

ISSN 2685-032X



# SOUTH EAST ASIA NURSING RESEARCH

Available on : <https://jurnal.unimus.ac.id/index.php/SEANR>



SEANR

# Editorial Team



## Editor In Chief

**Ns. Aric Vranada, S,Kep. MSN.**  
University of Muhammadiyah Semarang, Indonesia

## Editorial Board

**Hiromi Ogasawara, MSN., Ph.D.**  
Kaikoukai Medical Foundation, Japan

**Dr. Edy Soesanto, S.Kp., M.Kes.**  
University of Muhammadiyah Semarang, Indonesia

**Antonio Coyoc, B.Sc. MSN.**  
Ministry of Health Belize, Belize

**Quyen Thao Nguyen, B.Mid. MNS.**  
University of Medicine and Pharmacy at Ho Chi Minh City,  
Viet Nam

**Lin CHun Shing, MNS.**  
Taipei Veterans General Hospital, Taiwan

**Ns. Satriya Pranata, M,Kep.**  
University of Muhammadiyah Semarang, Indonesia

**Ns. Desi Ariyana Rahayu, M,Kep.**  
University of Muhammadiyah Semarang, Indonesia

**Ns. Tri Nurhidayati, S.Kep, M.MedEd.**  
University of Muhammadiyah Semarang, Indonesia

**Ns. Dewi Setyawati, S,Kep. MNS.**  
University of Muhammadiyah Semarang, Indonesia



**Professor Junko Sugama**, [Scopus-ID: 6602310352], Kanazawa University, Japan

**Professor Chieh-Yu Liu**, [Scopus ID: 14060585600], National Taipei University of Nursing and Health Sciences, Taiwan, Province of China

**Professor Chia-Jung Hsieh**, [Scopus-ID: 7401724043], National Taipei University of Nursing and Health Sciences, Taiwan, Province of China

**Professor Chiou-Fen Lin**, [Scopus-ID: 25937370400], Taipei Medical University, Taiwan, Province of China

**Professor Tsae-Jyy Wang**, [Scopus-ID: 8332469900], National Taipei University of Nursing and Health Sciences, Taiwan, Province of China

**Professor Soh Kim Lam**, [Scopus-ID: 57204760022], Universiti Putra Malaysia, Malaysia

**Professor Zahrah Saad**, [Scopus-ID: 35741658000], Faculty of Nursing and Midwifery, MAHSA University, Malaysia

**Dr. Sandeep Poddar, Ph.D.**, [Scopus-ID: 21335539800], Lincoln University College, Malaysia

**Sriyani Padmalatha**, Ministry of Health Sri Lanka, Sri Lanka

**Dr. Mohammad Fatkhul Mubin**, [Scopus-ID: 57205695107], Universitas Muhammadiyah Semarang, Indonesia

**Dr. Abdul Aziz Alimul Hidayat**, [Scopus-ID: 57203654137], Universitas Muhammadiyah Surabaya, Indonesia

**Dr. Mundakir Mundakir**, [Scopus-ID: 57210859545], Universitas Muhammadiyah Surabaya, Indonesia

**I Gede Putu Darma Suyasa, Ph.D**, [Scopus-ID: 56124702600], Institut Teknologi dan Kesehatan Bali, Indonesia

**VOL 2, NO 1 (2020)  
TABLE OF CONTENTS**

**ARTICLES**

**Exploring the quality of life and its related factors among the elderly in Indonesia**

Indra Gunawan, Mei-Hsiang Lin, Hsiu-Chin Hsu

**Relationship between Active Physical Exercise And Sleep Quality With Physical Fatigue in Elderly**

Ramdhany Ismahmudi, Alfi Ari Fakhrurizal

**The Effectiveness of Prezi Web-Based Teaching Media to Improve Nursing Students' Comprehension**

Arief Yanto, Warsono Warsono

**The Role of Volunteers in Improving Services in Elderly Integrated Service Centers**

Edy Soesanto, Naufal Najib Abdurrahman

**Therapeutic effect of Al-Quran murattal (surah yusuf) on blood pressure level in pregnant women with preeclampsia**

Sri Rejeki, Sumastia Trimuliani, Machmudah Machmudah, Nikmatul Khayati

**Chickenpox prevention behaviour in the Ras Laffan Industrial City Qatar**

Djuhari Djuhari

**Implementation of The Tiered Supervision as a Supervision Function**

Retno Wahyu Nugrahini, Vivi Yosafianti Pohan



## Original Research

### Exploring The Quality of Life and The Related Factors among The Elderly

Indra Gunawan<sup>1</sup>, Mei-Hsiang Lin<sup>2</sup>, Hsiu-Chin Hsu<sup>3</sup>

<sup>1</sup> Universitas Muhammadiyah Tasikmalaya, Indonesia

<sup>2</sup> National Taipei University of Nursing and Health Sciences, Taiwan

<sup>3</sup> Chang Gung University of Science and Technology, Taiwan

#### Article Info

##### Article History:

Accepted January 27th, 2020

##### Keywords:

Elderly; Depression; Quality of Life

#### Abstract

As the rapidly growing population of elderly people in the world that means they would be facing all challenges to their quality of life. As age increases, quality of life is often reported to decline. They are also at risk of mental illness, neurological disorder and more health problems affecting their quality of life. Depression is a common mental disorder among the elderly. The objective of this study is to understand the relationship between depression and quality of life among the elderly in an Indonesian nursing home. This research use the descriptive correlational and cross-sectional design was applied. There were 114 elderly recruited by convenient sampling. The results of this study showed the mean age of the elderly was 71.2 at the time of data collection ranging from 65 to 76 years old. The variables associated with quality of life were age, gender, education, marital status, ethnicity, chronic disease, and depression status. Moreover, the study found that, as predictors, the variables that influenced the quality of life according to relevance were: age, depression status, and educational level. Age and depression status is recognized as significant predictors of the quality of life among the elderly in an Indonesian nursing home. The result of the study would serve as references to the future and related promotion for the same field of the study.

