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Pada tanggal Jum, 11 Feb 2022 14.02, <nursing@academicstrive.org> menulis:

Dear Rina Delfina,

Greetings!!

We would like to introduce **Advanced Nursing & Patient Care International Journal (ANPCIJ) ISSN: 2642-0147** to you, so it may help you to publish your on-going research work. We request you to kindly submit your valuable manuscript (at-least 5 page article) on or before **February 25, 2022**.

Your contribution will help us for the success issue release.

**Note:** If you want to be part of our Editorial board member please let us know. The eligibility is minimum Ph.D. or M.D.

Hope you accept our invitation.

Sincerely,

**Loretta Hampton**  
Assistant Managing Editor

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To: <nursing@academicstrive.org>

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Dari: <nursing@academicstrive.org>  
Date: Rab, 2 Mar 2022 pukul 11.02  
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To: <rdelfina@unib.ac.id>

**Dear Dr. Rina Delfina,**

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We would like to remind you about the submission of revised version of your manuscript (Ref No.: ANPCIJRA220073). Kindly submit your revised article as soon as possible so that we can proceed with further process.

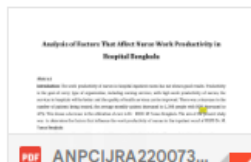
Looking forward to receive from you soon.

Sincerely,

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On Thu Mar 17, 2022 2:07 PM, <[nursing@academicstrive.org](mailto:nursing@academicstrive.org)> wrote:

Dear Dr. Rina Delfina,

Greetings..!!

We are delighted to inform you that your manuscript "**Analysis of Factors that Affect Nurse Work Productivity in Hospital Bengkulu**" has been successfully accepted for publication in **Advanced Nursing & Patient Care International Journal**.

Enclosed please find the Galley proof of your manuscript before publication, kindly go through it and let us know if any further modifications are required within 48 hours. Otherwise, we may take for granted that no corrections are required and we will publish the article as it is. We are gratifying for your association with us throughout the publication process of your manuscript.

The actual APC of our journal is \$1949 as you are an eminent editor of our journal we are providing discount kindly pay \$1099 towards your manuscript publication.

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Sincerely,

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On Thu 17 Mar 2022 at 6:31 PM <[nursing@academicstrive.org](mailto:nursing@academicstrive.org)> wrote:

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For your convenience, we are providing discount kindly pay \$649 towards your manuscript publication. Hope this is affordable.

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Looking forward to receive from you soon.

Sincerely,

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**MANUSCRIPT REVIEW FORM**

Article ID: ANPCIJRA220073

Date: 23-02-2022

Article Details	
Type of Article	Research Article
Manuscript Title	Analysis of Factors That Affect Nurse Work Productivity in Hospital Bengkulu
Please answer Yes/No to the following questions and add further comments as appropriate	
The Article Title is appropriate	Yes
Is the abstract correlate with the manuscript content?	Yes
The problem significant and concisely stated	Yes
The experimental and/or theoretical work described expansively	Yes
The discussion and conclusions justified by the results of the study	Yes
References, language, grammar are acceptable	Yes
Comments and Suggestions to the Author (s)	
<p>Congratulations to the authors. The topic addressed in this manuscript is very relevant. The introduction brought a brief contextualization and presented the problem. The objective was well described, of course. The methodology needs to be better described as some information was explained in the results section. The tables need to be revised regarding their formatting and presentation of some results. The discussion needs to be rewritten in some parts, which are marked in the text with suggestions for improvement, such as: removing the part where the results are presented again, considering that the focus of the discussion is to dialogue with other authors about the main findings of the study. The conclusion needs to be rewritten, see comments in the text. References need to be reviewed for order and inclusion of some that are in the text but not on the list, as well as others that are on the list but were not cited in the text.</p>	
<b><i>Reviewer rating for publishing the manuscript: 3</i></b>	
5. Excellent   4. Very good   3. Good   2. Average   1. Poor	

# Analysis of Factors That Affect Nurse Work Productivity in Hospital Bengkulu

## Abstract

**Introduction:** The work productivity of nurses in hospital inpatient rooms has not shown good results. Productivity is the goal of every type of organization, including nursing services, with high work productivity of nurses, the services in hospitals will be better and the quality of health services can be improved. There was a decrease in the number of patients being treated, the average monthly patient decreased to 1,348 people with BOP decreased to 47%. This shows a decrease in the utilization of care in Dr. RSUD. M. Yunus Bengkulu. The aim of the present study was to determine the factors that influence the work productivity of nurses in the inpatient ward of RSUD Dr. M. Yunus Bengkulu

**Methods:** This type of research is analytic with a cross sectional study design. The sample in this study was the nurse in the inpatient room of Dr. RSUD. M. Yunus Bengkulu, which amounted to 130 people, was taken using the proportional random sampling technique. Data collection using a questionnaire. Data analysis was carried out univariate, bivariate and multivariate with factor analysis.

**Results:** Findings of the study showed that there were three factors formed from factor analysis, namely work support (37.72%), reward system factors (15.55%), job demands (12.32%), and individual characteristics factors (8.36). %. The dominant factor that affects the work productivity of nurses is the job demand factor (OR: 2,280; 95% CI: 1,123-4.630).

**Conclusion:** The nursing sector should be able to increase the work productivity of implementing nurses through measuring workload activities by direct observation and distributing nurses according to the workload of each room, as well as providing motivation/spirit, direct direction and supervision to the inpatient room to improve the work ethic of implementing nurses.

**Keywords :** *Factor Analysis, Work Productivity, and Implementing Nurses*

## Introduction

Quality guarantee of health services is a very important and fundamental approach in providing health services to patients (Pohan, 2003). The quality of nursing services is an indicator of health services that can be a determining factor in the image of health service institutions to the community perspective, this happens because nursing is the professional group with the highest population and the closest to the suffering, pain and the misery condition who come to the patient and family. One of the quality indicator of nursing service is whether the nursing services can give satisfying to the patient or not, the patient as users of nursing service can demanded the nursing service have to suitable with their right. The patient will complain when the nursing service can not give the satisfying for themselves (Nursalam, 2014).

According to the health ministry Republic of Indonesia (2017) in 2016 there were 2.045 of general hospitals who increase from 2015 with a total of 1,949 general hospitals. And the health workers, especially nurses, there were 296.876 in 2016. The increase of the number of hospital and the number of nurses, must be in accordance with the improvement the quality of nursing services at the institution.

According to Dewan Penasihat Indonesia Services Dialog (ISD) Mari Elka Pangestu make the noted the number of people who do the medical treatment in abroad increase from 350 thousand in 2006 to 600 thousand people in 2015 ( **Muliana, 2016**). This condition shows that Indonesian hospitals need to improve the quality to increase the number of patient visits to the hospital so that it can decrease the number of Indonesians who go abroad to get the medical treatment.

The Nursing services can be comply the needs of patients and are given quality but are provided using unlimited resources so that these resources cannot be utilized by other patients in need (**Pohan, 2003**). The quality of nursing services is not something that can meet the needs of patients at maximum cost, but the quality of nursing services must be able to be linked to the efficient use of resources.

One of the indicator of success and quality of nursing services is to look at the work productivity of nurses in the inpatient room and providing nursing care to patients and their families (**Fajariadi, 2014**). Productivity is an indicator of efficiency and productivity. A comparison between output and input. Input is often limited by labor, while output is measured in physical unity, form and value (**Sutrisno, 2014**).

