Analysis of Workload and Ward Nurse Staffing Needs Using the Workload Indicator Staffing Need (WISN) Method on Anxiety Levels Using the Hamilton Anxiety Rating Scale (HARS)

by Journal Cek Plagiasi

Submission date: 16-Jul-2023 01:21PM (UTC-0400)
Submission ID: 2131910882
File name: M_AL_Razi_Lubis__sf_template_ok.docx (130.83K)
Word count: 9823
Character count: 50182

DOI: http://dx.doi.org/10.33846/sf00000

Analysis of Workload and Ward Nurse Staffing Needs Using the Workload Indicator Staffing Need (WISN) Method on Anxiety Levels Using the Hamilton Anxiety Rating Scale (HARS)

M AL Razi Lubis
Faculty of Medicine, Dentistry and Health Sciences, Universitas Prima Indonesia; razilbs@gmail.com
Chrismis Novalinsa Ginting
Faculty of Medicine, Dentistry and Health Sciences, Universitas Prima Indonesia; account@mailanda.com (correspondence email)
Sri Wahyuni
Faculty of Medicine, Dentistry and Health Sciences, Universitas Prima Indonesia; email@anda.com

ABSTRACT

The purpose of this study is to analyze of workload and ward nurse staffing needs using the workload indicator staffing need (WISN) method on anxiety levels using the hamilton anxiety rating scale (HARS). This type of research was carried out using the analytic observational method. This research was conducted at RSU Royal Prima Medan, which is located at Jl. Ayahanda No. 68A, Sei Putih Tengah, Kec. Medan Petisah, Medan City, North Sumatra 20118. Sampling in this study involved a total sampling of 50 nurses working on the 11th, 12th and 15th floors. Data collection techniques were divided into two parts, namely based on primary data sources and secondary data. Data analysis techniques employed data reduction, data presentation, drawing conclusions, and verification. Research results show that verall nurse workload on the morning shift is 4505 minutes, consisting of 741 minutes (16.4%) for direct nursing care, 3550 minutes (78.8%) for indirect nursing, 174 minutes (3.8%) for personal activities, and 40 minutes (0.8%) for non-productive activities. The overall workload for nurses during afternoon shift is 4992 minutes, with 817 minutes (16.3%) for direct nursing, 4025 minutes (80.6%) for indirect nursing, 127 minutes (2.5%) for personal activities, and 23 minutes (0.4%) for non-productive activities. The overall workload nurses during night shift is 6467 minutes, consisting of 780 minutes (12.0%) for direct nursing, 3745 minutes (57.9%) for indirect nursing, 167 minutes (2.5%) for personal activities, and 1775 minutes (27.4%) for non-productive activities. The workload indicator staff need Workload Indicator Staff Need (WISN) method determines the staffing requirements for the ward/room. The average number of working days used by nurses is 6 days per week, with 1 day off.

Keywords *: Anxiety Levels; Hamilton Anxiety Rating Scale; Nurse; Workload Indicator Staffing Need*

ABSTRAK

Tujuan penelitian ini adalah menganalisis beban kerja dan kebutuhan penempatan staf perawat bangsal menggunakan metode workload indicator staffing need (WISN) terhadap tingkat kecemasan dengan menggunakan hamilton anxiety rating scale (HARS). Jenis penelitian ini dilakukan dengan menggunakan metode observasi analitik. Penelitian ini dilakukan di RSU Royal Prima Medan yang beralamat di Jl. Ayahanda No. 68A, Sei Putih Tengah, Kec. Medan Petisah, Kota Medan, Sumatera Utara 20118. Pengambilan sampel dalam penelitian ini melibatkan total sampling sebanyak 50 orang perawat yang bekerja di lantai 11, 12 dan 15. Teknik pengumpulan data dibagi menjadi dua bagian, yaitu berdasarkan sumber data primer dan data sekunder. Teknik analisis data menggunakan reduksi data, penyajian data, penarikan kesimpulan, dan verifikasi. Hasil penelitian menunjukkan bahwa beban kerja perawat verall pada shift pagi adalah 4505 menit, terdiri dari 741 menit (16,4%) untuk asuhan keperawatan langsung, 3550 menit (78,8%) untuk keperawatan tidak langsung, 174 menit (3,8%) untuk aktivitas personal, dan 40 menit (0,8%) untuk kegiatan non produktif. Beban kerja perawat secara keseluruhan pada shift siang adalah 4992 menit, dengan rincian 817 menit (16,3%) untuk keperawatan langsung, 4025 menit (80,6%) untuk keperawatan tidak langsung, 127 menit (2,5%) untuk aktivitas personal, dan 23 menit (0,4%). untuk kegiatan non produktif. Beban kerja perawat secara keseluruhan pada shift malam adalah 6467 menit, terdiri dari 780 menit (12,0%) untuk keperawatan langsung, 3745 menit (57,9%) untuk keperawatan tidak langsung, 167 menit (2,5%) untuk aktivitas personal, dan 1775 menit (27,4%). untuk kegiatan non produktif. Indikator beban kerja kebutuhan staf Indikator Kebutuhan Staf Indikator Beban Kerja (WISN) metode menentukan kebutuhan staf untuk bangsal/ruangan. Rata-rata jumlah hari kerja yang digunakan perawat adalah 6 hari per minggu, dengan 1 hari libur.

Keywords: Tingkat Kecemasan; Skala Peringkat Kecemasan Hamilton; Perawat; Indikator Beban Kerja

INTRODUCTION

The hospital is a unique and complex form of organization, with specific characteristics and functions, as it involves various kinds of professions to deliver medical services (Hertin & Al-Sanjary, 2018; K.Nishanthan et al., 2022; Wardhani et al., 2019). Therefore, in its development, both science and technology must be able to consider various aspects that can influence the organization in providing health services (Tandi, 2017). The excellent quality of hospital service marks the success of hospitals in carrying out its functions. The quality of hospital services is influenced by several factors, with the most dominant factors is Human Resources. Besides, the improvement of hospital service quality is influenced by Human Resources (Cucu et al., 2019).

Human resources in hospitals are adjusted based on the type of hospital and the services provided to the community. One indicator of the success of an effective and efficient hospital is the availability of adequate, high-quality, and professional human resources in accordance with the functions and duties of each personnel (Soesanto & Ersyad, 2019). Health workers who have the most frequent contact with patients are nurses. Nurses are the officers or staff members who have the longest contact with patients, 24 hours. One of the important aspects in achieving quality nursing service or nursing care is the availability of nursing staff according to the situation and needs, both in quantity and quality. Patient care in the ward requires nurses with the knowledge and skills to apply the nursing process by using critical thinking, providing health education to patients, coordinating health services and making discharge plans, and carrying out various types of therapy (Cucu et al., 2019).

Planning for nursing staff becomes still a problem in various hospitals. These problems include a need for numbers, types of staff, competencies (knowledge, skills, attitudes, and values), and weak hospital funding capabilities, making they cannot meet and maintain existing resources (Macphee et al., 2017; Soesanto & Ersyad, 2019). Nurse Human Resources need to be considered in terms of the quality and quantity needed by hospitals or other health facilities as nursing care provides nursing care services for 24 hours. Therefore, it is necessary to note the number of nurses based on workload (Jameson et al., 2018; Riklikiene et al., 2020; Tubbs-Cooley et al., 2019).

