

Analysis Midwife Workload with Nasa-TLX Method

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Abstract

Background: Results of preliminary studies conducted at the Health Community Centers in the city of Surabaya regarding duties and responsibilities as a midwife, showed that midwives had overlapping duties and responsibilities because midwives did not only handle maternal and child problems as their main duties and functions, but midwives also carried out all activities. This is due to the limited personnel owned by the Community Health Centers so that it can affect the workload of midwives because in addition to exercising their authority the midwife also carries out other tasks. Based on the above problems and remembering the duties and functions of midwives as maternal and child health providers, it is important to conduct research on midwife workload analysis in carrying out their authority in the working area of Surabaya Inpatient Health Centers.

Method: This study has a cross-sectional quantitative research design. In this study using 2 variables (exogenous), namely Midwife Work Performance and Midwife Performance or Productivity. In this study, the endogenous variables are the quality of midwife services in the Surabaya Inpatient Health Center. The population used in this study were all implementing midwives, who provided services in 10 inpatient health centers in Surabaya.

Results and Analysis: Pearson correlation test results indicate there is a significant relationship between workload and performance ($p = 0.000$) and there is a significant relationship between workload and service quality ($p = 0.000$).

Discussion and Conclusion: In order to avoid work fatigue, it is necessary to rearrange work shifts in accordance with the rules and conditions of work shift provisions in maternity inpatient units, the determination of clear rest hours, when service hours can be accompanied by work music and additional labor reduce workload, as well as the division of workload according to ability and routinely carry out refreshing to reduce saturation.

Keywords: *Workload, Performance and Service Quality.*

Introduction

The minister of Health Stated that one of the main targets. Health development contained in Medium Term Development Plan 2015- 2019 is increasing access and quality of basic health services and referrals especially in the small region, disadvantaged and border areas. This makes facilities role of the first instance as the spearhead of Indonesian health service. Therefore, improving the quality of health service in Indonesia especially in facilities role of an instance is something that can't be delayed anymore. Facilities role of first in instance National Health Insurance acts as a get keeper (goalkeeper). Minister of healths said facilities role

of the instance itself is one of the Community Health Centers.

Based on the above problems and the tasks carried out as maternal and child health care providers, a study of the analysis of workload was carried out in carrying out tasks in the work area of the Surabaya Inpatient Health Center.

Material and Method

This study has a cross-sectional quantitative research design. In this study using 2 causative variables (exogenous), namely Midwife's Workload and

Midwife's Performance or Productivity. In this study, the resulting (endogenous) variable was the quality of midwife services at the Surabaya City Inpatient Health Center. The population used in this study were all implementing Midwives, who provided services in 10 Surabaya Inpatient Health Centers which at the time of this research was proposed 100 people while the sampling technique was using simple random techniques

sampling. The analysis in this study used Pearson's correlation test.

Findings: Respondents in this study were midwives who served in the Surabaya City Inpatient Health Center. In this study the characteristics of the respondents were seen from the age of the midwife, length of service and level of education.

Table 1: Distribution of objective workload levels for midwives in surabaya city inpatient health centers

Health Center	Productive Time		% Productive	Time
	For 3 working days (Minutes)	For 1 working day (Minutes)	Time 1 day Work (from standard time)	Level
A	1178	392,67	93,49	High
B	1181	393,67	93,72	High
C	1161	387	92,14	High
D	1168	389,33	92,69	High
E	1167	389	92,61	High
F	1206	402	95,71	High
G	1170	390	92,85	High
H	1198	399,33	95,07	High
I	1165	388,33	92,45	High
J	1172	390,66	93,01	High
Total	11766	3921,99		
Average	1176,6	392,199	93,38	High

Table 2: The frequency of Workload Distribution

No.	Indicator	Category	Frequency	
			Σ	%
1.	Time Demands	Heavy	82	82
		Medium	12	12
		Light	6	6
2.	Physical Demands	Heavy	38	38
		Medium	35	35
		Light	27	27
3.	Performance Demands	Heavy	40	40
		Medium	32	32
		Light	28	28
4.	Mental Weight Levels	Heavy	48	48
		Medium	26	26
		Light	26	26
5.	Frustration Levels	Heavy	29	29
		Medium	48	48
		Light	23	23
6.	Business Levels	Heavy	78	78
		Medium	12	12
		Light	10	10

Based on table 1 it can be seen that all the percentage of productive time > 80% with the smallest percentage of productive time is 92,14% and the largest productive time is 95,71%. Based on table 2. The average percentage of work time for village midwives used for productive activities is also > 80%, which is 93,38% of the total work time in the work area of the Health Center in Surabaya, which indicates that the performance level of midwives in the work area Surabaya city health center is categorized as high.