The Productivity is the goal of every type of organization, including nursing services, with high work productivity of nurses, so services in hospitals will be better and quality of health services can be improved. Improved work productivity is shown to increase profits in nursing organizations including to improve the progress of nurses and increase client satisfaction as recipients of nursing services (**Fajariadi, 2014**).

The work productivity of nurses in hospital inpatients room has not shown good results. **Fajaradi** research results (**2014**) in Mental Hospital of North Sumatra Province showed 18.3%, and there was a significant relationship between fish and work discipline with the work productivity of implementing nurses.

**Minarsih** Research Results (**2011**) showed as many as 41 people (54.7%) nurses in non-surgical IRNA (internal disease) had low work productivity and there was a relationship between the workload of nurses and work productivity of nurses in non-surgical IRNA (internal disease) **RSUP DR. M. Djamil Padang**.

The research results of **Putri, et al (2014)** at Bhayangkara Hospital Palembang showed that half (49.3%) nurses with low work productivity, and factors related to nurse work productivity were motivation (P: 0.039), training (P: 0.006), work climate (P: 0.012), and salary (P: 0.001).

Work productivity is influenced by many factors. According to **Sedarmawanti (2011)** factors that influence work productivity such as work motivation, income level, work environment, achievement opportunities, management and nutritional status. According to **Simanjuntak (1993** in **Su-trisno, 2014**) there are several factors that influence the work productivity of employees, namely: training, mental and physical abilities



of employees, the relationship between superiors and subordinates. Meanwhile, according to Tiffin and Cormick (in Siagian, 2002), the factors that influence work productivity can be concluded into two groups, namely: factors that exist in individuals, Such as age, temperament, individual physical condition, fatigue, and motivation, and factors existing outside the individual, namely: physical conditions such as sound, lighting, rest periods, length of work, wages, form of organization, social environment and family.

One of the government hospitals in Bengkulu Province is Dr. M. Yunus Bengkulu. RSUD Dr. M. Yunus Bengkulu is a Swadana hospital owned by the Regional Government of Tk. I Bengkulu with Class B Education classification which is the highest referral hospital in Bengkulu Province. The hospital's vision is "To become a Type A Hospital with quality, advanced, competitive services and to carry out education and research". At present the number of nurses in 11 inpatient rooms is 240 people.

In 2016, the number of patients in Dr. M. Yunus hospital are 16.297 people, the average monthly patient was 1.358 with 50% BOR. In 2017, the number of patients decreased to 16,183 people, the average monthly patient fell to 1,348 people with BOR dropped to 47%. This shows a decrease in the utilization of care in RSUD Dr. M. Yunus Bengkulu. Performance and productivity of nurses work is one of the factors causing the decline in the use of the hospital in addition to other factors such as a tiered referral system BPJS Health to health facilities.

The performance of nurses in Dr. RSUD M. Yunus has not shown good results. Hidayah Research (2010) shows that almost half (40.5%) of the nurses in the C2 Melati Inpatient Room performed badly. Hermansyah's research results (2009) showed that 25.9% of the nurses performed poorly in Dr. M. Yunus Bengkulu. Syafriyani's research results (2011) outside the Seruni RSUD Dr. M. Yunus Bengkulu showed that almost half (47.5%) nurses were not good in using the nursing process.

The results of Yusuwarsono's research (2014), showed that nurses' services in the Internal Medicine Poly Room of M.Yunus General Hospital Bengkulu were of poor quality. Nurses do not maintain neatness, appearance cleanliness in providing nurses do not maintain neatness, cleanliness in appearance in providing nursing services to patients, do not help patients want to be treated, it is difficult to be contacted, so patients who receive nursing services are less qualified, and nurses who practice, so they have not experienced in serving, coupled with the large number of patients who need maximum service. The results of this study indicate the work productivity of nurses has not been maximized so that it has not been able to provide good service quality.

The results of researchers did through interviews with 7 patients in the inpatient hospital Dr. M. Yunus Bengkulu. 5 from 7 patients said they were not satisfied with the service and performance of nurses, nurses rarely visited patients, and nursing actions were often carried out by students.

The results of interviews with 6 nurses, found five nurses said morale decreased so that work productivity also decreased in providing services to patients. From the six nurses, there were four nurses

who said there were no proportional rewards for the results of the implementation of nursing care, include in the provision of services and the proposed study assignments funded by the hospital, equated to all nurses according to length of work or seniority regardless of the nurse which performance is really good, so that will decrease the enthusiasm and work productivity. This study aims to analyze the factors that influence the work productivity of nurses in the inpatient room of RSUD Dr. M. Yunus Bengkulu.

## Research methodology

This research uses a cross-sectional design. The research population was all nurses in the inpatient room Dr. M. Yunus Bengkulu in 2018, amounting to 240 nurses. The research sample consisted of 130 nurses who were taken with the Proportional Random Sampling technique.

Data collection was carried out using a questionnaire to Count the factors affecting work productivity (age, education, training, length of work, motivation, management, work environment, opportunity for achievement, work climate, income, workload, work ethic, and work discipline) and work productivity by using a scale rating of 0-10.

Data analysis was performed by univariate, bivariate analysis using the Spearman Rank correlation test at a significance level of  $\alpha$  5%, and mutivariate analysis is carried out by factor analysis and multiple logistic regression analysis prediction modeling conducted on independent variables (age, education, training, length of work, motivation, management, work environment, opportunity for achievement, work climate, income, workload, work ethic, and work discipline) that affect the work productivity of nurses.

## Result

**Table 1: Distribution of Respondents based on Age, Education, Length of Work Training, Motivation, and Management**

Variable	N	Mean	Median	SD	Min – Max	95% CI
Age	130	35,68	36	4,956	24-52	35,68-34,82
Education	130	4,3	5	0,945	3-5	4,14-4,46
Length of work	130	10,86	10	4,345	3-30	10,11-11,62
Training	130	27,43	0	117,251	0-960	7,08-47,78
Motivation	130	94,12	96,5	20,052	29-136	90,64-97,6
Management	130	120,04	125	24,523	16-231	115,78-124,29

Table 1. shows that the average age of respondents 35.68 years with a standard deviation of 4.956 years. From the interval estimation results it is concluded that 95% are believed the average age of respondents between 35.68-34.82 years. The average length of education of respondents is 4.3 years with a standard deviation of 0.945 years. From the interval estimation results it is concluded that 95% are believed the average length of education of respondents between 4.14-4.46 years. The average length of work of

respondents was 10.86 years with a standard deviation of 4.345 years. From the interval estimation results it was concluded that 95% believed the average length of work of respondents was between 10.11-11.62 years.

The average length of training for respondents was 27.43 hours with a standard deviation of 117.251 hours. From the interval estimation results it was concluded that 95% believed the average hours of respondent training was between 7.08-47.78 hours. The average motivation score of respondents was 94.12 with a standard deviation of 20.052. From the interval estimation results it was concluded that 95% believed the average score of respondents' motivation was between 90.64-97.6. The average respondent management score is 120.04 with a standard deviation of 24.523. From the interval estimation results it was concluded that 95% believed the average score of respondents' motivation was between 115.78-124.29.