According to *Permendagri* Number 12/2008, workload refers to the amount or weight of a job that must be carried out by someone in a position or organizational unit, which is the product of work time and work volume. It is necessary to know the workload of nurses, which aims to determine the quantity and quality of the required nursing staff so that inappropriate workloads do not occur, which ultimately impact nurses' work stress and patient safety. The high workload on nurses can have an impact on decreasing the work productivity of nurses so that it can threaten patient safety. If the number of nurses is more than the number needed in a hospital, it can also have an impact in terms of the hospital's finances. It can affect the service quality because the use of time is unproductive and the division of nursing tasks is not balanced (Shivam et al., 2019).

Planning for nursing staff requires several methods to measure the number of nursing staff required. According to the Decree of the Minister of Health of the Republic of Indonesia Number 81/*Menkes*/SK/I/2004, one of the methods developed by the Ministry of Health to calculate the need for hospital staff is the Workload Indicators of Staffing Need (WISN) method.

The ease of operation, use, application, comprehensiveness, and realistic are all advantages of the WISN method. The WISN method is able to identify work units and their human resource categories, available working time for each human resource category, workload standards, allowance standards, quantity of main activities and determine the human resource needs of the work unit. The WISN method needs to improve, which is very dependent on the accuracy and completeness of data related to workload (Soesanto & Ersyad, 2019).

In this study, the burden of nurses was assessed by the level of anxiety using the Hamilton Anxiety Rating Scale (HARS). Max Hamilton first introduced its instrument in 1959 (Vivin, 2019). The HARS questionnaire has a validity value with a range of r 0.39-0.79 and a Cronbach Alpha value of 0.948 (Hamdiah et al., 2017). HARS means an anxiety instrument that is measured/assessed based on symptoms experienced, which includes 14 items, each categorized based on a set of symptoms, and measures mental agitation and psychological distress, as well as physical complaints related to anxiety. Responses to the scale were measured on a 5-point Likert scale: 0 (no symptoms), 1 (mild), 2 (moderate), 3 (severe) and 4 (very severe). The overall score is calculated by the sum of the 14 items (Hallit et al., 2020). The advantage of the HARS instrument is that it examines in detail about the disturbances in each system in the body of a person experiencing anxiety. However, the drawback of this instrument is that feelings of anxiety are included in the aspects of the instrument to be studied (Vivin, 2019).

This research was then be carried out at the Royal Prima Medan General Hospital where in the pre-survey conducted by researchers through direct observation at the hospital who wanted to find out the adequacy of nurses with the number of patients available. According to the data, it was found that the nurse adequacy ratio at the Royal Prima Medan General Hospital was still able to treat patients in the Royal Prima Medan General Hospital units because the number of patients is still not too many and the level of dependence of patients on nurses is still low. If the number of patients who come at the same time and have a high level of dependence on nurses, the installation in units will experience a high workload. Based on this phenomenon, the researchers are interested in determining the type of nursing staff calculation at RSU Royal Prima Medan which is more appropriate when the number of patients being treated is large, and in the end of the service quality provided to patients will increase.

On this problem, an analysis of the real needs of nurses in the unit was carried out by conducting an assessment of the needs of staff based on real workloads.

From the description of the background above and the results of previous research, this study aimed to analyze the workload and needs of room nurses using the Workload Indicator Staffing Need (WISN) method for anxiety levels through the Hamilton Anxiety Rating Scale (HARS).

METHOD

This type of research was carried out using the analytic observational method of the Workload Indicator Staffing Need (WISN) method (Notoatmodjo, 2019). The research was analyzed using a cross-sectional approach (cross-sectional) (Notoatmodjo, 2019). This research was conducted at RSU Royal Prima Medan, which is located at Jl. Ayahanda No. 68A, Sei Putih Tengah, Kec. Medan Petisah, Medan City, North Sumatra 20118. The researchers conducted a preliminary survey in May 2023. The population in this study were located in the 11th floor room nurses (16 nurses), the 12th floor (16 nurses), and the 17th floor (17 nurses) who were working at RSU Royal Prima Medan. Sampling in this study involved a total sampling of 50 nurses working on the 11th, 12th and 15th floors. Data collection techniques were divided into two parts, namely based on primary data sources and secondary data. Primary data were obtained by structured observation includes determining the average time per activity, standard working time data available, a well as room nurse allowance standards at RSU Royal Prima Medan. Meanwhile, secondary data were obtained from supported documents/publications/research reports or other data sources. Data collection techniques was through observation techniques, interviews, documentation, and questionnaires. Data analysis techniques employed data reduction, data presentation, drawing conclusions, and verification.

RESULTS

Royal Prima Medan Hospital is one of the largest private hospitals and become a referral center for the community, especially the City of Medan and the people of North Sumatra in common. A proud moment, on May 17, 2011, Deputy Minister of National Education of the Republic of Indonesia, Prof. Dr. Fasli Jalal, PhD. Was laying the groundwork for the construction of the Royal Prima Hospital. On February 14, 2013, the Head of the North Sumatra Provincial Health Office issued a Temporary Operational Permit to the Royal Prima Medan Hospital Number. 440.442/1641/II/YEAR 2014. On 16 February, 2014 RS. Royal Prima Medan was inaugurated by the Deputy Governor of North Sumatra Province, Mr. Ir. H. Tengku Erry Nuradi, M.Si with a Permanent Operational Permit from the North Sumatra Provincial Health Office signed by the Head of the North Sumatra Provincial Health Office, Dr. Siti Hatati Surjantini, M.Kes.

Table 1. Age Frequency Distribution of Nurses at the Royal Prima Medan Hospital in 2022

No.	Age	Frequency	Percentage (%)
1.	20-30 years	15	30.0
2.	31-40 years	30	60.0
3.	> 40 years	5	10.0
	Total	**50**	**100.0**

From Table 1 above, the majority age of nurse are in the 31-40 year category, about 30 people (60.0%) and a minority in the category > 40 years of 5 people (10.0%).

1. **Gender**

Table 2. Nurse Gender Frequency at Royal Prima Medan Hospital in 2022

No.	Gender	Frequency	Percentage (%)
1.	Men	5	10.0
2.	Women	45	90.0
	Total	**50**	**100.0**

From Table 2 above, the majority of nurses are women, about45 people (90.0%) and a minority in the category of Men of 5 people (10,0%).

2. **Education**

Table 3. Frequency Distribution of Nurse Education at the Royal Prima Medan Hospital in 2022

No.	Education Level	Frequency	Percentage (%)
1.	Associates Degree of Nursing	33	66.0
2.	Bachelor Degree of Nursing	14	28.0
3.	Bachelor Degree of Nursing + Ners (Profession)	3	6.0
	Total	**50**	**100.0**

From the Table 3 above, it can be seen that the majority of nurses have a Diploma or Associates degree of nurse education, about 33 people (66.0%) and minorities in the Bachelor degree of Nursing + Ners education, namely 3 people (6.0%).

a. The Average Number of Nurses and Patients Ratio for 7 days

Table 4. The Average Number of Nurse and Patient Ratios for 7 Days

No.	Day	Shifts					
		Morning		Afternoon		Evening	
		Nurse	Patient	Nurse	Patient	Nurse	Patient
1.	Monday	5	21	4	18	3	18
2.	Tuesday	5	19	4	18	3	17
3.	Wednesday	6	18	4	19	4	19
4.	Thursday	5	19	4	18	3	20
5.	Friday	6	21	5	19	4	19
6.	Saturday	6	19	4	18	3	19
7.	Sunday	6	17	4	20	3	18
	Total	**5**	**19**	**4**	**19**	**3**	**18**

From Table 4 above, it can be seen that the average number of nurses in the morning shift is five nurses, in the afternoon shift is four nurses, and in the night shift is three nurses. The average number of patient visits in the room is nine-teen patients per day. Total ratio of 1: 5 consists of a nurse caring for five patients.