## INTRODUCTION

The elderly population in the world is increasing day by day. According to the United Nations in 2017 the population of elderly people age 60 or more was 962 million; twice in 1980, when there were 382 million elderly people worldwide. Moreover, by 2050, the number of elderly is expected to double, is projected to reach nearly 2.1 billion .<sup>1</sup>

Indonesia is one of top five most populous countries in the world and it is elderly

population is growing rapidly. Based on the 2010 population census, the number of elderly in Indonesia was 18.1 million people (7.6% of the total population). In 2014, that number had risen to 18,781million people. The population is expected to rise exponentially, reaching 27.08 million in 2020, and 33.69 million in 2025 .<sup>2</sup>

In the future, a large number of elderly people in Indonesia will have both positive and negative consequences. If the elderly are healthy, active and productive they can live independently and will have a positive

Corresponding author:

Indra Gunawan

[indrasarkid@yahoo.com](mailto:indrasarkid@yahoo.com)

South East Asia Nursing Research, Vol 2 No 1, March 2020

ISSN:2685-032X

DOI: <https://doi.org/10.26714/seanr.2.1.2020.1-10>

impact. On the other hand, large numbers of elderly people become a burden if they have health problems that result in increased health care costs and decreased family incomes. Increased disability combined with, lack of social and environmental support is not a friendly situation for the elderly.<sup>2</sup> Elderly people often encounter several difficulties in old age. The elderly often face several vulnerabilities, both physical and social. These include suffering from chronic illness, loneliness and, in any case, lack of physical protection. Because of their physical weakness or mental disability, they both experience decreasing levels of autonomy themselves and limit the autonomy of other family members. It is a serious problem because it can be led to decreased quality of life (QOL) for the elderly.

The World Health Organization (WHO) has defined QOL as “an individual’s perception of life in the context of culture and value system in which he or she lives and with his or her goals, expectations, standards, and concerns”.<sup>3</sup> WHO has recently warned its member states that as people around the world live longer, soaring levels of chronic diseases and reduced QOL were poised to become a global public health challenge.<sup>4</sup>

As the rapidly growing population of elderly people in developed and developing country that means they would be facing all challenges to their quality of life. The challenge is to delay the incidence of disability and ensure QOL will remain optimal among elderly people.<sup>5</sup> But as age increases, quality of life is often reported to decline.<sup>6</sup> For elderly people, good QOL usually means good living conditions. They can live independently and have many friends. Subjectively, they feel satisfied with their lives and experience a high level of happiness.<sup>7</sup> Although most elderly have good mental health, they are also at risk of mental illness, neurological disorder and more health problems than younger people.<sup>4</sup> Depression and dementia are the two most common mental disorders among

the elderly; depression is a common affecting about 7% of the world’s older population. Depression is a common reaction to health problems, and in elderly people, depression was often an under-diagnosed problem. People can be depressed caused by trauma or illness; suffering from an earlier loss, or they may seek health care for somatic complaints that were bodily manifestations of depression.<sup>8</sup> Depression among the elderly has a high recurrence rate and is usually chronic.<sup>9</sup> The prevalence of depression among the elderly in nursing home populations is very high. The prevalence rate of depression in nursing homes is three to four times higher than among elderly people living in the community.<sup>10</sup>

The institutionalized elderly commonly experience psychological distress. For instance, in Taiwan, about 43% of elderly people living in nursing homes experience depressive symptoms, while in Hongkong nursing homes, that number rises to about 65%.<sup>11</sup> Mazurek found that in three nursing homes in major cities in Poland, that average score on the Geriatric Depression Scale was  $7.2 \pm 3.77$ , indicating moderate depression among resident based on the result of his survey of 300 resident.<sup>12</sup>

In Indonesia, one study found that the percentage of elderly people who were depressed in a nursing home was higher than they living at home/ community. Found 39% of elderly people were depressed living in the nursing home and 30% of elderly people were depressed living in the community/home.<sup>13</sup> As the elderly population continues to grow, In China today’s elderly who are highly dependent on help are choosing to move to nurse homes, which is related to a decrease in the number of caregivers in the family.<sup>14</sup> *Therefore, a limited study has been conducted to explore the relationship between depressions to the quality of life.* For this reason, it is reasonable to ask: ‘What are the differences between the diverse health/sickness cultures?’, and ‘How does

influence the elderly quality of life?' The objective of this study is to understand the relationship between depression and quality of life among elderly in Indonesian nursing home.

## **METHODS**

### ***Design***

This study adopted a descriptive correlational and cross-sectional design to collect data using a structured questionnaire with face-to-face interviews.

### ***Participants***

A convenience sampling technique was used. A total of 114 subjects elderly who were recruited from five nursing homes in Bandung City. The inclusion criteria were as follows: (1) Participants must be fluent in Indonesian (2) Participants must be willing to participate in the study and sign an informed consent form (3) Ages 60 years and above (4) Living in a nursing home Bandung. The exclusion criteria consisted of (1) Elderly nursing home residents who are healthcare providers or practitioners (2) Elderly who do not consent after getting information about this study (3) Elderly with dementia.

### ***Data Collection***

The recruitment period was conducted from July 2018 to September 2018. After getting permission from the Institutional Review Board (IRB), the researcher made an appointment with each respondent who was agreed to participate in the research. The researcher has explained the research procedures, explain its purpose, and obtained written informed consent. After the participants pass through these stages, the researcher conducted face-to-face interviews using the questionnaires.

### ***Analysis***

Each participant was assigned a study ID for data entry and then the data entered into IBM SPSS Statistics 20.0 to calculate a total score for each of the questionnaires based on the participants' responses. Descriptive statistics, including frequencies and percentages, used to describe demographic variables such as gender, educational background, ethnicity, and marital status. Sample T-test and one-way ANOVA, Pearson correlation coefficients and stepwise multiple regressions used for univariate analysis.