External factors that affect work productivity will be presented as follows: work environment, achievement opportunities, work climate, income, workload, work ethic, and work discipline.

**Table 2** Distribution of Respondents by Work Environment, Opportunities for Achievement, Work Climate, Income, Workload, Work Ethos, and Work Discipline

Variable	N	Mean	Median	SD	Min – Max	95% CI
Work Environment	130	109,58	113	18,3	32-130	106,4-112,75
Opportunities for achievement	130	43,75	49	19,483	0-80	40,37-47,13
work climate	130	152,37	158,5	24,701	26-190	148,08-156,66
Income	130	32,39	33	11,701	0-50	30,36-34,42
Workload	130	57,2	59	15,057	12-80	54,59-59,81
Work Ethos	130	93,7	91	16,14	28-120	90,9-96,5
Work Discipline	130	80,78	81,5	13,728	14-100	78,4-83,17

Table 2 shows that the average score of respondents' work environment was 109.58 with a standard deviation of 18.3. From the interval estimation results it was concluded that 95% believed the average score of respondents' work environment was between 106.4-112.75. The average score of respondents' opportunities for achievement is 43.75 with a standard deviation of 19.483. From the interval estimation results it was concluded that 95% believed the average score of respondents' opportunities for achievement was between 40.37-47.13. The average score of the respondent's work climate was 152.37 with a standard deviation of 24.701. From the interval estimation results it was concluded that 95% believed the average work climate score of respondents was between 148.08-156.66. The average score of respondents' income was 32.39 with a standard deviation of 11.701. From the interval estimation results it was concluded that 95% believed the average score of respondents' income was between 30.36-

34.42. The average score of respondents' workload was 57.2 with a standard deviation of 15.057. From the estimated interval results it was concluded that 95% believed the average score of respondents' workload was between 54.59-59.81. The average score of respondents' work ethos. Based on the interval estimation results it was concluded that 95% believed the average score of the work ethic of the respondents was between 90.9-96.5. The average score of respondent's work discipline is 80.78 with a standard deviation of 13.728.as 93.7 with a standard deviation of 16,140. From the interval estimation results it was concluded that 95% believed the average score of the work discipline of respondents was between 78.4-83.17.

Nurse work productivity at RSUD Dr. M. Yunus Bengkulu will be presented in table 3.

Table 3: Distribution of Respondents Based on Work Productivity

Variable	N	Mean	Median	SD	Min -	95% CI
Work Productivity	130	184,13	180	20,230	133-265	180,62-

Table 3. shows that the average work productivity score of the respondents was 184,13 with a standard deviation of 20,230. From the interval estimation results it was concluded that 95% believed the average score of respondents' work productivity was between 180.62-187.64.

Table 4: The Relationship of Age, Education, Training, Length of Work, Motivation, Management, Work Environment, Opportunity for Achievement, Work Climate, Income, Workload, Work Ethic, and Work Discipline with the Nurse's Work Productivity

Variabel	r	p value
Age	-0,094	0,290
Education	0,023	0,793
Length Of Work	-0,115	0,194
Training	0,049	0,577
Motivation	0,092	0,297
Management	0,345	0,000
Work Environment	0,118	0,183
Opportunities achievement	0,125	0,156
Work Climate	0,232	0,008
Income	0,129	0,142
Workload	0,378	0,000
Work Ethos	0,512	0,000
Work Disclipne	0,473	0,000

The analysis result of table 4. Show that the relationship between age and work productivity of nurses showed a very weak relationship ( $r = -0.094$ ). Statistical test results also showed that there's nothing significant relationship between age and nurse work productivity ( $p = 0.290$ ). The relationship between education and work productivity of nurses showed a very weak relationship ( $r = 0.023$ ). Statistical test results also showed no significant relationship between education and nurse work productivity ( $p = 0.793$ ). The relationship between training and nurse work productivity shows a very weak relationship ( $r = 0.049$ ). Statistical test results also showed that there's nothing significant relationship between training and nurse work productivity ( $p = 0.577$ ).

The relationship between length of work with nurse work productivity shows a very weak relationship ( $r = -0.115$ ). Statistical test results also show that there's nothing significant relationship between length of work with nurse work productivity ( $p = 0.194$ ). The relationship between motivation and work productivity of nurses showed a very weak relationship ( $r = 0.092$ ). Statistical test results also showed a significant relationship between motivation and nurse work productivity ( $p = 0.297$ ). The relationship between management and nurse work productivity shows a weak relationship ( $r = 0.345$ ). Statistical test results also showed a significant relationship between management and nurse work productivity ( $p = 0.000$ ).

The relationship between work environment and nurse work productivity showed a very weak relationship ( $r = 0.118$ ). Statistical test results also showed a significant relationship between work environment and nurse work productivity ( $p = 0.183$ ). The relationship between opportunities for achievement with nurse work productivity shows a very weak relationship ( $r = 0.125$ ). Statistical test also showed a significant relationship between opportunity for achievement and nurse work productivity ( $p = 0.156$ ). The relationship between work climate and nurse work productivity shows a weak relationship ( $r = 0.232$ ). Statistical test results also showed a significant relationship between work climate and nurse work productivity ( $p = 0.008$ ).

The relationship between income and work productivity of nurses showed a very weak relationship ( $r = 0.129$ ). Statistical test also showed a significant relationship between income and nurse work productivity ( $p = 0.142$ ). The relationship between workload and nurse work productivity shows a weak relationship ( $r = 0.378$ ). Statistical test results also showed a significant relationship between workload and nurse work productivity ( $p = 0.000$ ). The relationship between work ethos and nurse work productivity shows a moderate relationship ( $r = 0.512$ ). Statistical test results also showed a significant relationship between work ethos and nurse work productivity ( $p = 0.000$ ). The relationship between work discipline with nurse work productivity shows a moderate relationship ( $r = 0.473$ ). Statistical test results also showed a significant relationship between work discipline and nurse work productivity ( $p = 0.000$ ).

### **Multivariate Analysis**

Multivariate analysis use the factor analysis of the independent variables (age, education, training, length

of work, motivation, management, work environment, opportunity for achievement, work climate, income, workload, work ethic, and work discipline) that affect nurse work productivity. Through this factor analysis expected to produce one or several sets of variables that are fewer than the number of previous variables after analysis. The results of the factor analysis are as follows:

### Correlation Test and Variable Feasibility

The first stage of factor analysis is to assess variables that are considered appropriate to be included in the next analysis. This analysis is done by entering all variables. At this stage also tested the correlation of variables that exist using the Bartlett Test and the Kaiser Meyer Olkin Measure of Sampling Adequacy (MSA). Bartlett test and MSA test carried out to assess the feasibility of a variable to be analyzed using factor analysis. Bartlett test carried out to test the correlation between variables because the desired result in factor analysis is a high correlation between variables. The correlation will be high if the Bartlett test p value  $<0.05$  so that the process can proceed.

MSA test is a test used to measure homogeneity between variables and filtering between variables so that only variables that meet the requirements can be further processed, namely variables with an MSA value of 0.5 - 1.0. MSA value = 1, meaning that the variable can be predicted without error by other variables. MSA value = 0.5 means that the variable can be predicted and can be further analyzed. MSA value  $<0.5$ , meaning that the variable cannot be predicted and cannot be further analyzed, or excluded from other variables (Santoso, 2002).