1) Nurse Workload

Workload to find out the workload of nurses by analyzing nursing activities and getting the amount of time used by nurses in completing their duties as nurses using formula time and motion study.

b. Number of Direct Nursing Activities

Table 5. Description of Direct Nursing Activity Time for 7 Days

No.	Activity	Shifts					
		Morning		Afternoon		Evening	
		Minute	%	Minute	%	Minute	%
1	Communication with patients and families	69	9.31	130	15.91	88	11.28
2	Administering an IV	63	8.50	66	8.08	123	15.77
3	Inserting an IV	17	2.29	22	2.69	7	0.90
4	Dressing IV	10	1.35	5	0.61	0	0.00
5	Adjusting IV flow rate	10	1.35	18	2.20	9	1.15
6	Changing IV bags	38	5.13	23	2.82	41	5.26
7	Removing IV lines	10	1.35	26	3.18	5	0.64
8	Patient observation	0	0.00	8	0.98	0	0.00
9	Inserting NGT	0	0.00	8	0.98	0	0.00
10	Feeding through NGT	0	0.00	0	0.00	18	2.31
11	Assisting with toileting (Sacsen)	0	0.00	10	1.22	14	1.79
12	Replaces diaper and bed pads	23	3.10	0	0.00	13	1.67
13	Replacing the patient's clothing	0	0.00	8	0.98	0	0.00
14	Making the bed for a decubitus patient	14	1.89	0	0.00	0	0.00
15	Injury care	17	9.58	0	0.00	0	0.00
16	Administering O_2	0	0.00	3	0.37	4	0.51
17	Blood transfusion	0	0.00	3	0.37	0	0.00
18	Positioning postoperative patients	0	0.00	10	1.22	8	.03
19	Nebulizers treatment	34	4.59	8	0.98	18	2.31
20	TTV	115	15.5	163	19.95	156	20.0
21	Accompanying patients to radiology	33	4.45	29	3.55	26	3.33
22	Accompanying surgical patients	0	0.00	31	3.79	0	0.00
23	Picking up surgical patients	0	0.00	28	3.43	42	5.38
24	Accompanying Hemodialysis patients	12	1.62	12	1.47	28	3.59
25	Pick up Hemodialysis patients	13	1.75	0	0.00	0	0.00
26	Receiving new patients	29	3.91	11	1.35	14	1.79
27	Removing urinary catheter	2	0.27	0	0.00	4	0.51
28	Bed making	17	2.29	3	0.37	18	2.31

29	Administering medication via NGT	0	0.00	0	0.00	9	1.15
30	Administering oral medication	4	0.54	2	0.24	11	1.41
31	Doctor visit	66	8.91	49	6.00	41	5.26
32	Checking Blood Glucose Levels (GDS)	0	0.00	3	0.37	1	0.13
33	Feeding the patients	0	0.00	0	0.00	12	1.54
34	Providing respiratory care	11	1.48	0	0.00	0	0.00
35	Taking the patient home	9	1.21	70	8.57	20	2.56
36	Escorting the patient to another room	20	2.70	12	1.47	0	0.00
37	Providing service for new patients	34	4.59	10	1.22	17	2.18
38	Educating Patients on Fasting	0	0.00	0	0.00	18	2.31
39	Providing care for discharged patients	17	2.29	46	5.63	15	1.92
	Total	**741**	**100**	**817**	**100**	**780**	**100**

From Table 5 above, the results of observations in the use of time for direct nursing activities carried out by nurses for 7 days in the morning, afternoon, and evening shifts. The amount of time that nurses spend the most time on is TTV with 434 minutes (18.6%) and the least amount of time for nurses' activities is UP DC with 6 minutes (0.25%). The use of the most amount of time spent on the afternoon shift with the highest number of nurse activities is 817 minutes (34.9%). Then, the night shift is 780 minutes (33.4%) and the morning shift uses the least nurse activities as much as 741 minutes (31.7%).

From the results of observing workload using this work sampling technique, it is in line with the results of in-depth interviews about direct nursing activities to 50 informants who were used as samples in the study. Based on the results of the interviews, it was found that the highest amount of time for direct nursing activities was in the morning shift because many patients entered in the morning and more patient care activities were carried out in the morning starting from doctor visits, giving prescriptions, and providing nursing actions carried out in the morning. With the number of nursing actions given, nurses are required to be able to carry out their duties as nurses in providing nursing care.

c. Number of Indirect Nursing Activities

Table 6. Description of Indirect Nursing Activity Time for 7 Days

No.	Activity	Shifts					
		Morning		Afternoon		Evening	
		Minute	%	Minute	%	Minute	%
1	Communicate with the doctor	185	5.2	230	5.7	10	0.3
2	Setting up and cleaning action tools	285	8.0	225	5.6	450	12.0
3	Prepare oral and injectable drugs	325	9.2	565	14.0	525	14.0
4	Make a food requisition list	0	0.0	0	0.0	0	0.0
5	Writing patient prescriptions	40	1.1	40	1.0	10	0.3
6	Fill out and complete the patient form	110	3.1	3.20	8.0	200	5.3
7	Shifts Report	115	3.0	115	2.9	210	5.6
8	Check patient status	1170	33.0	1160	28.8	1365	36.4
9	Write doctor's instructions	35	1.0	25	0.6	30	0.8
10	Create task reports	920	25.9	1120	27.8	905	24.2
11	Doctor visits	170	4.8	0	0.00	0	0.00
12	Manage patient discharge administration	80	2.3	75	1.9	0	0.00
13	Receive office calls	125	3.5	150	3.7	40	1.1
	Total	**3550**	**100.0**	**4025**	**100.0**	**3745**	**100.0**

From Table 6 above, the observation results in the use of time for indirect nursing activities carried out by nurses for 7 days, namely the third most time used was in the morning shift with a total activity time of 3550 minutes with the most activities is checking patient status by 1170 minutes or 33%. The second largest use of time is in the afternoon shift with a total activity time of 4025 minutes with the most activities namely checking the patient's status of 1160 minutes or 28.8%.