### ***Ethical considerations***

The study protocol and consent form were approved by the institutional review board of the department of health and also the National Committee of Field Development and Research of Bandung City (Institutional Review Board approval: **16MMHIS92e**).

## **RESULTS**

### ***Descriptive Statistics of the Study Population, Depression Status, and Quality of Life***

The mean age of the elderly was 71.2 (SD  $\pm$  2.88) at the time of data collection ranging from 65 to 76 years old. The majority of the respondents were female, with 75 (65.8%) females and 39 (34.2%) males. Most of the participants (n = 103, 90.4%), were single including widower and only 11(9.6%) were married. Regarding the educational background, the majority of respondents (n = 61, (53.5%), are the primary school. As many as 27 (23.7%) are a junior high school, a total of 11 (9.6%) elderly have the education until senior high school, and around 15 (13%) had not completed primary school.

Among several ethnicities, the Sundanese elderly outnumbered the others. Of the elderly in the study population, 61 (53.5%) were Sundanese, 42 (36%) were Javanese,

and 11 (9.6%) were Bataknese. According to their chronic disease of the respondents, around 37 (32%) elderlies had others disease including complications disease, 21 (18.8%) elderlies with Hypertension, 23 (20.2%) elderlies with Diabetes mellitus, 15 (13.2) elderlies with Stroke and around 18 (15.8%) elderlies had Osteoarthritis (table 1).

Table 1  
Demographic characteristics of the respondents

Indicators	n	%	Mean ± SD
Age			71.2 ± 2.88
65-68	16	14	
69-72	62	54.4	
73-76	36	31.6	
Gender			
Male	39	34.2	
Female	75	65.8	
Marital Status			
Married	11	9.6	
Single or widowed	103	90.4	
Educational background			
Senior & Junior High School	38	33.3	
Primary & No School	76	66.7	
Ethnicity			
Bataknese	11	9.6	
Javanese	42	36.8	
Sundanese	61	53.5	
Chronic Disease			
Osteoarthritis	18	15.7	
HT	21	18.8	
DM	23	20	
Stroke	15	13	
Others	37	32.5	

Note, HT = Hypertension; DM = Diabetus Mellitus; Others = Multiple chronic conditions.

Regarding depression status, the mean depression score among the elderly was 9.17 (SD ± 2.28). The majority of respondents (n = 61, 53.5%), had moderate depression. As many as 27 (23.7%) had mild depression, around 11 (9.6%) elderly had no depression and a total of 15 (13%) elderly had severe depression (table 2).

Meanwhile, regarding the quality of life status, the mean score was 73.46 (SD ± 13.29). Most of the respondents (n = 80, 70.2%) had a moderate quality of life, 23

(20.0%) respondents had poor quality of life and 11 (9.6%) respondents had a high quality of life (table 2).

Table 2  
The distribution of depression status

Indicators	n	%	Mean ± SD	Min	Max
Depression			9.17 ± 2.28	4	13
1. No Depression	11	9.6			
2. Mild Depression	27	23.7			
3. Moderate Depression	61	53.5			
4. Severe Depression	15	13.2			
Quality of Life			73.46 ± 13.29	52	109
1. Poor QOL	23	20.2			
2. Moderate QOL	80	70.2			
3. High QOL	11	9.6			

**The Difference Between Demographic to Quality of Life**

The result showed that there was a significant difference between the quality of life (QOL) and age variable with F = 118.01, p<.001 and post hoc showed a result that the age group of 65-68 years old had better QOL than the age group of 69-72 years old or over.

Another variables also showed that there were a significant difference between QOL with gender, marital status, and educational background among the elderly with t =3.24, p = 0.002 ; t = 16.72, p = <0.001 ; t = 10.63, p = <0.001 respectively.

Similarly, the statistical result showed that there was a significant difference between QOL and ethnicity among the elderly, with F = 59.28, p<0.001 and post hoc showed that Bataknese had better QOL than other ethnicities such as Javanese and Sundanese.

Finally, the result showed that there was a significant difference between QOL and chronic disease among the elderly with F = 51.34, p <0.001, and post hoc test showed



that the elderly had osteoarthritis had better QOL than HT, DM, Stroke, and others (Table 3).

Table 3  
The Significant difference between demographic variables to quality of life

Indicators	n	Mean ± SD	F/t	p	Post Hoc
<b>Age</b>					
65-68	16	94.88 ± 10.52	118.01	<0.001	(1) > (2)
69-72	62	75.44 ± 4.18			
73-76	36	60.56 ± 10.21			
<b>Gender</b>					
Male	39	79.36 ± 15.30	3.24	0.002	
Female	75	70.40 ± 11.02			
<b>Marital Status</b>					
Married	11	101.18 ± 5.11	16.72	<0.001	
Single or widowed	103	70.50 ± 10.07			
<b>Educational background</b>					
Senior & Junior School	38	86.84 ± 9.64	10.63	<0.001	
Primary & No School	76	66.78 ± 9.17			
<b>Ethnicity</b>					
Batakese	11	94.55 ± 11.24	59.28	<0.001	(1) > (2)
Javanese	42	79.52 ± 7.93			
Sundanese	61	65.49 ± 9.83			
<b>Chronic Disease</b>					
Osteoarthritis	18	93.33 ± 10.85	51.34	<0.001	(1) > (2)
HT	21	78.43 ± 4.16			
DM	23	74.13 ± 3.74			
Stroke	15	71.27 ± 5.35			
Others	37	61.46 ± 10.35			

Note, HT = Hypertension; DM = Diabetus Mellitus; Others = Multiple chronic conditions.

### ***The Relationship Between Depression and Quality of Life***

This study used Pearson correlation, to determine the relationships between depression status and quality of life among the elderly. The result found that depression status was negatively and significantly related to the quality of life ( $r = -0.859$ ,  $p < 0.001$ ) among the elderly (Table 4).

### ***The Factors Predictor of The Quality of Life***

Stepwise multiple regression was used to test the contributions of all independent variables for their influence on basic computer competence. Three predictors variables, including age, depression status, and educational level accounted for 77% of the variance (Table 5).