**Table 5.** KMO and Bartlett Test Results in the First Step Analysis of Factors that Influence the Productivity of Nurses

Kaiser Meyer Olkin Measure of Sampling Adequacy (MSA)	Bartlett's Test of Sphericity		
	X <sup>2</sup>	df	p
0,775	766,549	78	0,000

The results of the analysis in table 5. Showed that the KMO value =  $0.775 > 0.5$  and the Bartlett test with a value of  $p = 0.000 < 0.05$  means the variables are correlated and can be processed further. The MSA value can be seen in the anti-image correlation matrix value. If there is a MSA value of initial variables less than 0.5, one must be excluded from the analysis, sorted from the variables that have the smallest MSA value and the test is repeated (Santoso, 2002).

MSA value of the variables that affect the work productivity of nurses in nurses inpatients Dr. M. Yunus Bengkulu is age: 0.507, education: 0.649, training: 0.455, length of work: 0.501, motivation: 0.818, management: 0.866, work environment: 0.853, opportunity for achievement: 0.618, work climate: 0.868, income: 0.801, workload: 0.728, work ethic: 0.813, and work discipline 0.850. MSA value of the training variable =  $0.455 < 0.5$ , then the research variables were excluded from the analysis.

**Table 6:** KMO and Bartlett Test Results in the Final Step Analysis of Factors that Influence to the Productivity of Nurses

Kaiser Meyer Olkin Measure of Sampling Adequacy (MSA)	Bartlett's Test of Sphericity		
	X <sup>2</sup>	df	p
0,779	760,229	66	0,000

The results of the analysis show the value of KMO = 0.779 > 0.5 and the Bartlett test with value of p = 0.000 < 0.05 means that the variables are correlated and can be processed further.

**Table 7:** The Values of Measure of Sampling Adequacy (MSA) Variables in the Final Step Analysis of Factors that Influence to the Productivity of

No.	Variable	MSA Value
1.	Age	0.513
2.	Education	0,658
3.	Length of working	0,507
4.	Motivation	0,818
5.	Management	0,865
6.	Work environment	0,853
7.	Opportunity for achievement	0,616
8.	Work climate	0,867
9.	Income	0,801
10.	Workload	0,727
11.	Work ethos	0,818
12.	Work discipline	0,856

Based on table 7. the value of MSA variables that affect to the work productivity of nurses in the inpatient hospital Dr. M. Yunus Bengkulu > 0.5, then there are nothing the variables that are excluded from the analysis and can be further processed.

### Factor and Rotation

The next step of factor analysis is factoring / extraction of avariables, so that one or more factors are formed. After one or more factors are formed, with a factor containing a number of variables, where there is a possibility that one of the variables is difficult to determine which factor will be included or if the factor formed by the factoring process is only one factor, then to overcome this rotation process carried out the factors formed to clarify the position of a variable. The method used is Principal Components Analysis (PCA) and the rotation process (Santoso, 2002).

**Table 8:** Contribution of Extraction Results to Analysis of Factors that Influence the Productivity of Nurses

No.	Variable	Extraction
1.	Age	0,832

2.	Education	0,264
3.	Length of working	0,784
4.	Motivation	0,846
5.	Management	0,825
6.	Work environment	0,721
7.	Opportunity for achievement	0,843
8.	Work climate	0,783
9.	Income	0,813
10.	Workload	0,826
11.	Work ethos	0,715
12.	Work discipline	0,624

Table 5.8 shows the contribution of extraction results variable shows the value of the variable to the formed factor. The greater the contribution of a variable, the more closely related to the factors formed. The age variable has a number of 0.832, this means that about 83.2% of the variance of the age variable can be explained by the factors formed. Likewise, so on with other variables. Furthermore, from Table 5.8 will show more specific extraction results using the Principal Components Analysis (PCA) method seen at the Eigenvalue greater than or equal to 1.0. The specific results of PCA extraction will shown in Table 9. The results of PCA extraction are as follows:

Table 9: PCA Extraction Results in Analysis of Factors that Influence the Productivity of Nurses

No.	Factor	Initial Eigenvalues		
		Total	% Variant	% Cumulative
1.	1	4,527	37,728	37,728
2.	2	1,867	15,555	53,283
3.	3	1,479	12,324	65,607
4.	4	1,003	8,360	73,967
5.	5	0,888	7,399	81,366
6.	6	0,630	5,247	86,612
7.	7	0,366	3,051	89,663
8.	8	0,332	2,765	92,428
9.	9	0,265	2,211	94,639
10.	10	0,237	1,979	96,618
11.	11	0,220	1,834	98,452
12.	12	0,186	1,548	100,000

In Table 9. PCA Extraction results is tables of the results of extraction of a number of variables that affect



the productivity of nurses' work in hospital inpatient room. The total variables that have correlations are 12 variables. Each variable has a variance of 1 so that the total of all variances is 12. If the 12 variables are summarized into one factor, the variance that can be explained by one of these factors is  $4,527 / 12 \times 100\% = 37,728\%$ .

The number of eigenvalues for the twelve variables is equal to the total of all variances, namely:  $4,527 + 1,867 + 1,479 + 1,003 + 0,888 + 0,630 + 0,366 + 0,332 + 0,265 + 0,237 + 0,220 + 0,186 = 12$ . The number of eigenvalues is always sorted from the largest to the smallest with the criterion that the number of eigenvalues below 1 is not used in calculating the number of factors formed. From table 5.9 based on eigenvalues  $\geq 1$ , it can be seen that there are four factors that are formed with eigenvalues: 4,527, 1,867, 1,479, and 1,003 (Santoso, 2002).

Furthermore, after four factors are formed, the distribution of the variables in the four factors is as follows.

Table 10: Component Matrix Before Rotation in Analysis of Factors that Influence the Productivity of Nurses in the

No	Variabel	Component			
		1	2	3	4
1.	Age	0,058	0,899	0,122	-0,069
2.	Education	0,123	0,428	0,238	0,095
3.	Length of working	-0,052	0,849	0,230	-0,086
4.	Motivation	0,776	0,006	-0,364	-0,333
5.	Management	0,816	-0,099	-0,010	-0,385
6.	Work environment	0,799	-0,007	0,070	-0,279
7.	Opportunity for achievement	0,473	0,233	-0,730	0,180
8.	Work climate	0,861	0,109	-0,115	0,131
9.	Income	0,638	0,129	-0,291	0,552
10.	Workload	0,588	-0,141	0,471	0,489
11.	Work ethos	0,672	-0,183	0,466	0,112
12.	Work discipline	0,656	-0,090	0,383	-0,198

Table 10. shows the magnitude the correlation of the variables on the four factors formed (regardless of the value - and +). The age variable entered into component factor 2 because it has the highest loading factor number in component number 2 which is 0.899. Therefore, there are still variables which not clear yet to include in one of the factors such as the workload variable which has a correlation number of 0.588 at factor 1, 0.471 at factor 3 and 0.489 at factor 4, so the rotation process is necessary.

The results of rotation of 12 variables can be seen in the component matrix in table 11 which shows a clearer and more obvious variable distribution.