From the results of observing workload using this work sampling technique, it is in line with the results of in-depth interviews about indirect nursing activities to 50 informants who were used as samples in the study. Based on the interview results, it was found that the most activities during the night shift were checking patient

status, providing equipment used in carrying out nursing actions. In the afternoon shift, there are patients who have finished operating patient actions so that they prepare rooms and patient needs after completing surgery.

d. Number of Nurse Activities In Personal Activities

Table 7. Description of Nurse Activities in Personal Activities for 7 Days

No.	Activity	Shifts					
		Morning		Afternoon		Evening	
		Minute	%	Minute	%	Minute	%
1	Washing hands	17	9.77	20	15.75	22	13.17
2	Book a schedule	3	1.72	8	6.30	3	1.80
3	Worship	24	13.79	0	0	0	0
4	Cutting Nails	0	0	0	0	10	5.99
5	Toileting	21	12.07	25	19.69	44	26.35
6	Pray	28	16.09	62	48.82	40	23.95
7	Eat	66	37.93	8	6.30	37	22.16
8	Drink	15	8.62	4	3.15	11	6.59
	Total	**174**	**100.0**	**127**	**100.0**	**167**	**100.0**

From Table 7 above, the results of observations in the use of time for personal nursing activities carried out by nurses for 7 days, namely the amount of time for personal activities that spend the most time is prayer, as much as 130 minutes (27.8%) and the amount of time for personal activities that is the least done is cutting nails, as much as 10 minutes (2.1%). The use of the most amount of time used in the morning shift was 174 minutes (37.2%), then the night shift was 167 (35.7%), and the afternoon shift used the least amount of personal activities, as much as 127 minutes (27.1%).

e. Number of Nurse Activities in Non-productive Activities

Table 8. Description of Nurse Activities in Non-productive Activities for 7 Days

No.	Activity	Shifts					
		Morning		Afternoon		Evening	
		Minute	%	Minute	%	Minute	%
1	Chat	2	5.0	0	0	33	1.86
2	Check Hand-phone Notification	25	62.5	23	100	75	4.11
3	Sleep	5	12.5	0	0	1669	84.03
4	Pick up school children	13	32.5	0	0	0	0
	Total	40	100	23	100	1775	100

From Table 8 above, the results of observations in the use of time for non-productive nursing activities carried out by nurses for 7 days are activities that spend the most time resting sleeping at night as much as 1674 minutes (9.1%), and the least amount of time for non-productive activities carried out is pick up school children as much as 13 minutes or (0.7%).

From the results of observing workload using this work sampling technique, it is in accordance with the results of in-depth interviews about non-productive nursing activities to 50 informants who were used as samples in the study. Based on the interview results, it was found that the most activities carried out by nurses were in non-productive activities, namely resting at night, after checking patients, the average nurse carried out night sleep activities while waiting for the patient's condition.

f. Overall Number of Nurse Activities for 7 Days

Table 9. Overview of Overall Nurse Activities for 7 Days

No.	Activity	Shifts					
		Morning		Afternoon		Evening	
		Minute	%	Minute	%	Minute	%
1	Direct Nursing	741	16,4	817	16.3	780	12.0
2	Indirect Nursing	3550	78.8	4025	80.6	3745	57.9
3	Personal Activities	174	3.8	127	2.5	167	2.5
4	Non-Productive Activities	40	0.8	23	0.4	1775	27.4
	Total	4505	100	4992	100	6467	100

From Table 9 above, the observation results in the use of time for nursing activities as a whole carried out by nurses for 7 days, namely the workload of nurses on the morning shift as a whole is 4505 minutes consisting of direct nursing 741 minutes (16.4%), indirect nursing 3550 minutes (78.8%), personal activities 174 minutes

(3.8%), and non-productive activities 40 minutes (0.8%). Nurse workload on the afternoon shift as a whole is 4992 minutes consisting of direct nursing 817 minutes (16.3%), indirect nursing 4025 minutes (80.6%), personal activities 127 minutes (2.5%), and non-productive activities 23 minutes (0.4%). Nurse workload on the night shift as a whole is 6467 minutes consisting of direct nursing 780 minutes (12.0%), indirect nursing 3745 minutes (57.9%), personal activities 167 minutes (2.5%), and non-productive activities 1775 minutes (27.4%)

Indirect nursing activities in the morning shift are 3550 minutes (78.8%), afternoon shift are 4025 minutes (80.6%), and night shift are 3745 minutes (57.9%). This shows that the activities that are mostly carried out by nurses are indirect nursing activities. This is due to the fact that there are many indirect nursing activities and must be completed according to the procedure. This is due to the fact that there are many indirect nursing activities and must be completed according to the procedure.

The workload on the shift that uses the most time for main activities consisting of direct nursing activities and indirect nursing activities, namely the night shift. It can be concluded that the shift that requires the most time for main activities is the night shift, this is because the amount of working time in the night shift is different from the morning and afternoon shifts, which is 11 hours.

Nursing activities as a whole are direct nursing, indirect nursing, personal activities, and non-personal activities on the morning shift of4505 minutes, afternoon shift of4992 minutes and night shift of 6467 minutes. Available working time is the time that must be fulfilled by a nurse in carrying out her main activities. Determining available working time aims to obtain available working time for nurses at the Royal Prima Medan Hospital, especially on the 11th floor, 12th floor, and 15th floor for a period of one year. The data required to determine available working time is available working time consisting of three shifts with the morning shift starting from 7.30-13.00, afternoon shift starting from 13.00-19.30, and night shift starting from 19.30-07.30.

Based on the results of interviews with nurses regarding the number of working days, that is, the average number of working days used by nurses is 6 days in one week, there is 1 day off. Nurses work following existing shifts in providing comprehensive nursing care. The results of interviews with nurses regarding the division of shift work, namely the division of shift work has been made by the team. Nurses just run the shift that has been divided. The nurse shift has been determined by the hospital. The amount of annual leave has been set by the hospital. Nurses get 12 days of annual leave a year.

Based on the results of interviews with nurses regarding absence tolerance, in providing nursing care, the number of nurses must be available. Tolerance is given when there is a very important reason. Nevertheless, the nurse must still look for a replacement on the schedule set by the hospital. Timeliness in completing work, namely nursing actions given by nurses have a predetermined time at Royal Prima Hospital so that all nursing actions must be on time. The results of interviews with nurses about calculating the workload of nurses, namely to calculate the standard workload of nurses, it takes an average amount of time to complete a main nursing activity. Royal Prima Hospital has an average amount of time to complete a nursing action, but researchers did not use this data due to differences in the results of observations. Therefore, researchers used the average amount of nursing action time from the observations. The SOP required in carrying out each description of the main activities is that each nursing action has an SOP that has been set by the Royal Prima Hospital team.

Based on the results of interviews with nurses about the target time in completing the work, namely the nursing actions given by nurses have targets according to the type of nursing actions given by nurses. In the interview about the workload of nurses, especially inpatient rooms, namely nurses completing nursing actions according to the targets set so that nurses have a workload. Meanwhile, if viewed from activities outside the main activities, namely the task of the nurse in providing nursing care, there are tasks other than the main task. It all depends on the head of the room. The services provided must be optimal in providing nursing care to patients if looking at the training activities provided, namely the training activities given by the head of the room or doctor. Training is very necessary in supporting nurses to carry out their duties as nurses. The training time is determined from the hospital. Nurses follow the training schedule set by the Royal Prima Hospital.

Based on the results of interviews with nurses about delegating tasks, namely Delegation of Tasks which is given if there are important tasks or other tasks from the main tasks carried out by nurses. Delegation can be oral or written form if the delegation's important task uses a decree from the Royal Prima Hospital. The results of interviews with nurses regarding the calculation of nursing energy, namely the calculation using the WISN formula, with the quantity of main activities plus the allowance standard with the workload standard. For example, obtained data 0.7 based on the ratio. If the WISN ratio < 1 means that the existing human resources are not sufficient and are not in accordance with the amount of workload. The number of human resources in the inpatient room of Royal Prima Hospital is 15 nurses and the head of the room, while the number of human resources needed according to the WISN formula is 21 nurses. Thus, there is a shortage of staff nurses in the inpatient room of Royal Prima Hospital, of 6 people. Based on the results of interviews with nurses regarding the division of tasks, namely the division of tasks was determined by the hospital, nurses get their duties in accordance with the job description that has been given. The assigned task must be completed within the allotted time.