Table 4  
The relationship between depression status and quality of life

Indicator	Depression Status	Quality of Life
Depression Status	1	
Quality of Life	-0.859**	1

Table 5  
The Predict factors of the elderly's quality of life

Indicators	Unstandardized Coefficients		Standardized Coefficients $\beta$	R <sup>2</sup>	Adjusted R <sup>2</sup>	F	p
	B	S E					
Age	-0.488	0.054	-0.594	0.641	0.638	199.824	<0.0001
Depression status	-0.142	0.018	-0.601	0.730	0.725	36.461	<0.0001
Educational level	0.363	0.083	0.320	0.770	0.764	19.243	<0.0001

## DISCUSSION

### *Descriptive Statistics of the Study Population, Depression Status, and Quality of Life*

The mean age of the residents was 71.2 years at the time of data collection. Their ages ranged from 65 to 76 years. Almost two-thirds of the respondents were female, with 65.8% (n=75) female and 34.2% (n=39) male. This age distribution is similar to that of the population as a whole. Based on data issued by the Indonesian government which shows that life expectancy in Indonesia was approximately 67 years for men and 71 years old for women at the time of data collection. Life expectancy is projected to increase by around 5% between 2020 and 2030.

The great majority of nursing home residents, 90.4% (n=103), were single. The category "single" included widowers, divorced people, and those who never married. At 9.6% (n=11), less than one-tenth of the nursing home residents were married.

As regards education, just over half of the respondents had completed primary school (n=61, 53.5%), and 23.7% (n=27) had completed junior high school, with a total of 9.6% (n=11) completing senior high school, and around 13% (n=15) had not completed primary school. This population had a notably higher level of education compared to elderly Sundanese as a whole; most older Sundanese are illiterate or have only completed an elementary school education.<sup>15</sup>

Just over half of the participants were of Sundanese ethnicity (n=61, 53.5%); 36% (n=42) were Javanese, and 9.6% (n=11) were Bataknese. This reflects the fact that Sundanese people are concentrated in the provinces of West Java, Bandung, Jakarta, and the western part of Central Java.<sup>16</sup>

Around 32% (n=37) of respondents had more than one chronic illness: 21 (18.8%) had hypertension, 23 (20.2%) had diabetes mellitus, 15 (13.2%) had had a stroke, and about 18 (15.8%) had osteoarthritis. As we get older, the risk of chronic disease and comorbidities increases and a person undergoes many changes, including physical, psychological, economic, social and spiritual changes. The age distribution of respondents indicated that most elderly respondents were of advanced age (age 75 or above). At that age, the elderly begin to experience health crises. In line with the research conducted by Kartika in Indonesia, this study found that the participants who experienced depression were in the highest in the age group, 60 to 74 years.<sup>17</sup>

This study found that most depressed residents had moderate depression (53.5%). Similarly, a study conducted by Mazurek in three nursing homes in major cities in Poland found an average score on the Geriatric Depression Scale was  $7.2 \pm 3.77$ , indicating moderate depression, based on the results of a survey of 300 nursing home residents.<sup>12</sup>

Among the elderly, depression is often an under-diagnosed problem. Depression may be caused by trauma or illness and suffering from an earlier loss. It is common to seek

health care for somatic complaints that are bodily manifestations of depression.

### ***The Difference Between Demographic to Quality of Life***

This study found a significant association between demographic factors, such as age, gender, marital status, educational background, ethnicity, and chronic disease, and quality of life.

This study found that age was associated with quality of life among the elderly at five nursing homes in Indonesia. The younger elderly group reported a higher quality of life than the older elderly group. These results are similar to findings from another study conducted by Shah et al in Gujarat, which likewise found that age was related to the quality of life among the elderly, with the older elderly having a lower quality of life than others age groups.<sup>18</sup>

A study conducted in nursing homes in Brazil showed that QOL levels peaked between age 60 and 69, but decreased in every decade of life thereafter so that more than half of people aged seventy-five years and over could be considered to have unsatisfactory QOL.

The results of this study revealed significant differences between genders in terms of quality of life among the elderly at nursing homes in Indonesia. Specifically, elderly males had a better quality of life than females. A study conducted by Khaje et al in Teheran similarly found significant differences between genders, with males having a higher quality of life than females. A survey conducted among 400 elderly people ages 60 years and over also revealed that males got higher scores than the females on quality of life in nursing homes in Marivan City, Iran.

In this study, marital status was significantly associated with quality of life among the elderly in the nursing homes. The results showed that elderly people who

were married had a greater quality of life than people who were single or divorced. An association between marital status and quality of life among the elderly has been proven in several studies. For example, the previously found study on elderly people in India found that currently, married people had a better quality of life than people who were divorced, widowed, or separated.

Another factor that is associated with quality of life among the elderly is educational background. The results of this study revealed that the elderly with a higher level of education reported better quality of life than the elderly with lower levels of education. This finding is similar to other studies. For example, Bhatia et al did a study in the district of Ludhiana in India. They found that QOL has a significant correlation with an education background. Specifically, older adults with a high school or higher education had significantly higher QOL scores than elderly people who were illiterate.<sup>19, 20</sup> Similarly, quality of life has been reported to be lower among elderly people with less education in Taiwan.<sup>21</sup>

The results of this study found a significant association between ethnicity and quality of life among the elderly. In this study, elderly Batakese had a higher quality of life than elderly Javanese and Sundanese. Another study conducted by Reeves et al also found a significant QOL difference between ethnic groups in American nursing homes, finding that Mexican Americans had a lower quality of life than non-Hispanics whites in nursing homes.<sup>22</sup>

The results of this study found a significant association between chronic disease and quality of life among the elderly in Indonesian nursing homes. Elderly with multiple chronic conditions had lower quality of life than those who had only one. A study conducted by Canbaz in Turkey which likewise found that elderly people with chronic illnesses scored lower on QOL than the elderly without chronic disease across all four domains.<sup>23</sup> Similarly, a study

conducted by Bouchet (2000) found that participants with a history of chronic disease scored higher on all items in each domain of the SF36 Group Questionnaire than those without a history of chronic disease. Furthermore, a study by Leach found that elderly people worried that their physical and mental state would cause emotional distress to others.