Based on Table 2. Visible frequency distribution of Workload according to NASA-TLX calculations there are 6 dimensions (mental demands, physical demands,

time demands, effort demands, frustrating demands, performance demands) from the dimensions of mental demands, physical demands, time demands, business demands and the level of performance describes the weight of the category, while the level of frustration in the category is moderate.

The majority of respondents as much as 59% were satisfied with services at the health center and as many as 41% said they were quite satisfied with the services provided in the City Health Center Surabaya.

Based on the results of the Pearson correlation test analysis between the performance of midwives and midwives workload, the results were obtained:

Table 3. The relationship between Midwife and Performance Workloads

Variable	Mean	Median	SD	Minimum-Maximum	95% Confidence Interval (CI)	p-Value
Workload	395,36	394	53,61	275-536	384,142 – 406,578	0.000
Performance	81,8	80,5	17,645	41-128	78,11 – 85,49	

Based on the Table. 3 it can be seen the results of the Pearson Correlation test there is a significant relationship between midwife workload and performance ($p = 0,000$).

Based on the results of the Pearson correlation test analysis between midwife's workload and midwife's service quality, results were obtained:

Table 4. The relationship between Midwife's Workload and Service Quality

Variable	Mean	Median	SD	Minimum-Maximum	95% CI	p-Value
Workload	395,36	394	53,61	275-536	384,142 – 406,578	0.000
Quality	132,16	131,5	17,639	93-179	128,47 – 135,85	

Based on the Table. 4, it can be seen that the results of the Pearson correlation test, there is a significant relationship between workload and service quality of midwives in the Surabaya City Health Center. ($p=0.000$).

The model of system development and clinical performance management (SPMCK) for midwives, starts from the smallest element in the organization, namely at the level of "First Line Manager", because productivity (services) is directly in the hands of individuals in teamwork.²

The measurement of mental workload in this study used the NASA-TLX questionnaire which consisted of 6 dimensions namely mental demands, physical demands,

time demands (temporal demand), performance (own performance), effort level and the level of frustration that will form the average WWL (subjective workload) of a person. Overall, it can be seen that the dimensions of time demands, level of effort and mental demands. is the highest dimension of the WWL average. This is that the dimensions that most often contribute to the magnitude of the WWL index are the level of effort, mental demands and physical demands. Based on the results of the study, the most contributing to the WWL index of midwives in the Surabaya City Health Center is the dimension of time demands. Time demands are the amount of pressure time felt during doing work. The results of this study indicate that midwives at the Surabaya City Inpatient

Health Center carry out their work quickly and tiring. The time demands at the Health Center are related to the accuracy and alertness in providing midwifery services. Limited service time with a large number of patients requires midwives to work quickly. This is in line with the results of research by Widayati et al, stating that the implementation of officers in providing services is influenced by the number of patients served. Midwives must be able to divide the time for all patients so that there is little time for each client.⁸ Whereas the time demands on maternity inpatient units are in the form of alertness in assisting labor because it relates to the lives of patients both mothers and their babies. Jobs that require time that add to the burden are administrative tasks. Administrative tasks in the form of records and reporting that must be completed every day so that each month can be collected to the relevant agencies on time in accordance with the provisions.