Table 10. Frequency Distribution of Anxiety Levels Using the Hamilton Anxiety Rating Scale (HARS) at Royal Prima Medan Hospital in 2022

No.	Anxiety Level Using Hamilton Anxiety Rating Scale (HARS)	Frequency	Percentage (%)
1.	Light stress	16	32.0
2.	Moderate stress	24	48.0
3.	Heavy stress	10	20.0
	Total	**50**	**100.0**

From Table 10 above, the anxiety level using the Hamilton Anxiety Rating Scale (HARS) is the majority in the moderate stress category, with 24 people (48.0%) and a minority in the severe stress that is 10 people (20.0%).

Table 11. Frequency Distribution of Anxiety Level Answers Using the Hamilton Anxiety Rating Scale (HARS) at Royal Prima Medan Hospital in 2022

No	Material	Never		Sometimes		Often		Always	
		f	%	f	%	f	%	f	%
1.	I accept the changes that are happening to my body	18	36.0	10	20.0	9	18.0	13	26.0
2.	I feel useless because I can no longer do as many activities as I did when I was young	21	42.0	5	10.0	5	10.0	19	38.0
3.	I am no longer strong enough to do an activity	21	42.0	6	12.0	3	6.0	20	40.0
4.	I feel weak	20	40.0	7	14.0	5	10.0	18	36.0
5.	I feel sad because I can't enjoy the things I do	10	40.0	8	16.0	4	8.0	18	36.0
6.	I have to urinate and defecate constantly	22	44.0	9	18.0	2	4.0	17	34.0
7.	I don't pay attention to my appearance	25	50.0	6	12.0	8	16.0	11	22.0
8.	My appetite is fickle	22	44.0	8	16.0	9	18.0	11	22.0
9.	I rarely do personal hygiene	22	44.0	7	14.0	5	10.0	16	32.0
10.	I often feel tremors in my body	28	56.0	4	8.0	2	4.0	16	32.0
11.	I sweat in doing every activity	30	60.0	5	10.0	3	6.0	12	24.0
12.	I get tired very easily	27	54.0	9	18.0	1	2.0	13	26.0
13.	I often feel stiff muscles in the neck, shoulders and lower back	20	40.0	10	20.0	10	20.0	10	20.0
14.	I feel the balance of my body has decreased	27	54.0	9	18.0	5	10.0	9	18.0
15.	I felt my limbs begin to weaken	30	60.0	9	18.0	3	6.0	8	16.0

Based on Table 11 above, the nurses' answers about the level of anxiety using the Hamilton Anxiety Rating Scale (HARS) with the majority answered Never about *I sweat in doing every activity, I felt my limbs were starting to weaken,* with 30 people (60.0%), the majority answered Sometimes in *I accept the changes that occur in my body, I often feel stiff muscles in the neck, shoulders and lower back,* with 10 people (20.0%). The majority answer often about *I often feel stiff muscles in the neck, shoulders and lower back,* with 10 people (20.0%), the majority answered that it was always about *I am no longer strong enough to do an activity, with* 20 people (40.0%).

DISCUSSION

1. Nurse Workload

The findings of the study showed that observations results in the use of time for nursing activities as a whole carried out by nurses for 7 days, namely the workload of nurses on the morning shift as a whole of 4505 minutes consisting of 741 minutes direct nursing (16.4%), 3550 minutes indirect nursing (78, 8%), 174 minutes personal activities (3.8%), and 40 minutes non-productive activities (0.8%). Nurse workload on the afternoon shift as a whole is 4992 minutes consisting of 817 minutes direct nursing (16.3%), 4025 minutes indirect nursing (80.6%),127 minutes personal activities (2.5%), and 23 minutes non-productive activities (0.4%). Nurse workload on the night shift as a whole is 6467 minutes consisting of 780 minutes direct nursing (12.0%), 3745 minutes

indirect nursing (57.9%), 167 minutes personal activities (2.5%), and 1775 minutes non-productive activities (27.4%).

Indirect nursing activities in the morning shift are 3550 minutes (78.8%), consisting of afternoon shift are 4025 minutes (80.6%) and night shift are 3745 minutes (57.9%). This shows that the activities that are mostly carried out by nurses are indirect nursing activities. This is due to the fact that there are many indirect nursing activities and must be completed according to the procedure and there are many indirect nursing activities and must be completed according to the procedure

The increasing number of patient care hours for 24 hours, the need for the number of nurses will also increase as well. This means that the more hours of patient care for 24 hours, the greater the need for the number of nurses needed by inpatients at the hospital. The nurse's workload is the overall activity carried out by a nurse while on duty in the nursing care unit. Nurses who experience burnout at work can cause work deviations which will lead to a decrease in work performance

The distribution of the workload of nurses at Royal Prima Hospital varies in each shift, where the most direct nursing activities are in the night and day shifts. At the time of the study, the researchers observed the activeness of the patient's family regarding the patient's condition requiring nursing actions, such as changing IV fluids, correcting stuck infusions, and controlling the patient's vital signs. Nurses at the Royal Prima Hospital also appealed to the patient's family to help monitor the patient's condition due to the small number of nurses. One of the problems that often arise in hospitals is the unbalanced workload of nurses. It is often difficult for managers to know the quality of workload because it is more based on subjective complaints. This situation usually starts from the planning stage where the need for nurses is not in accordance with the work capacity of a health care institution.

In the researchers opinion, a shortage of nurses can cause a high workload. The high workload has an impact on decreasing work quality and performance. This can happen especially if the workload increases without being followed by an increase in rewards. With a decrease in the quality of work and performance of nurses that will have an impact on the hospital is a decrease in the image of the hospital as the results achieved will not be maximized, which results in a decrease in the value of nursing care. Lack of nurses can cause excessive workload. This is in line with research conducted by researchers that there is a shortage of nurses at this time. It is recommended that the addition of nurse staff that will greatly assist the activities of nurses in each unit in the inpatient room of Royal Prima Hospital. Besides, this can also facilitate the division of tasks in carrying out nursing care to avoid complaints due to excessive workload. The workload seen from nursing care activities and additional tasks, they stated that the activities were too many and tiring because they got additional tasks besides the main nursing duties, such as delegation from doctors, administration, and carrying out cleaning duties, especially during the night shift because there is no cleaning workers. In addition, the nurse also stated that when more than one patient arrives with an emergency or critical condition, the nurse is overwhelmed in handling them patiently.

Research by Susilawati et al. (2023) mentioned that the workload of nurses in the Orion Inpatient Room at RSUD X was obtained by observing for 24 hours in three shifts, namely the morning, afternoon, and evening shifts using a work sampling technique. The bed capacity of the adult inpatient rooms was 49 with 24 nurses. Observations of nursing activities were carried out at intervals of fifteen minutes. From the observations that have been made, it was known that the total time for direct nursing activities was 32.2%, and the total time for indirect nursing activities was 34.4%, while the total time for personal activities was 21.3%, and the total time for non-productive activities used by nurses was 12.0%.