Table 11. The Component Matrix After Rotation in Analysis of Factors that Influence the Productivity of Nurses in the Inpatient Room of RSUD Dr. M. Yunus Bengkulu

No	Variabel	Component			
		1	2	3	4
1.	Age	0,036	0,097	-0,110	0,900
2.	Education	0,009	0,026	0,181	0,480
3.	Length of working	-0,032	-0,049	-0,092	0,878
4.	Motivation	0,801	0,443	-0,068	-0,057
5.	Management	0,876	0,163	0,169	-0,050
6.	Work environment	0,790	0,171	0,256	0,057
7.	Opportunity for achievement	0,222	0,869	-0,193	0,024
8.	Work climate	0,563	0,559	0,378	0,102
9.	Income	0,118	0,798	0,400	0,047
10.	Workload	0,146	0,147	0,885	0,011
11.	Work ethos	0,456	-0,009	0,712	-0,015
12.	Work discipline	0,637	-0,092	0,454	0,059

The results of rotation in table 11. indicate that they already have a group of factors, namely:

1) Factor 1 consists of 5 development variables, namely motivation (0.801), management (0.876), work environment (0.790), work climate (0.563), and work discipline (0.637). Factor 1 is named the **Work Support Factor**

Equation for factor 1: 0,801 Motivation + 0,876 Management + 0,790 work environment + 0,563 work climate + 0,637 work discipline

2) Factor 2 consists of 2 forming variables, namely opportunity for achievement (0.869) and income (0.798). Factor 2 is named the **Reward System Factor**.

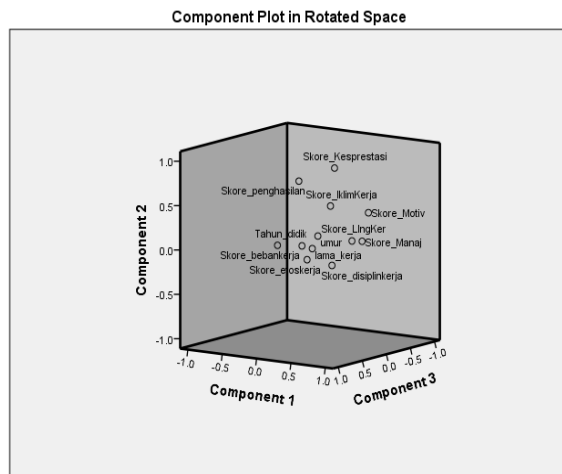
Equation for factor 2: 0.869 chance of achievement + 0.798 income

3) Factor 3 consists of 2 development variables, namely workload (0.885) and work ethic (0.712). Factor 3 is named the **Occupational Factor**.

Equation for factor 3:  $0.885 \text{ workload} + 0.712 \text{ and work ethos}$ .

4) Factor 4 consists of 3 development variables, namely age (0.900), education (0.480), and length of work (0.878). Factor 4 is named the **Individual Characteristic Factor**.

Equation for factor 4:  $0.900 \text{ age} + 0.480 \text{ education} + 0.878 \text{ Length of working}$ .



**Figure 1.** *Component Plot In Rotated Space*

Figure 1. shows a picture of the twelve variables of all four factors. This picture is a media to clarify the location of a variable in a factor.

## Factor Validation

**Table 12**

The Component Matrix sample no. 1-65 Analysis of Factors that Influence the Productivity of Nurses in the Inpatient Room of RSUD Dr. M. Yunus Bengkulu

N o.	Variable	Component			
		1	2	3	4
1.	Age	0,010	0,84 4	0,35 4	- 0,051
2.	Education	0,135	0,30 2	0,40 8	0,759
3.	Length of working	- 0,163	0,68 9	0,51 4	- 0,298
4.	Motivation	0,840	0,10 5	- 0,23 0	0,270
5.	Management	0,903	- 0,11	0,05 4	0,147

			0		
6.	Work environment	0,816	- 0,01 9	0,09 0	- 0,062
7.	Opportunity for achievement	0,369	0,57 0	- 0,63 4	0,136
8.	Work climate	0,881	0,16 4	- 0,11 1	- 0,063
9.	Income	0,610	0,46 0	- 0,32 2	- 0,304
10.	Workload	0,735	- 0,20 4	0,22 8	- 0,374
11.	Work ethos	0,729	- 0,28 8	0,38 6	- 0,091
12.	Work discipline	0,746	- 0,24 9	0,23 6	0,097

**Table 13**

Component Matrix sample no. 66-130 Analysis of Factors that Influence the Productivity of Nurses in the Inpatient Room of RSUD Dr. M. Yunus Bengkulu

N o.	Variable	Component			
		1	2	3	4
1.	Age	0,093	0,817	-0,405	0,105
2.	Education	0,032	0,519	0,309	0,434
3.	Length of working	0,084	0,812	-0,374	0,02
4.	Motivation	0,726	-0,26	-0,419	0,12
5.	Management	0,649	-0,18	-0,348	- 0,147
6.	Work environment	0,74	- 0,017	-0,18	- 0,165
7.	Opportunity for	0,662	- 0,247	-0,088	0,504

	achievement				
8.	Work climate	0,794	0,101	0,053	0,249
9.	Income	0,674	- 0,081	0,443	0,182
10.	Workload	0,244	0,322	0,756	0,014
11.	Work ethos	0,571	0,139	0,425	- 0,373
12.	Work discipline	0,532	0,257	0,024	- 0,638

Tabel 14: The Final Results of the Multiple Logistic Regression Test Modeling Prediction between Independent Variables (Work Support Factors, Reward System Factors, Occupational demands Factors and Individual Characteristics Factors) with Nurse Work Productivity in the Inpatient Room Dr. M. Yunus Bengkulu

Variable	B	P wald	OR	95% CI
<b>Occupational demands Factors</b>	0,824	0,023	2,280	1,123-4,630
<b>Constant</b>	- 0,670			

-2 Log likelihood : 172,925    G : 5,319    pvalue=  
0,021

Based on table 14 showed that the factors that influence the work productivity of implementing nurses in the inpatient room of RSUD Dr. M. Yunus Bengkulu is a factor in occupation demands. The OR value of the occupational demands factor is 2,280 (95% CI: 1,123-4,630), which means the odds of respondents with low perceptions about the factors of occupational demands for doing low work productivity are 2,280 times the odds of nurses who have high perceptions about occupational demands factors, or nurses who having a low perception of occupational demands is 2,280 times as likely to have low work productivity compared to nurses who have a high perception of occupational demands.

## Discussion

### The productivity of the nurses in the inpatient room

Productivity is a measure of efficiency and productivity, that is, between output and input. Renewed with labor, while issued in physical ties, form and value (Sutrisno, 2014).

The results of research showed that the average work productivity score of respondents was 184.13 with a standard deviation of 20.230. The average productivity score is above the middle value of the total productivity score of 130, It is mean that the productivity of nurses' work in the inpatient room of RSUD

Dr. M. Yunus Bengkulu is considered good.

Productivity is the goal of every type of organization, including nursing services, with high work productivity of nurses, then the service in hospitals will be better and the quality of health services can be improved. Improvement work productivity is shown to increase profits in nursing organizations, including to be able to improve the progress of nurses and increase client satisfaction as recipients of nursing services (Fajariadi, 2014).