### ***The Relationship between Depression and Quality of Life***

The findings of this study revealed a negative correlation between depression levels among the elderly and their quality of life. Results showed that the elderly with the highest level of depression had a lower quality of life, compared to the elderly with a lower level of depression who had a higher quality of life. This association is confirmed by several studies. For example, a study conducted by Chan in China reported that the subjective quality of life is really low among Chinese elderly age 65 years and over with depression, compared with non-depressed elderly. Similarly, Unalan et al. found that depression has a negative relationship to QOL among elderly people, and quality of life is a protective factor against dying. Depression is associated with difficulty adapting. As time goes by, some older persons may partly accept their loss of health and function; adjusting expectations is one way to bridge the gap between what is actual and what is possible.<sup>24</sup> However, depressive disorder or severity of depressive symptoms in older people are associated with poor psychological resources and coping strategies.<sup>25</sup>

### ***The Factors Predictor of The Quality of Life***

The first factor is age. In this study, revealed that the older elderly groups (75 years or over) more often complained about their life are very severe. Living conditions, lack of activities due to physical weakness, illness, an uncomfortable environment and feeling insecure about their physical

appearance were currently the trigger factors that increased the burden of life among the elderly. This finding was linearly by the result of the study conducted by Rohmah and Bariyah, that stated that the elderly people reported often experienced unsatisfied feeling the changes in physical, social, cognitive, and vulnerability.<sup>26</sup> Another factor that greatly influences the quality of life among the elderly in nursing homes in Bandung, Indonesia was depression. In this study it was revealed that the majority of the elderly in nursing homes in the city of Bandung experienced moderate depression, this might be caused by a lack of activities carried out by the elderly while in institutions and supported by the absence of consultation or psychological examination services for those who are depressed. Depression in the elderly has a serious negative impact on social and physical life where it causes a decrease in the quality of life and causes parents to dependency on others.<sup>27</sup> Lastly, the educational level was the major predictor that influenced the quality of life among the elderly in Bandung nursing homes. This study found that the majority of the respondent had a low educational level and few of them had higher educational levels such as senior high school. this finding is in line with other studies conducted by Maricha and Wirasto in Indonesia that have found that illiteracy among elderly people age 75 years or older is a problem among elderly living in nursing homes; it has been a concern for a long time in Indonesia.

### **CONCLUSION**

The study has provided an insight into how the quality of life among the elderly in Indonesian nursing homes. The mean score for quality of life scores among the elderly was 73.46 out of 120, at the time of data collection. This study included two hundred and fourteen, all elderly at the nursing homes in Bandung City Indonesia. The mean age of the elderly was 71.2 at the time of data collection ranging from 65 to 76 years

old. Most of the respondents (65.8%) were female and included several ethnicities, such as Sunda, Batak, and Jawa. There were more students of Sunda ethnicity than any other group. These study findings showed that overall, that variable associated with quality of life were age, gender, educational background, marital status, ethnicity, chronic disease, and depression status. Moreover, age, depression status, and educational level are all predictors of the quality of life elderly in Indonesian nursing homes.

## ACKNOWLEDGMENTS

I want to say thank you to all the family who has participated in success this research, especially to my mother, my father and my lovely wife. And also I want to say thank you to my best advisor for always supporting me and giving me good advice.

## CONFLICTS OF INTEREST

Neither of the authors has any conflicts of interest that would bias the findings presented here.

## REFERENCES

- de Pauw M. Global Population Aging from a Human Rights Perspective: The Need for a UN Convention on the Rights of Older Persons. *Global Europe–Basel Papers on Europe in a Global Perspective*. 2017(114).
- Indonesia KKR. *Pelayanan dan Peningkatan Kesehatan Usia Lanjut*. Jakarta: Kementerian Kesehatan Republik Indonesia. 2015.
- WHOQOL W. WHOQOL-Brief introduction, administration, scoring and generic version of the assessment. WHO December. 1996.
- Shah VR, Christian DS, Prajapati AC, Patel MM, Sonaliya K. Quality of life among elderly population residing in urban field practice area of a tertiary care institute of Ahmedabad city, Gujarat. *Journal of family medicine and primary care*. 2017;6(1):101.
- Mohapatra S, Gambir I, Singh I, Mishra N. Nutritional status in elderly people of Varanasi district. *Indian J Prev Soc Med*. 2010;40(3):152-56.
- Netuveli G, Wiggins RD, Hildon Z, Montgomery SM, Blane D. Quality of life at older ages: evidence from the English longitudinal study of aging (wave 1). *Journal of epidemiology and community health*. 2006;60(4):357-63.
- Oguzturk O. Differences in quality of life in rural and urban populations. 2008. 2008:5.
- Brunner LS. *Brunner & Suddarth's textbook of medical-surgical nursing*: Lippincott Williams & Wilkins; 2010.
- Ismail Z, Fischer C, McCall WV. What characterizes late-life depression? *Psychiatr Clin North Am*. 2013;36(4):483-96.
- Sun Y, Zhang D, Yang Y, Wu M, Xie H, Zhang J, et al. Social support moderates the effects of self-esteem and depression on quality of life among Chinese rural elderly in nursing homes. *Archives of psychiatric nursing*. 2017;31(2):197-204.
- Tsai YF, Chung JW, Wong TK, Huang CM. Comparison of the prevalence and risk factors for depressive symptoms among elderly nursing home residents in Taiwan and Hong Kong. *Int J Geriatr Psychiatry*. 2005;20(4):315-21.
- Mazurek J, Szcześniak D, Talarska D, Wieczorowska-Tobis K, Kropińska S, Kachaniuk H, et al. Needs assessment of elderly people living in Polish nursing homes. *Geriatric Mental Health Care*. 2015;2(3-4):9-15.
- Wulandari AFS, Rahayu RA. *Kejadian dan tingkat depresi pada lanjut usia: studi perbandingan di panti wreda dan komunitas*: Faculty of Medicine; 2011.
- Gu D, Dupre ME, Liu G. Characteristics of the institutionalized and community-residing oldest-old in China. *Social Science & Medicine*. 2007;64(4):871-83.
- Sunaryo MK, Wijayanti HR, Kp S, Kep M, Kom S, Kuhu MM, et al. *Asuhan Keperawatan Gerontik*: Penerbit Andi; 2016.
- Kurniasih N, Komariah N, Rodiah S. *Designing Sundanese Cultural Literacy Programs Based on National Curriculum of 2013 for Students of Elementary Schools in Cileunyi Sub-district, Bandung Regency, Indonesia*. INA-Rxiv November. 2017;13.
- Kartika S. *Gambaran Tingkat Depresi Pada Lanjut Usia (Lansia) di Panti Sosial Tresna Wredha Budi Mulia 01 dan 03 Jakarta Timur*. Jakarta; 2012.
- Arslantaş D, Metintaş S, Ünsal A, Kalyoncu C. Eskişehir Mahmudiye ilçesi yaşlılarında yaşam kalitesi. *Osmangazi Tıp Dergisi*. 2006;28(2):81-9.
- Chen H-M, Chen C-M. Factors associated with quality of life among older adults with chronic disease in Taiwan. *International Journal of Gerontology*. 2017;11(1):12-5.
- Bhatia S, Swami H, Thakur J, Bhatia V. A study of health problems and loneliness among the elderly in Chandigarh. *Indian Journal of Community Medicine*. 2007;32(4):255.