Research by Ernawati et al. (2017) also stated that the workload of nurses in the Dahlia room was 83.87%. The total time to complete productive activities in the Dahlia room was 202.41 hours which included 129.66 hours of direct nursing actions and 72.75 hours of indirect nursing actions. The workload of nurses in the Flamboyan room was 81.36%. The total time to complete productive activities in the Flamboyan room was 271.96 hours which included 161.28 hours of direct and indirect nursing actions 110.068 hours.

Research by Fajri et al. (2020) said that the average time needed to carry out direct activities was 6,870 minutes (55.9%), indirect activities was 3,448 minutes (28.%), personal activities was 1,099 minutes (8.9%) and for non-direct productive activities was 865 minutes (7.4%). From the results of calculating these average working time, it can be seen that the amount of time needed by nurses a day to complete all nursing work is 10 hours.

According to Setiyawan (2020) , what affects the workload of nurses is the patient's condition that is always changing, the average number of hours of care needed to provide direct service to patients, as well as the number of additional tasks that must be done by a nurse so that it can interfere with the work performance of the nurse. Besides additional tasks, the workload of a nurse is also greatly influenced by her working time. If the work time that must be borne by nurses exceeds their capacity, such as the amount of overtime, it will have a negative impact on the productivity of these nurses.

The nurse's workload means all activities carried out by a nurse while serving in a nursing care unit (Dewi & Zestin, 2019) . High workload will cause fatigue and work stress. Nurse fatigue at work can cause work deviations which will cause a decline in work performance. Nurse fatigue can also have an impact on the care the

services provided will not be optimal. According to Ilyas (2004) , the high workload can have an effect on decreasing the performance of personnel hospital.

The number of officers must be adjusted to the amount of workload so that the productivity of the officers can increase and be more optimal. If the number of workers is small, while the workload is increasing, it will cause work fatigue. This work fatigue in officers will later affect work productivity and have an impact on the quality of hospital services. Otherwise, if the number of officers is greater than the workload, then there will be a lot of time left so that the work becomes less effective (Cania, 2019) .

According to Ilyas (2004) , workload can be seen from the activities carried out by staff at work time, both direct and indirect productive activities, and other activities, such as personal activities and unproductive activities. Productive activity is an activity that produces something in the form of new things that can be obtained from reading, objects, writing, and other good things. As for unproductive activities are activities carried out but these activities that do not produce anything

2. Room Nurse Needs Using the Workload Indicator Staff Need (WISN) Method

The results of the study show that the number of working days is the average number of working days used by nurses six days a week with one day off. The nurse regarding the number of annual leaves, namely the number of annual leaves has been determined by the hospital. Nurses get 12 days of annual leave a year. Nurses regarding tolerance for absence, namely in providing nursing care must be available with the existing numbers.

Timeliness in completing work, namely nursing actions given by nurses have a predetermined time at Royal Prima Hospital so that all nursing actions must be on time. Nurses about calculating the workload of nurses is to calculate the standard workload of nurses. It takes an average amount of time to complete a main nursing activity.

The SOP required in carrying out each description of the main activities is that each nursing action has an SOP that has been set by the Royal Prima Hospital team. The nurse regarding the target time in completing the work, namely the nursing action given by the nurse has a target according to the type of nursing action given by the nurse.

Nurses have additional tasks besides their primary duties in providing nursing care. These additional tasks depend on the head of the department. The service provided must be maximized in delivering nursing care to patients. The training activities provided are training activities given by the head of the room or doctor. Training is very necessary in supporting nurses to carry out their duties as nurses. The training time is determined by the hospital. Nurses follow the training schedule set by the Royal Prima Hospital.

Nurse about the delegation of tasks is provided if there are important tasks or other tasks from the main tasks carried out by nurses. Delegation can be oral or written form. If the delegation's important task, it uses a decree from the Royal Prima Hospital. Nurses about the number of existing nursing staff, namely the number of nurses less than the number of patients. The nurse's workload is high in serving patients. The division of tasks, namely the division of tasks is determined from the hospital. Nurses get their duties in accordance with the job description that has been given. The assigned task must be completed within the allotted time

The increasing number of patient care hours for 24 hours, the need for the number of nurses will also increase as well. This means that the more hours of patient care for 24 hours, the greater the need for the number of nurses needed by inpatients at the hospital. The nurse's workload is the overall activity carried out by a nurse while on duty in the nursing care unit. Nurses who experience burnout at work can cause work deviations which will lead to a decline in work performance

The results of this study are the same as research by Ernawati et al. (2017) mentioned that the number of nurses needed in the Flamboyan Room was 32 people. There were currently 14 nurses. Thus, the Flamboyan Room required an additional 18 people. For the Dahlia Room, from the calculation results, the number of nurses needed in that room was 22 people, currently there were 10 people, and it required an additional 12 nurses.

Soesanto and Ersyad's research (2019) stated that calculation of the need for nurses based on the Staff Need Indicator Workload (WISN) shows that based on available working time, it was 1,954 hours/year (117,240 minutes/year), or 279.1 working days. In terms of establishing the working unit, the focus of this research was on the nursing staff in the adult inpatient room and pediatric inpatient room of Gotong Royong hospital. The workload standard for nursing staff in adult inpatient rooms is 2008224/year, while in children's inpatient rooms was 1693714/year. As for setting the staffing standards, the flexibility standard in adult inpatient rooms of Gotong Royong hospitals was 0.24 and in the pediatric inpatient room was also 0.24. Based on the calculation of the WISN method, the staffing requirements for nurses in the work unit can be determined. The adult inpatient room required 10 nurses and 8 nurses in the pediatric inpatient room of the Gotong Royong hospital.

Research by Susilawati et al. (2023) said that the need for nurses based on the Workload Indicator Staff Need (WISN) method shows that the number of nurses needed for the inpatient installation of Hospital X was 34 people. While the current number of nurses was only 24 people. This shows that the Orion inpatient installation requires an additional 10 nurses. If seen from the results of calculating the need for nurses, based on the Workload Indicator Staff Need (WISN) method, the number of available staff only meets 55% of the ideal total number of

nurses. This can have a bad influence on hospital services as a lack of staff with a lot of workload can lead to work stress and has a negative impact on patient safety.

To carry out health efforts a person is sought to have knowledge and skills in education, especially in the health sector. The Guidelines for the Preparation of Health HR Planning at the Provincial, District/City and Hospital levels for the need for health workers in health institutions is based on workload through the WISN (Workload Indicators of Staffing Need) method. The WISN method is a calculation of the need for health workers based on the real workload that is carried out for each category of health workers in each work unit of health service facilities (Sukma, 2023)

Personnel planning is a great problem in various nursing organizations, such as hospital settings, nursing homes, and other nursing service places. Problems that often occur in organizations are the lack of number and type of staff needed, lack of competence (knowledge, skills, attitudes and values) of nurses, and limited funds from hospitals, causing they cannot add and care for the human resources (HR) they need (Ilyas, 2004) .

According to Cania (2019) said that the method for calculating the number of needs for health workers. In principle, it starts with knowing the current condition of the organization's workforce in relation to the working conditions of the hospital. The next step is to make forecasts or estimates of the number of future personnel associated with the hospital's plan to produce effective service products. Forecasting the number of workers needed must take into account many determining factors, such as the size of the actual workload, the quality of the workforce, including the use of productive working time.

a. Anxiety Level Using Hamilton Anxiety Rating Scale (HARS)

The research findings indicate that the majority of anxiety levels, measured using the Hamilton Anxiety Rating Scale (HARS), is mostly categorized as moderate stress, with 24 people (48.0%), while the minority in the severe stress category, with 10 people (20.0%).

