		The inappropriate and uneven number of workers causes many employees to complain about the high workload.
		Senior employees feel burdened by the work provided, such as if a patient who gives birth and handles it must be senior, and junior midwives sometimes do not have the courage to go directly to the birth.
2	Methods	Puskesmas still apply for job determination according to their field of expertise and many employees, such as midwives and nurses, are unemployed at Labangka puskesmas.
3	Measurements	The evaluation process carried out by the PUSTU staff is still not optimal in assessing employees.
		There has never been an analysis of the workload experienced by workers.

Seeing and reviewing the problems that occur and the factors that cause them, the issues that arise at the PUSTU, namely the uneven distribution of employees, cause an imbalance in workload between employees, can be seen from some of the factors above that cause it to happen. Therefore, it is necessary to analyze workload and calculate employee needs based on workload so that the number of employees needed for each PUSTU can be known.

Workload measurements can be divided into physical workload measurements and mental workload measurements. The results of physical workload measurements can be observed directly in the form of work results from a person. In contrast, the results of mental workload measurements cannot be observed directly. One method that can be used to measure mental workload is the NASA-TLX method, and physical workload is done using the Work Sampling method.

This research will be conducted using the NASA-TLX approach to determine how much mental workload affects. NASA-TLX is a multi-dimensional rating method that can measure the overall mental workload based on the average weight of 6 subscales, namely Mental Demands, Physical Demands, Temporal Demands, Own Performance, Effort, and Frustration (NASA Performance Research Group, 1988).

Work sampling is one of the approaches that can be used to measure employee productivity and can be used to determine the productive and unproductive activities of operators. In addition, Work sampling can also be used for discrete observations (Wignjosoebroto, 2008).

I.2 Alternative Solution

Based on identifying the root causes of the uneven distribution of employees causing an imbalance in workload between employees can be seen from the fishbone diagram, then an analysis of alternative solutions contained in the table for each root cause that occurs at PUSKESMAS Labangka.

Table I. 8 List of alternative solutions

No.	Root of the Problem	Potential Solution
1.	Traditional determination of the number of workers	• Design for evenly assigning workers
2.	Inappropriate number of employees.	• Designing optimal staffing requirements
3.	High workloads	

Table I. 8 List of alternative solutions (continued)

No.	Root of the Problem	Potential Solution
4.	Senior employees feel burdened by the work they are given.	Designing an even distribution of workload
5.	The process of evaluating work results has not been maximized	Design effective evaluation methods for employees
6.	There has never been an analysis of workload	Design of workload analysis for employees

After determining the solution to each root problem at PUSKESMAS Labangka, the percentage of causes of increased employee workload is obtained.

The table shows that the causal factors are obtained from the root causes of the problems that occur at PUSEKSMAS Labangka..

Table I. 9 Root cause percentage

Causes	Quarter				Total	Percentages
	1	2	3	4		
Traditional determination of the number of workers	3	2	3	3	11	18,3 %
Inappropriate number of employees and high workloads	7	5	5	6	23	38,3 %
Senior employees feel burdened by the work they are given.	3	3	3	4	13	21,7 %
The process of evaluating work results has not been maximized	1	1	2	1	5	8,3 %
There has never been an analysis of workload	2	3	2	1	8	13,3 %

The most significant percentage occurred in the man element, with a ratio of 38.3%. The problems in the man element are an inappropriate number of employees and the high workload. The man element was chosen because, after joint observation with PUSKESMAS Labangka employees, the man element has a

significant influence that will have a greater impact on the office, which provides the potential for designing improvements following this research. Human resources are an essential factor in an organization or company. So that a potential solution is obtained, namely designing optimal employee needs at PUSKESMAS Labangka.

I.3 Formulation of the Problem

The problem formulation in this research is as follows:

1. What is the mental workload condition experienced by employees at the PUSTU Desa processed based on the NASA-TLX and Work Sampling analysis methods?
2. What is the proposed ideal number of Nurses based on the mental load conditions at the PUSTU?

I.4 Final Project Objectives

The objectives of this research to be achieved are as follows:

1. Identify the results of mental work measurements experienced by PUSTU employees in the Village calculated using Work Sampling and NASA-TLX analysis methods.
2. Suggesting the ideal number of human resources requirements for each PUSTU in the village based on the results of the workload calculation.

1.5 Final Project Benefits

The benefits obtained from this research are as follows:

1. The workload received by employees is more evenly distributed so that the work system is more effective and efficient.
2. This study is expected to provide recommendations for determining the optimal workload for Nurses and Midwives at PUSTU PUSKESMAS Labangka.
3. The mental workload is more evenly distributed so that the work system is effective and efficient.
4. This research can provide a means of knowledge to readers and writers and can also provide references for other companies to conduct workload research on their employees.

1.6 Systematization of Report Writing

The systematics of writing in this study consists of several chapters, each of which discusses a different subject matter as follows:

CHAPTER I Introduction

CHAPTER I discusses literature regarding the background of the research, problem formulation, research objectives, research discussion, research benefits, and writing systematics.

CHAPTER II Literature Review

CHAPTER II contains a discussion of the literature that is relevant to the problem under study.

CHAPTER III Research Methodology

CHAPTER III describes the research steps in detail, including formulating research problems, formulating hypotheses, developing research models, identifying and operationalizing research variables, compiling research questionnaires, designing data collection and processing, conducting instrument tests, and designing data processing analysis.

CHAPTER IV Data Collection and Processing

CHAPTER IV presents data processing from data collection conducted for this study. The existing data is then processed so that the output data is obtained from the data that has been collected.

CHAPTER V Analysis

CHAPTER V describes the analysis of data collection and processing results from the previous chapters. It also explains the discussion about analyzing data processing results so that conclusions can be obtained.

CHAPTER VI Conclusions and Suggestions

CHAPTER VI explains the conclusions obtained from the research that has been done. Here are also outlined suggestions that are useful for future research development.