21. Lai K-L, Tzeng R-J, Wang B-L, Lee H-S, Amidon RL, Kao S. Health-related quality of life and health utility for the institutional elderly in Taiwan. *Quality of Life Research*. 2005;14(4):1169-80.
22. Reeves SL, Brown DL, Baek J, Wing JJ, Morgenstern LB, Lisabeth LD. Ethnic differences in poststroke quality of life in the Brain Attack Surveillance in Corpus Christi (BASIC) project. *Stroke*. 2015;46(10):2896-901.
23. Canbaz S, SÜNTER AT, Dabak S, PEKŞEN Y. The prevalence of chronic diseases and quality of life in elderly people in Samsun. *Turkish Journal of Medical Sciences*. 2003;33(5):335-40.
24. McDowell I. *Measuring health: a guide to rating scales and questionnaires*: Oxford University Press, USA; 2006.
25. Sivertsen H, Bjørkløf GH, Engedal K, Selbæk G, Helvik A-S. Depression and quality of life in older persons: a review. *Dementia and geriatric cognitive disorders*. 2015;40(5-6):311-39.
26. Rohmah AIN, Bariyah K. Kualitas hidup lanjut usia. *Jurnal keperawatan*. 2015;3(2).
27. Mangoenprasodjo AS. *Mengisi hari tua dengan bahagia*: Pradipta Publishing; 2005.



## Original Research

# Relationship between Active Physical Exercise And Sleep Quality With Physical Fatigue in Elderly

Ramdhany Ismahmudi<sup>1</sup>, Alfi Ari Fakhrurizal<sup>1</sup>

<sup>1</sup> Universitas Muhammadiyah Kalimantan Timur, Indonesia

### Article Info

#### Article History:

Accepted March 30th, 2020

#### Keywords:

Physical Exercise; Sleep Quality; Physical Exhaustion; Elderly

### Abstract

Physical exercise is any form of activity carried out by an individual, especially the elderly, to improve physical fitness and physical conditions, with the main objective being to increase strength, cardiorespiratory endurance, speed, skills, and flexibility. In the elderly, physical training aims to improve the quality of life, so they can get through their old days in a fit. The purpose of this study is to find out how the relationship between active physical activity and sleep quality with physical fatigue that occurs in the elderly in the working area. This research is a descriptive qualitative study using a cross-sectional study approach. Sampling is done by the method of Total Sampling, where all respondents will be involved in research activities, with a total sample of 125 respondents. The research activity was carried out for approximately 1 month starting from July 23-August 24, 2019 at the Harapan Baru Health Center in Samarinda. The result of this research showed a significant relationship between physical activity with fatigue.

## INTRODUCTION

Elderly experienced setbacks in various aspects, especially physical abilities that caused the occurrence include physical abilities that disrupt meeting the needs of life to increase dependence on others. Physical activity has a big impact on health. Some effects are well established; as a major component of energy expenditure, physical activity has a major influence on energy balance and body composition. It is also recognized that physical activity is a major, unmodifiable risk factor that has a protective effect against heart disease, stroke, type 2 diabetes, colon, and breast cancer, and is also associated with other important health outcomes such as mental

health, injury, and falls<sup>1</sup>. Some physical activity that is suitable and suitable for elderly people to do such as aerobic exercise, muscle strengthening, and flexibility exercises. When doing physical exercise several things that affect the physical activity of the elderly include body composition, flexibility, muscle strength, and endurance of the pulmonary heart<sup>2</sup>. Some studies also explain that the prevalence of sleep disorders in the elderly is quite high at around 67%<sup>3</sup>. The elderly often report having difficulty falling asleep to be able to fall asleep while in bed. Sleep quality is a condition where sleep experienced by an individual produces freshness and fitness when waking up from sleep. Sleep quality that includes

Corresponding author:

Ramdhany Ismahmudi

[dhanyfikes@umkt.ac.id](mailto:dhanyfikes@umkt.ac.id)

South East Asia Nursing Research, Vol 2 No 1, March 2020

ISSN:2685-032X

DOI: <https://doi.org/10.26714/seanr.2.1.2020.11-15>

quantitative aspects of sleep, such as duration, sleep retention, and subjective aspects, such as deep sleep and rest. Changes in sleep patterns in the elderly are caused by changes in the nervous system that are physiologically where this results in the function of neurotransmitters in the nervous system decreases<sup>4</sup>. In research on sleep disorders in which the researchers found that sleep disturbance and lack of activity negatively influence each other<sup>5</sup>.