Based on the nurses' answers about the level of anxiety using the Hamilton Anxiety Rating Scale (HARS), the majority answered Never about *I sweat in doing every activity* and *I felt my limbs begin to weaken* are 30 people (60.0%). The majority answered Sometimes about *I accept the changes that occur in my body, I often feel stiff muscles in the neck, shoulders and lower back* are 10 people (20.0%). The majority answered Often about *I often feel stiff muscles in the neck, shoulders and lower back* is 10 people (20.0%). The majority answered Always abou *t I was no longer strong enough to carry out an activity* is 20 people (40.0%).

The results of this study are the same as Fitri's research (2022) said that out of 79 respondents, 17 respondents (60.7%) had no anxiety with a heavy workload, 2 respondents (7.1%) had a heavy workload with mild anxiety, 2 respondents (7.1%) had a heavy workload severe anxiety as many as 5 respondents (17.9%), respondents with a heavy workload very severe anxiety as many as 0 respondents (0%). Respondents with moderate workload no anxiety as many as 15 respondents (29.4%), respondents with moderate workload mild anxiety as many as 18 respondents (35.3%), respondents with moderate workload moderate anxiety as many as 11 respondents (21.5%),), respondents with moderate workloads of severe anxiety were 5 respondents (9.8%), respondents with moderate workloads of very high anxiety were 2 respondents (3.9%).

The most important nursing service provided to patients is providing nursing care. The implementation of comprehensive nursing care carried out by nurses is the most dominant in inpatient services. The nurse's responsibilities in implementing nursing care include conducting assessments, planning, implementing and evaluating nursing actions for patients. The causes of nurses' anxiety in the implementation of nursing care are the increasing severity of the patient's condition, the transmission of the risk of disease infection, the number of patients who are more than nurses amount, and the various nursing actions that must be carried out for the care and safety of patients. In addition, nurses in inpatient rooms are not only related to patients but also the demands of the patient's family for patient safety. This shows that the workload that nurses have in carrying out nursing care in inpatient rooms is more so that it can cause care anxiety.

Workload on nurses who are not in accordance with standards can lead to less than optimal implementation of nursing care for patients. Excessive workload on nurses that is not proportional to the physical, mental, expertise and availability of working time can cause work stress. One of the psychological responses to stress is anxiety. Nurses who experience excessive workload with the availability of time will resulted in a decrease in the work productivity of nurses and the performance displayed by nurses is ineffective and inefficient. This is shown by the decreased concentration of nurses, reduced communication, decreased motivation to provide quality services, and decreased nurse compliance in following rules or guidelines resulting in errors in actions (Wahyu Istiqomah, 2021).

Anxiety among healthcare workers is caused by demanding jobs, long working hours, increasing patient numbers, societal stigma on front-line workers, and personal protective equipment that limits access to social support. Mobility, lack of information exposure, long-term impact on infected people, and fear as a team of front-line workers. When nurses think that they are in a dangerous situation, it will inevitably cause a high level of anxiety (Indriati & Usman, 2022).

According to Nursalam (2020), the workload in the room does not always cause anxiety among nurses, and can cause anxiety if the workload is not proportional to the physical abilities, experience and expertise of the nurses, and the time available. Each nurse has a normal ability to complete the tasks assigned to her, and each nurse has a different way of managing anxiety, depending on the duration, type and frequency of anxiety of experiences.

CONCLUSION

The overall nurse workload on the morning shift is 4505 minutes, consisting of 741 minutes (16.4%) for direct nursing care, 3550 minutes (78.8%) for indirect nursing, 174 minutes (3.8%) for personal activities, and 40 minutes (0.8%) for non-productive activities. The overall workload for nurses during afternoon shift is 4992 minutes, with 817 minutes (16.3%) for direct nursing, 4025 minutes (80.6%) for indirect nursing, 127 minutes (2.5%) for personal activities, and 23 minutes (0.4%) for non-productive activities. The overall workload nurses during night shift is 6467 minutes, consisting of 780 minutes (12.0%) for direct nursing, 3745 minutes (57.9%) for indirect nursing, 167 minutes (2.5%) for personal activities, and 1775 minutes (27.4%) for non-productive activities. The workload indicator staff need Workload Indicator Staff Need (WISN) method determines the staffing requirements for the ward/room. The average number of working days used by nurses is 6 days per week, with 1 day off,. The time allocation for completing nursing tasks is predetermined at Royal Prima Hospital to ensure that all nursing actions must be on time. Calculating the standard workload of nurses required the average amount of time to complete a main nursing activity and determining SOPs for each activity. The targets for nursing actions align with the type of nursing intervention provided by the nurse. Training activities and schedules are determined by the hospital, while task delegation is given when there are important tasks or other tasks from the main tasks carried out by nurses. The number of nurses is insufficient with patients loads, resulting in high workload for nurses. Nurses receive tasks based on their duties in accordance with the job descriptions, which are expected to be completed within the allocated time. Regarding the anxiety levels measured using the Hamilton Anxiety Rating Scale (HARS), most individuals are in the category of moderate stress. With 24 individuals (48.0%), while the minority is in the category of severe stress, with 10 people (20.0%). for the future researchers, it is recommended to conduct further in-de[th studies using different theories and techniques.

REFERENCES

Cania, L. (2019). Analisis Kebutuhan Tenaga Kerja Berdasarkan Beban Kerja Dengan Metode Workload Indicator Staffing Need (WISN) Unit Rekam Medis Rumah Sakit Budi Agung Juwana. *Journal of Chemical Information and Modeling*, 1–94.

Cucu, Nuraeni, H., & Muryani, A. (2019). Analisis Beban Kerja Perawat di Ruang Rawat Inap Rumah Sakit Gigi Mulut Universitas Padjadjaran Tahun 2018. *JSK (Jurnal Sistem Kesehatan)*, *4*(4), 164–172.

Dewi, M., & Zestin, R. (2019). Kepemimpinan dan Manajemen Keperawatan Teori & Aplikasi. *Managemen Keperawatan*, *2*(1), 85–89.

Ernawati, N. L. A. K., Nursalam, N., & Djuari, L. (2017). Kebutuhan Riil Tenaga Perawat dengan Metode Workload Indicator Staff Need (WISN). *Jurnal Ners*, *6*(1), 85–92. https://doi.org/10.20473/jn.v6i1.3970

Fajri, N., Yusni, Y., Usman, S., Syahputra, I., & Nurjannah, N. (2020). Analisis Kebutuhan Tenaga Keperawatan Berbasis Beban Kerja Dengan Metode Workload Indicator Staff Need (Wisn) Di Instalasi Gawat Darurat (Igd) Rumah Sakit Ibu Dan Anak Provinsi Aceh. *Jurnal Kesehatan*, *13*(2). https://doi.org/10.24252/kesehatan.v13i2.16304

Hallit, S., Haddad, C., Hallit, R., Akel, M., Obeid, S., Haddad, G., Soufia, M., Khansa, W., Khoury, R., Kheir, N., Elias Hallit, C. A., & Salameh, P. (2020). Validation of the Hamilton Anxiety Rating Scale and State Trait Anxiety Inventory A and B in Arabic among the Lebanese population. *Clinical Epidemiology and Global Health*, *8*(4), 1104–1109. https://doi.org/10.1016/j.cegh.2020.03.028

Hamdiah, H., Suwondo, A., Sri Hardjanti, T., Soejoenoes, A., & Anwar, M. C. (2017). Effect of Prenatal Yoga on Anxiety, Blood Pressure, and Fetal Heart Rate in Primigravida Mothers. *Belitung Nursing Journal*, *3*(3), 246–254. https://doi.org/10.33546/bnj.99

Hertin, R. D., & Al-Sanjary, O. I. (2018). Performance of hospital information system in Malaysian public hospital: A review. *International Journal of Engineering and Technology(UAE)*, *7*(4). https://doi.org/10.14419/ijet.v7i4.11.20682

Ilyas, Y. (2004). Perencanaan sumber daya manusia rumah sakit, teori, metoda, dan formula. *Jakarta: Fakultas Illmu Kesehatan Masyarakat Universitas Indonesia*.