Hasibuan (2003), generally states that productivity is defined as a comparison between outputs and inputs. Gibson (1997) states that productivity reflects the ability to produce the number and quality of outputs needed with the benefits, the success of good service, increased activity and the presence of feedback.

The results of this research suitable with the results of Susanti (2014) research that nurses who have poor work productivity are 49% and 51% with good work productivity. then, the results of Minarsi's research (2011) showed that 45.3% of nurses' work productivity was in the high category.

### **Factors that Influence the Nurse's Work Productivity**

#### **Age**

The result of this research showed that the average age of respondents was 35.68 years with a standard deviation of 4.956 years. The relationship between age and nurse work productivity shows a very weak relationship ( $r = -0,094$ ). Statistical test results also show that there is nothing significant relationship between age and nurse work productivity ( $p = 0.290$ ). The result of this research suitable with Hallatu's research (2015) where nurses are in the age range of 35-40 years (40.7%).

The results of this research is not suitable with the opinion of Ilyas (2001) that age is one of the personnel factors that influence work productivity. Thus according to Robbins (2001) that there is a belief that productivity will decline with one's aging. This is often associated with an individual's skills, especially speed, dexterity, strength and coordination will decrease with the passage of time.

The results of this research suitable with the research of Priyanto (2014), that age has a significant influence on employee work productivity ( $p = 0.049$ ). According to Simaniuntak (1985) that work performance increases with age, then decreases towards old age and the highest productivity is at the age of 35-39 years. In addition, the bored factor in work who monotonous and the lack of intellectual stimulation will be able to contribute to reduced productivity. According to Siagian (2000), another factor that can influences work productivity is maturity (age), technical and psychological maturity can create they are able to make wise decisions.

#### **Education**

According to Sikula in Mangkunegaran (2004) that the level of education is a long-term process that uses

a systematic and organized process, where managerial staff learns conceptual and theoretical knowledge for one's educational goals. Employees can increase company competitiveness and improve company performance.

The results of this research show that the average length of education of respondents was 4.3 years with a standard deviation of 0.945 years. The relationship between education and work productivity of nurses showed a very weak relationship ( $r = 0.023$ ). The Statistical test results also show that there is nothing significant relationship between education and nurse work productivity ( $p = 0.793$ ). The results of this research it is not suitable with the opinion of Siagian (2000) who states that the higher a person's education, the greater their desire to utilize their knowledge and skill they have. The results of this research suitable with the research of Fajariadi (2014), which show that the majority of nurses with a Bachelor's Degree in Nursing with 4-5 years of education (63.3%).

### Length of Working

The result of this research show that the average length of work of respondents was 10.86 years with a standard deviation of 4.345 years. The relationship between length of work with nurse work productivity shows a very weak relationship ( $r = -0.115$ ). Statistical test results also show that there is nothing significant relationship between length of work with nurse work productivity ( $p = 0.194$ ). The results of this research suitable with Hallatu's research (2015) which shows that nurses' working period is > 9 years (44.8%).

The results of this research suitable with the opinion of Robbins (1998), who states that seniority is not a good predictor of productivity. Several research about relationship between seniority and productivity show that there is no strong evidence that people who have long been in a job will be more productive than those with lower seniority. The results of this research it is not suitable with the opinion of Siagian (2000), where the length of working will affect the someone experience, the longer of will create more experience so that work productivity can increase.

### Training

Training is part of the education process to gain the knowledge and skills (Notoatmodjo, 2010). According to Erik (2006) training is a short-term educational process that uses systematic and organized procedures so that non-managerial personnel can learn knowledge and technical skills for specific goals. This is suitable with what was stated by Rivai, (2005) that "job training for employees goal at the evaluation and development process to achieve employee self-assessment".

The results of this research show that the average length of training of respondents was 27.43 hours with a standard deviation of 117.251 hours. The relationship between training and nurse work productivity shows a very weak relationship ( $r = 0.049$ ). Statistical test results also show that there is nothing significant relationship between training and nurse work productivity ( $p = 0.577$ ). The results of this research suitable with the research of Priyanto (2014), that training not give significant influence to

employee productivity ( $p = 0.119$ ). But this is not suitable with research of Putri, et al (2014) showed that training is related to the work productivity of nurses in hospitals ( $p = 0.006$ ).

### **Motivation**

The factors that cause someone to work is motivation. Motivation is a concept used to describe the extrinsic conditions that stimulate behavior and the intrinsic response shown in behavior (Swansburg, 1999).

The result of this research show that the average score of motivation of respondents was 94.12 with a standard deviation of 20.052. The relationship between motivation and nurse work productivity shows a very weak relationship ( $r = 0.092$ ). Statistical test results also show that there is nothing significant relationship between motivation and nurse work productivity ( $p = 0.297$ ). The results of this research suitable with Hallatu's (2015) research, that there is influence between intrinsic motivation and extrinsic motivation to nurse work productivity ( $p = 0,000$ ). Then, the research of Putri, et al (2014) shows that motivation is related to the work productivity of nurses in the hospital ( $p = 0.039$ ), Susanti (2014) research also shows that motivation is related to the work productivity of nurses in hospitals ( $p = 0.025$ ). According to Gibson (2001) motivation is a psychological process that reflects the interaction between attitudes, needs, perceptions and decisions that occur in a someone (intrinsic) in the form of personality, attitudes, experience, education, expectations and others and is caused by factors external self (extrinsic) in the form of the influence of leaders and other factors that are very complex.

### **Management**

Productivity is related to environmental factors, personal factors, organizational factors, and management factors. Thus, the performance of a person processes very dynamically in an individual and is influenced by internal and external factors where the individual is (Ilyas, 2001). High performance of employees can be achieved by harmonizing the criteria and requirements for all staff, developing learning organizations, designing jobs to fully utilize the skills and abilities to provide information on performance and prospects for the organization, using internal promotion if possible, using job security policies and using merit elements in wages staff (Wibowo, 2007).

The results of this research show that the average score of respondents' management was 120.04 with a standard deviation of 24.523. The relationship between management and nurse work productivity shows a weak relationship ( $r = 0.345$ ). Statistical test results also showed a significant relationship between management and nurse work productivity ( $p = 0,000$ ). The results of this research is supported by research of Pangemanan et al (2014) that there is a significant relationship between time management and the work productivity of implementing nurses ( $p = 0.004$ ). Then, Susanti's research (2014) shows that management is related to the work productivity of nurses in hospitals ( $p = 0.001$ ). But thi is not suitable with research of Putri , et al (2014) where states that management is not have related to the work productivity of nurses in the hospital ( $p = 1,000$ ).



## Work Environment

According to Gibson (1998), work environment is a set of traits that are felt directly or indirectly by worker, and have a major influence on their behavior in the job. The results of this research show that the average score of the respondent's work environment was 109.58 with a standard deviation of 18.3. the relationship between work environment with nurse work productivity shows a very weak relationship ( $r = 0.118$ ). Statistical test results also show that nothing significant relationship between work environment and nurse work productivity ( $p = 0.183$ ).

The results of this research suitable with research of Susanti (2014) where states that the work environment is not related to the work productivity of nurses in hospitals ( $p = 0.091$ ). but, the results of this research is not suitable with the research of Maimun and Aryani (2015) where states that there is a significant relationship between work environment and nurse work productivity ( $p = 0.005$ ).