The phenomenon found by researchers in the Harapan Baru Health Center Elderly Service Room is a complaint of illness that is always associated with physical fatigue of elderly patients. Patients complain of headaches associated with lack of sleep, unable to sleep, sleep soundly because this condition causes him to experience physical fatigue and even unable to do physical activity that is too heavy. Information obtained from interviews with Puskesmas staff holding the elderly health program is a problem that is always complained of by the elderly when they come for treatment or visits both at the Puskesmas and at the posyandu where the disorders complained of when they arrive are always related to problems related to physical fatigue. Some of the elderly also said that they also participated in active physical activities at the Posyandu, and they said that with these activities they never felt any physical fatigue. Improved physical quality in the elderly will also affect general health, such as blood pressure and pulse to stay within normal limits when the elderly are at rest. Based on this background, researchers are interested in examining the purpose of seeing the extent of the relationship between active physical activity and sleep quality in an elderly person with physical fatigue in the elderly in the work area of the Harapan Baru Health Center in Samarinda to improve the living standards of the elderly.

## METHODS

This study was conducted for approximately 1 month starting from 23 July - 24 August 2019 at the Harapan Baru Health Center in Samarinda, with the sampling method being a total sampling with a total sample of 125 elderly people who were active in the Posyandu Elderly. All respondents who participated in the data collection activity actively answered and responded to the questions asked by the Research team. Data obtained in research activities were analyzed computerized using statistical software. The data in this study were analyzed with 2 models, namely univariate and bivariate analysis. Univariate analysis is directed to describe the frequency distribution of the variables analyzed using descriptive statistical methods, after which the data will be presented in the form of frequency distribution tables to find out the proportions of each variable. The bivariate analysis of the researchers used the chi-square test with the significance of  $p < 0.05$  to find out the extent of the relationship between the dependent and independent variables of this study or in other words to see the extent of the relationship between physical activity undertaken by the elderly and sleep quality with physical fatigue.

## RESULTS

After conducting research activities, a univariate analysis was performed for each variable and the results can be seen in the table below

Table 1  
Characteristic of the respondents

Research Variable	n	%
Physical activity		
High	71	57
Low	54	43
Sleep Quality		
Good	68	54
Poor	57	46
Physical Fatigue		
Not fatigue	72	58
fatigue	53	42



In table 1 above shows that of 125 respondents for the variable physical activity shows that the majority of respondents are in the high category with the number of respondents as many as 71 people (57%), for the sleep needs of 125 respondents indicate the majority of good sleep needs with the number of respondents as much 68 people (54%), and for the variable physical fatigue the majority of respondents are in the category of Tired with the number of respondents as many as 72 people (58%). For bivariate analysis for each variable can be seen in Table 2 below:

Table 2  
Crosstabulation of Fatigue with The Physical Activity and Sleep Quality of the respondent

Indicators	Fatigue		Total	p
	Fatigue	Not Fatigue		
Physical activity				
High	28	43	71	0,025
Low	25	29	54	
Sleep Quality				
Good	35	33	68	0,442
Poor	18	39	57	

In table 2 above it can be seen that between physical activity and fatigue where 43 out of 71 respondents (34%) did not experience fatigue after doing physical activity, the statistical test found that the P-Value 0.025 < 0.05, so it can be stated that there is a relationship Significant between physical activity with fatigue experienced by the elderly, for the value of OR = 2,298 shows that although the elderly who are active in physical activity will not experience fatigue.

## DISCUSSION

Physical activity is human behavior characterized by body movements from skeletal muscle that produce energy expenditure<sup>6</sup>. An experimental study of how active physical exercise can modulate brain-derived peripheral neurotrophic factors (Brain-Derived Neurotrophic Factor / BDNF). In this study, in which the research subjects were grouped into 5 control groups and 5 treatment groups, the results showed

that 5 groups had very significant differences between groups doing active physical activity in the form of aerobic exercise with changes in peripheral neurotrophic factors, in other words, could the conclusion is that good physical activity in the elderly will affect changes in brain quality and will certainly reduce the occurrence of problems related to brain disorders such as dementia<sup>7</sup>.

This is also appropriate with other studies that examine physical exercise in the elderly have an impact on increasing changes in the brain structure of the elderly, wherein this study observation was made on the elderly who were actively exercising continuously without any disturbance indicating a change in the structure of the brain where it changed in the structure of the left hippocampus and the bilateral brain nucleus<sup>8</sup>. Certain sports can be useful to overcome sleep disorders, one of which is insomnia. One of the sports that can improve the fulfillment of sleep needs is regular elderly exercise<sup>9</sup>. Based on other research shows there is a positive relationship between regular gymnastics elderly with the fulfillment of elderly sleep needs<sup>10</sup>. The frequency of exercises that are useful for maintaining and improving physical fitness is done at least once a week and as much as five times a week with a duration of 15 minutes<sup>11</sup>. It can be concluded that good physical activity in the elderly will affect their physical fitness so that to do other activities the elderly can continue to do it.

For the sleep needs variable of 39 people (31%) of respondents with the problem of lack of sleep do not experience fatigue, the statistical test obtained a P-Value of 0.442 > 0.05, so it can be stated that there is no significant relationship between sleep needs and fatigue experienced by an elderly person. The OR = 0.755 shows that even the elderly who have adequate sleep will not affect the occurrence of physical fatigue. According to research that examines sleep health, lifestyle, and mental health in the

elderly in Japan where the results of the study show short naps (30 minutes between 1300 and 1500 hours of sleep) and moderate sports activities such as walking are very important in efforts to maintain and improve sleep quality in the elderly. In this study, the variables studied were the effects of short naps and offset moderate physical activity carried out for 4 consecutive weeks showing a significant change in the quality of health of the elderly themselves, in addition to physical health as well as mental health<sup>12</sup>. These results indicate that this intervention is very effective in improving sleep quality and daily activities in the elderly. From this, it can be concluded that the need for sleep can affect physical fatigue that is experienced by the elderly so that the more adequate sleep a person, the better the level of physical and psychological fitness.