Indriati, F. N., & Usman, A. M. (2022). Analisis Hubungan Beban Kerja Dengan Tingkat Kecemasan Perawat Di Rsud Kabupaten B Pada Masa Pandemi Covid-19. *Jurnal Keperawatan*, *10*(1), 53. https://doi.org/10.35790/jkp.v10i1.38801

Jameson, B. E., Engelke, M. K., Anderson, L. S., Endsley, P., & Maughan, E. D. (2018). Factors Related to School Nurse Workload. *Journal of School Nursing*, *34*(3). https://doi.org/10.1177/1059840517718063

K.Nishanthan, S.Mathyvathana, R.Priyanthi, A.Thusara, D.I. De Silva, & Dulanji Cooray. (2022). The Hospital

Management System. *International Journal of Engineering and Management Research*, *12*(5). https://doi.org/10.31033/ijemr.12.5.17

Macphee, M., Dahinten, V. S., & Havaei, F. (2017). The impact of heavy perceived nurse workloads on patient and nurse outcomes. *Administrative Sciences*, *7*(1). https://doi.org/10.3390/admsci7010007

Notoatmodjo, S. (2019). *Metodologi Penelitian Kesehatan*. Jakarta: Rineka Cipta.

Nursalam. (2020). Metode Penelitian Ilmu Keperawatan : Pendekatan Praktis. Edisi Kelima. *Nucl. Phys*.

Riklikiene, O., Didenko, O., Ciutiene, R., Daunoriene, A., & Ciarniene, R. (2020). Balancing nurses' workload: A case study with nurse anaesthetists and intensive care nurses. *Economics and Sociology*, *13*(2). https://doi.org/10.14254/2071-789X.2020/13-2/1

Setiyawan, A. E. (2020). Gambaran Beban Kerja Perawat di Ruang Instalasi Gawat Darurat (IGD) RSUD Undata Provinsi Sulawesi Tengah. *Preventif : Jurnal Kesehatan Masyarakat*, *11*(340), 38–46.

Shivam S, Roy RN, Dasgupta S, Das Bhattacharyya K, Misra RN, Roy S, dkk. (2019). Perencanaan personel keperawatan untuk rumah sakit pedesaan di distrik Burdwan, Benggala Barat, India, menggunakan indikator beban kerja kebutuhan staf. *J Health Popul Nutr*, *32*, 658–664.

Soesanto, D., & Ersyad, T. (2019). Penghitungan Kebutuhan Tenaga Keperawatan Berdasarkan Wisn Di Rs.Gotong Royong. *Journal of Health Sciences*, *12*(02). https://doi.org/10.33086/jhs.v12i02.554

Sukma, S. A. S. H. (2023). Analisis Kebutuhan Tenaga Rekam Medis Unit Rawat Jalan dengan Metode Workload indicator Staffing Need (WISN) di Rumah Sakit Siti Miriam Lawang. *Informasi Kesehatan Dan Administrasi Rumah Sakit*, *01*, 4–7.

Susilawati, Y., Komariah, M., & Somantri, I. (2023). Beban Kerja Perawat Pelaksana Berdasarkan Metode Workland Indicator Staff Need (WISN). *Jounal of Telenursing (JOTING)*, *5*(1), 30–31.

Tandi, B. P. (2017). Analisis Biaya Satuan (Unit Cost) Pada Pelayanan Kesehatan Unit Rawat Inap Rumah Sakit Umum Daerah Tora Belo Di Kabupaten Sigi Provinsi Sulawesi Tengah. *Jurnal Katalogis*, *5*(5), 134–144.

Tubbs-Cooley, H. L., Mara, C. A., Carle, A. C., Mark, B. A., & Pickler, R. H. (2019). Association of Nurse Workload with Missed Nursing Care in the Neonatal Intensive Care Unit. *JAMA Pediatrics*, *173*(1). https://doi.org/10.1001/jamapediatrics.2018.3619

Vivin, V. (2019). Kecemasan dan motivasi belajar. *Persona:Jurnal Psikologi Indonesia*, *8*(2), 240–257. https://doi.org/10.30996/persona.v8i2.2276

Wahyu Istiqomah. (2021). Hubungan Beban Kerja Dengan Kecemasan Pada Perawat Dalam Pelaksanaan Asuhan Keperawatan Di Ruang Rawat Inap RSI Sultan Agung Semarang. *Universitas Diponegoro*.

Wardhani, V., Van Dijk, J. P., & Utarini, A. (2019). Hospitals accreditation status in Indonesia: Associated with hospital characteristics, market competition intensity, and hospital performance? *BMC Health Services Research*, *19*(1). https://doi.org/10.1186/s12913-019-4187-x

Analysis of Workload and Ward Nurse Staffing Needs Using the Workload Indicator Staffing Need (WISN) Method on Anxiety Levels Using the Hamilton Anxiety Rating Scale (HARS)

ORIGINALITY REPORT

13%	11%	9%	3%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

1	bircu-journal.com Internet Source	3%
2	Putranto Manalu, Mita Sahara, Tan Suyono, Milka Rositi Sianipar. "Using the Workload Indicators of Staffing Need (WISN) Method for Predicting Pharmacists Human Resources in Hospitals", Jurnal Aisyah : Jurnal Ilmu Kesehatan, 2021 Publication	2%
3	www.granthaalayahpublication.org Internet Source	1%
4	Submitted to Badan PPSDM Kesehatan Kementerian Kesehatan Student Paper	1%
5	saber.ucv.ve Internet Source	1%
6	Alfrensya Clara Patty, Yulian Wiji Utami, Fransiska Imavike Fevriasanty. "The Effect of	1%

Education Through Video on Retaining Knowledge of Pregnant Women About Nutrition to Prevent Stunting", Jurnal Aisyah : Jurnal Ilmu Kesehatan, 2023
Publication

7	journal.umy.ac.id Internet Source	1 %
8	ijrrjournal.com Internet Source	1 %
9	eudl.eu Internet Source	1 %
10	Cecilia Farrona Al hadri, Ahmad Sunandar. "Information System for Calculating Medical Record Personnel in the Industrial Revolution Era 4.0", Jurnal AKSI (Akuntansi dan Sistem Informasi), 2021 Publication	1 %
11	ejournal.unklab.ac.id Internet Source	1 %

Exclude quotes	Off	Exclude matches	< 1%
Exclude bibliography	On		