The results of the study which showed the highest score for the two were the level of effort. The level of effort in the work as a midwife is the amount of effort that must be spent both physically and mentally to complete the work. One of the levels of effort shown in the service at the mothers and children health. While the level of effort in the maternity care unit is to remain ready to provide midwifery services, especially labor at any time for 24 hours according to the work shift. The last dimension with the highest score is mental demands. In his work, the mental demands of the profession as a midwife are the amount of mental and perceptual activity needed in midwifery service work. A midwife is required to be always physically and psychologically prepared and has a high level of precision, patience and responsiveness in handling patients because of her work that involves a person's life.¹⁰ Mental demands based on identification results in midwives are at the time of the patient's history. Midwives try to dig up information to assess and determine the diagnosis by being proven through the results of a physical examination. The mental burden of additional midwives at the mothers and children health' policy is to evaluate the MCH program, which is almost all run by the mothers and children health' polyclinic Policewomen. Good mental preparation will provide calm in carrying out actions and decision making.

In this study, the frustration level of midwives obtaining a low score can be due to the working period of midwives at the Community Health Centers is 8 years. The working period proves that some respondents

have had a lot of experience in the field of midwifery care, so they are able and have their own coping mechanism in overcoming problems that arise in their work.⁵ Work period can significantly improve employee performance^[1]. The longer working period will affect the quality of work which leads to improvement in the performance of an employee. Mental workload is closely related to performance, the appropriate mental workload will produce optimal performance.⁹

The results of the identification of subjective assessments of physical workload that dominate the maternity inpatient unit in the delivery service. Midwives have a double burden to save the lives of mothers and their babies. Therefore in the process of childbirth requires a good physical condition.

The last dimension that gets the lowest score is Performance. Performance is satisfaction felt by midwives on midwifery services that have been given. Satisfaction will be obtained if the aspects of work and aspects support. According to the results of Martini's research⁴, performance is influenced by the workload.

The average length of work of respondents as midwives is 8,4 years. This means that on average midwives have carried out their duties as midwives over 3 years. Of course, during this period, midwives have had various experiences that make them more trained to face various obstacles or obstacles both from the patient and from the conditions of work. Duration of work is related to experience because with a long working experience, of course, the midwife has learned a lot through various failures and successes in carrying out her duties to provide services, according to the results of Priyadi.⁶ The level of a workload from midwives is grouped into 3 (three), namely mild, moderate and severe. The Workload is included in the heavy category if the average value of workload is > 80, moderate if the average workload is between 50-80 and is mild if the average workload is <50. In this study, the workload was measured using NASA TLX instruments because the questionnaire was the most reliable and valid questionnaire for measuring workloads and could be used in accordance with health services.³

The workload with the heavy level felt by most respondents can be due to the existence of multiple assignments in the Community Health Centers. As a result of a direct interview with one of the midwives who stated that outside of his role as a midwife also held

other roles such as the treasurer of one of the programs. Meanwhile, as midwives in the Community Health Centers, they have actually faced the demands of their own work. As the results of interviews with midwives stated that they often faced dilemmas when there were patients who needed counseling assistance but at the same time were also required to complete reports or attend meetings or activities outside the Community Health Centers. All of these conditions cause midwives to often complain of difficulties in managing time and become unable to carry out all their tasks to the maximum.⁷

In this study, a good performance was shown by some midwives who had not too heavy workloads, while a heavy workload made the midwives work poorly because of overload. This was consistent with the calculation of Pearson's correlation test that there was a significant relationship between midwife's workload and performance midwife.

Good performance can be influenced by various factors such as the commitment of each midwife and then signed by all employees in the Surabaya City Health Center to do their job well. This is consistent with Greenberg's explanation that organizational commitment is needed as one of the indicators of employee performance because employees who have high commitment can be expected to show optimal performance.⁴

Conclusion

On average, midwives who were respondents were 32,3 years old, 80% of midwives were last educated Associate's Degree in Midwifery, on average midwives had a tenure of 8,4 years in the Health Center. In this study, there was a significant relationship between midwife's workload and midwife's performance and there was a significant relationship between midwife's workload and service quality. This shows that in order to avoid work fatigue, it is necessary to rearrange work shifts in accordance with the rules and conditions of work shift provisions in maternity inpatient units, the determination of clear rest hours, when service hours can be accompanied by work music and additional labor reduce workload, as well as the division of workload according to ability and routinely carry out refreshing to reduce saturation.

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