According to Wireman (2007) the work environment is a perception of members organization (individually or in groups) and those who are appropriately related to the organization (eg suppliers, consumers, consultants, and contractors) about what is or happens in the organization's internal environment routinely which influences the attitude and behavior of the organization and the organizational manager who then determine the organization's performance.

## Opportunity for achievement

According to Herzberg, if employees have a positive perception of their work assignments, the level of satisfaction is usually high and it is better than when employees view work assignments negatively so the level of satisfaction is also low (Siagian 2009).

The results of this research show that the average of opportunity for achievement score was 43.75 with a standard deviation of 19.483. The relationship between opportunities for achievement with nurse work productivity show a very weak relationship ( $r = 0.125$ ). Statistical test results also show that there is nothing significant relationship between opportunities for achievement and nurse work productivity ( $p = 0.156$ ). The results of this research suitable with research of Susanti's (2014) show that the opportunity for achievement is related to the work productivity of nurses in hospitals ( $p = 0.006$ ).

The results of this research suitable with the opinion of Sedamayanti (2009), who states that if opportunities for achievement is open, will cause psychological encouragement to improve work productivity. Employees who work certainly expect an increase in self-potential, if there is an opportunity to present it will increase productivity.

## Work Climate

The results of this research show that the average work climate score of respondents was 152.37 with a standard deviation of 24.701. The relationship between work climate and nurse work productivity show that a weak relationship ( $r = 0.232$ ). Statistical test results also showed a significant relationship between

work climate and nurse work productivity ( $p = 0.008$ ). The results of this research suitable with the research of Putri, et al (2014) show that work climate is related to the work productivity of nurses in hospitals ( $p = 0.012$ ). But it is not supported by Fajariadi's research (2014) which shows there is no significant relationship between work climate and work productivity ( $p = 0.382$ ).

Work climate is related with the environment that exists or is faced by humans who are in an organization that affects someone who is doing a job or job. Marquis and Huston who states that in an effort to empower nursing staff, organizational aspects needed were philosophical, organizational structure, responsibilities, cooperative or coordinating relationships, performance standards and nurse autonomy. If these aspects not good enough attention, it will create not conducive conditions (Setiadi, 2009).

### Income

The income level is anything that employees receive as a reward for their work. Therefore, if employees have perception their salary as inadequate, their work performance, motivation and job satisfaction can drop dramatically (Wahyuningtyas, 2013). If the level of income is adequate, it can create concentration of work and capabilities that can be used to increase productivity. The level of income is the level of income obtained by each individual as a reward who obtained from economic activities carried out by these individuals (Carnadi, 2010).

The results of this research show that the average score of respondents' income was 32.39 with a standard deviation of 11.701. The relationship between income and work productivity of nurses showed a very weak relationship ( $r = 0.129$ ). Statistical test results also show that there is nothing significant relationship between income and nurse work productivity ( $p = 0.142$ ). The results of this research suitable with research of Susanti (2014) who states that income is not related to the work productivity of nurses in the hospital ( $p = 0.522$ ).

The results of this research suitable with the research of Maimun and Aryani (2015) who states that there is a significant relationship between salary and nurse work productivity ( $p = 0.000$ ). Then, research by Putri, et al (2014) which shows that salary is related to the work productivity of nurses in hospitals ( $p = 0.001$ ).

### Workload

Workload is an effort to specify the components and target work volume in a time unit and output unit (Hasibuan, 2002). Marquish (2000) define that the workload of nurses is all activities or activities carried out by a nurse while working in a nursing service unit. Work load is usually interpreted as patient days which refers to the number of procedures, examinations, visits (visite) to patients, injections and so on.

The result of this research show that the average score of respondents' workload was 57.2 with a standard deviation of 15.057. The relationship between workload and nurse work productivity shows a weak relationship ( $r = 0.378$ ). Statistical test results also showed a significant relationship between

workload and nurse work productivity ( $p = 0,000$ ). The result of this research suitable with the research of Minarsi (2011) who states that there is a relationship between nurses workload and nurse work productivity.

Munandar (2008) said that excessive workloads and too little workload it will be stressors. Workloads can be further distinguished in quantitative / excessive workloads, arising from tasks that are too much /too little given to the workforce to be completed within a certain period of time. Workload is excessive / too little qualitatively, i.e. if people are unable to perform a task, or the task does not use the skills and / or potential of the workforce. In addition, excessive workload quantitative and qualitative workloads can lead the need to work for very many hours, which is an additional source of stress.

Gillies (1996) states that to estimate the nurse's workload on a unit, managers must collect data about: the number of patients entering the unit every day / month / year, the condition or level of patient dependence, in that unit, on average patient care day, type of nursing action required by the patient, frequency of each nursing action needed by the patient, average time required to provide nursing action. Initially the number of patients was used as a reference to determine the nurse's workload. This method is very weak because it is not consider the patient's condition. Furthermore, developing based on disease diagnosis, even this method has not been able to describe the workload properly because it is not consider difference in age, sex, social background, personality and previous health status that affect the patient's response to the disease and its treatment (Gillies, 1996) .

### Work Ethos

According to Damayanti (2008), work ethos is all good habits based on ethics that must be carried out in the workplace. The work ethic in the organization includes motivations, main characteristics, basic spirit, basic thoughts, code of ethics, moral code, code of conduct, attitudes, aspirations, beliefs, principles and standards that become the basis for behavior and values adopted by human individuals in their organizations or social contexts.

The results of this research show that the average score of respondents' work ethos was 93.7 with a standard deviation of 16,140. The relationship between work ethic and nurse work productivity shows a moderate relationship ( $r = 0.512$ ). Statistical test results also showed a significant relationship between work ethos and nurse work productivity ( $p = 0,000$ ). The results of this research is not suitable with the research of Fajariadi (2014) which shows that there is no significant relationship between the work climate ethos and work productivity ( $p = 0.154$ ). Likewise, research by Putri, et al (2014) showed that work ethos is not related with the work productivity of nurses in hospitals ( $p = 0.273$ ).

The results of this research suitable with the opinion of Priyanto (2000) that work ethos is an important part of human success, include in a limited work community, and in the wider social environment. With high work ethos the company or organization will be able to increase productivity as expected. Improving the work ethos in the organization is the duty and responsibility of all layers, especially leaders in

fostering and guiding subordinates. so that they can work properly and correctly in accordance with their respective duties and functions. With a good work ethos it will create a conducive work atmosphere that will support the implementation of good tasks and provide a high level of productivity.

### **Work Discipline**

According to [Sastrohadiwiryono \(2002\)](#), work discipline can be defined as an attitude of respect, obedience to the applicable regulations, written and unwritten and able to carry it out and not avoid taking sanctions if it violates the duties and authority given to them.

The result of this research show that the average score of respondent's work discipline was 80.78 with a standard deviation of 13.728. The relationship between work discipline with nurse work productivity shows a moderate relationship ( $r = 0.473$ ). Statistic test result also showed a significant relationship between work discipline and nurse work productivity ( $p = 0,000$ ). The result of this research suitable with the research of [Fajariadi \(2014\)](#) where show that there is nothing significant relationship between work discipline and work productivity ( $p = 0.005$ ).

The results of this research suitable with the opinion of [Ilyas \(2001\)](#) who suggests that one of the decreases in company productivity is caused by the work behavior of employees who lack discipline, which is shown by the behavior of employees who often skip classes, fall asleep when working, or go home. Work discipline is one of the regulation (at school, in the office, military), obedience (adherence) (Depdiknas, 2002).

### **Analysis the factors who affect nurse work**

Based on the result of the factor and rotation there are three factors who had formed. These three factors affect the work productivity of nurses in hospital inpatient rooms, namely work support factors, reward system factors, job demands, and individual characteristics.

#### **First Factor (Work Support Factor)**

Based on the result of this research, the first factor formed from the factor analysis process is named the work support factor which has 5 variables namely motivation, management, work environment, work climate, and work discipline. This factor is the biggest factor formed from factor analysis who has a data diversity of 37.72%, it is mean that the work productivity of nurse in the inpatient room is determined by the work support factor of 37.72% and make it the most important factor who affecting the work productivity of nurse. The value of factor loading variables in work support factors is in the range of 0.563 to 0.876. The management variable has the highest factor loading value of 0.876 which indicates that management greatly influences the work productivity of nurses in the inpatient room of the hospital. The second biggest variable is motivation who has a factor loading value of 0.801. The third variable is the work environment with a factor loading value of 0.790. The fourth variable is the work climate with a factor loading value of 0.563. The fifth variable is work discipline with a factor loading value of 0.637.

### **Second Factor (Reward System Factor)**

Based on the result of this research, the second factor that was formed from the factor analysis process was named the reward system factor who has 2 variables, namely opportunity for achievement and income. This factor has a diversity of data of 15.55%, it is mean that the work productivity of nurses in the inpatient factor is determined by the rewards system factor of 15.55%. The value of factor loading variables in reward system factor is in the range of 0.798 to 0.869. Opportunity for achievement variable has the highest factor loading value of 0.869 which indicates that the opportunity for achievement greatly affects the work productivity of nurses in hospital hospitalizations. The second largest variable is income which has a factor loading value of 0.798.

### **Third Factor ( Job Demand Factor )**

Based on the result of this research, the third factor who formed by the factor analysis process is named the job demands factor who has 2 variables namely workload and work ethic. This factor has a diversity of data of 12.32%, meaning that the work productivity of nurses in the inpatient factor is determined by the factor of job charges of 12.32%. The factor loading value of the variables in the job demand factor is in the range of 0.712 to 0.885. Workload variable has the highest factor loading value of 0.885 which indicates that workload greatly affects the work productivity of nurses in hospital hospitalizations. The second largest variable is the work ethic with a factor loading value of 0.712.

### **Fourth Factor (Individual Characteristics Factor)**

Based on the result of this research, the fourth factor who formed from the factor analysis process is named individual characteristic factors who has 3 variables namely age, education, and length of work. This factor has a diversity of data of 8.36%, meaning that the work productivity of nurses in the inpatient factor is determined by individual characteristic factors of 8.36%. The factor loading values of variables in individual characteristic factors is in the range of 0.48 to 0.90. The age variable has the highest factor loading value of 0.90, which indicates that age greatly affects the work productivity of nurses in hospital hospitalizations. The second largest variable is the length of work which has a factor loading value of 0.87. The third variable is education which has a factor loading value of 0.48.

The most influential factor to the work productivity of implementing nurse in the inpatient room of RSUD Dr. M. Yunus Bengkulu is job demand factor. The OR value of the job demands factor is 2,280 (95% CI: 1,123-4,630), which means that the odds of respondents with low perceptions about work demand factors for doing low work productivity is 2,280 times the odds of nurses who have high perceptions about job demands factors. The leader of the room is expected to increase the variables contained in these factors, namely workload and work ethic.

### **Conclusion**

1. The average age of nurse is 35.68 years with a standard deviation of 4.956 years. The average length of education of nurses is 4.3 years with a standard deviation of 0.945 years. The average length of work of nurses is 10.86 years with a standard deviation of 4.345 years. The average duration of nurse

training was 27.43 hours with a standard deviation of 117.251 hours. The average nurse motivation score was 94.12 with a standard deviation of 20.052. The average nurse management score is 120.04 with a standard deviation of 24.523.

2. The average score of the nurse work environment is 109.58 with a standard deviation of 18.3. The average score nurse opportunities for achievement is 43.75 with a standard deviation of 19.483. The average score of nurse work climate is 152.37 with a standard deviation of 24.701. The average nurse income score is 32.39 with a standard deviation of 11.701. The average score of nurse workload is 57.2 with a standard deviation of 15.057. The average score of nurse work ethos was 93.7 with a standard deviation of 16,140. The average score of nurse work discipline is 80.78 with a standard deviation of 13.728.

3. The average work productivity score of nurse is 184.13 with a standard deviation of 20.230.

4. There is nothing significant relationship between age and nurse work productivity ( $p = 0.290$ ), there is nothing significant relationship between education and nurse work productivity ( $p = 0.793$ ), there is nothing significant relationship between training and work productivity nurses ( $p = 0.577$ ), there is nothing significant relationship between length of working with nurse work productivity ( $p = 0.194$ ), there is nothing significant relationship between motivation and nurse work productivity ( $p = 0.297$ ), there is a significant relationship between management and nurse work productivity ( $p = 0,000$ ), there is nothing significant relationship between work environment and nurse work productivity ( $p = 0.183$ ), there is nothing significant relationship between opportunities for achievement and nurse work productivity ( $p = 0.156$ ), there is a significant relationship between work climate and nurse work productivity ( $p = 0.008$ ), there is nothing significant relationship between income and work productivity nurse ( $p = 0.142$ ), there is a significant relationship between workload and nurse work productivity ( $p = 0,000$ ), there is a significant relationship between work ethos and nurse work productivity ( $p = 0,000$ ), and there is a significant relationship between work discipline and nurse work productivity ( $p = 0,000$ ).

5. There are four factors who affect the work productivity of nurse in hospital in the inpatient rooms, namely: work support factors (37.72%), reward system factors (15.55%), job recruitment factors (12.32%), and individual character-factors (8.36%).

6. The most influential factor to the work productivity of implementing nurses in the inpatient room of RSUD Dr. M. Yunus Bengkulu is job demand factor ( $OR = 2,280$  (95% CI: 1,123-4,630)).

#### **It is recommended to the RSUD Dr. M. Yunus Bengkulu:**

a. The sector of nursing can be taken by the leader of the room to attend training on room management, work, workload, work ethos and work discipline in order to make changes and increase these variables in hospitalization, increase the work productivity of nurse in the inpatient room.

b. The sector of nursing should improve the conditions of the most dominant factors who affecting nurse work productivity, namely the job demands consisting of workload variables and work ethos in order to increase the work productivity of implementing nurses, through workload measurement activities with direct observation and distributing nurses suitable with their workload each room. This will give the motivation / spirit, directing and direct supervision to the inpatient room to improve the work ethos of implementing nurses.

- c. The sector of nursing should make the regulation that each leader of the room have to make arrangements and increase management activities in the inpatient room includes: planning, organizing, directing, and controlling, so as to increase the work productivity of nurses.
- d. Conduct an assessment of the work productivity of implementing nurses by incorporating aspects of the assessment in the nurse work productivity assessment questionnaire, which is integrated with aspects of performance assesment at RSUD Dr. M. Yunus Bengkulu.

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