## CONCLUSION

From the conclusions obtained from the variable physical activity and sleep, needs can affect the physical undertaken by the elderly. The more physical activity and the elderly, the better the level of physical and psychological fitness.

## ACKNOWLEDGMENTS

Expression Thank you for the financial assistance provided by the Indonesian Ministry of Education's Directorate of Higher Education for the financial assistance that has been provided through the Program Penelitian Dosen Pemula (PDP) in 2019 so that this research activity can be carried out as expected. Do not forget also to all those who have provided assistance to support data collection activities in research, especially the Samarinda Harapan Community Health Center.

## CONFLICTS OF INTEREST

Neither of the authors has any conflicts of interest that would bias the findings presented here.

## REFERENCES

1. Miles(2007).*Physical Activity and Health*. Journal compilation British Nutrition Foundation Nutrition Bulletin,32, 314–363.
2. Ambardini RL. 2009. *Aktivitas Fisik pada Lanjut Usia*. Yogyakarta: UNY
3. Amir, N. (2007).Gangguan Tidur pada Lanjut Usia. Diagnosis dan Penatalaksanaan, dalam Cermin Dunia Kedokteran (hlm.196-206). Jakarta. Grup PT. Kalbe Farma
4. Khasanah dan Hidayati(2012).Kualitas Tidur Lansia Balai Rehabilitasi Sosial “MANDIRI” Semarang. Jurnal Nursing Studies, 1(1) : 189-196.
5. Hemalova garmas, F. U. (2010). *Sleep disorders and activities in long term care facilities a vicious cycle?*.<http://www.ncbi.nlm.nih.gov/pubmed/20603298>. accessed 5 December 2018 2.00 pm WITA.Jurnal Kesehatan Psychology
6. Caspersen CJ, Powell KE, Christenson GM. Physical activity, exercise, and physical fitness: definitions and distinctions for health-related research. Public Health Rep 1985;100:126-31.
7. Coelho, F. G. de M., Gobbi, S., Andreatto, C. A. A., Corazza, D. I., Pedroso, R.V., & Santos-Galduróz, R. F. (2013, January). *Physical exercise modulates peripheral levels of brain-derived neurotrophic factor (BDNF): A systematic review of experimental studies in the elderly*. *Archives of Gerontology and Geriatrics*. <https://doi.org/10.1016/j.archger.2012.06.003>
8. Boyke, J.,Driemeyer, J. Et.al(2008). Training-Induced Brain Structure Changes in the Elderly. The Journal of Neuroscience, July 9, 2008•28(28):7031–7035
9. Yanuarita, A.F. (2012),*Memaksimalkan Otak Melalui Senam Otak (Brain Gym)*,Yogyakarta: CV. Solusi Distribusi.
10. Mahardika, J., Haryanto, J., & Bakar, A. (2011) *Hubungan Keteraturan Mengikuti Senam Lansia Dan Kebutuhan Tidur Lansia Di UPT Surabaya*: Keperawatan Universitas Airlangga.
11. Maryam, S et all. (2008). *Mengenal Usia Lanjut dan Perawatannya*. Jakarta: Salemba Medika.

12. Tanaka, H. & Shirakawa, S. (2004) Sleep health, lifestyle and mental health in the Japanese elderly ensuring sleep to promote a healthy brain and mind. *J. Psychosom. Res.*, 56, 465-477



## Original Research

# The Effectiveness of Prezi Web-Based Teaching Media to Improve Nursing Students' Comprehension

Arief Yanto<sup>1</sup>, Warsono Warsono<sup>1</sup>

<sup>1</sup> Universitas Muhammadiyah Semarang, Indonesia

### Article Info

#### Article History:

Accepted March 30th, 2020

#### Keywords:

Nursing education; Prezi;  
Teaching media; Mind-map

### Abstract

The process of nursing education requires a teaching media which straightforward to be comprehend. Inappropriate determining the teaching media leads nursing students face difficulties to receive an adequate course's guidance from the educators. Prezi is a web-based presentation program which comprehensively integrates text, picture, animation, video and audio into one presentation file. This study is aimed to determine the effectiveness of Prezi web-based teaching media on improving nursing students' comprehension. A quantitative-experimental method with pretest-posttest control group design was applied. A total of 176 nursing students were recruited by using non probability sampling approach. The study indicated Prezi web-based teaching media showed significant result on improving students' knowledge. The determination of Prezi web-based program is suggested to improve students' comprehension in nursing education.

## INTRODUCTION

Learning media is one of the important components of the learning process. The ideal learning process is done by implementing the well-designed learning media.<sup>1</sup> The implementation of learning media should be a focal point for an educator, especially a lecturer in every learning process.<sup>2,3</sup> A well-designed learning media will help the students a lot in comprehending the learning material.<sup>4</sup>

The development in information technology could improve the performance and enable the fast, precise, and accurate completion of any activities which contribute to productivity improvement.<sup>5</sup> The development of information technology

could also be beneficial to convey information during the learning process. Therefore, the developed multimedia should be employed as a learning media.<sup>6</sup>

Prezi is one of the presentation programs which make use of digital information development. The appearance of Prezi is in the form of a single slide zooming presentation.<sup>7</sup> It enables the presenter to design a presentation with a linear and flexible storyline. Just like the traditional presentation software, Prezi can integrate text, images, animation, audio, and video neatly in a single presentation file.<sup>8-10</sup>

Higher education is required to provide an attractive learning process. Related to this, Prezi is an attractive medium to deliver a

Corresponding author:

Warsono

[arief.yanto@unimus.ac.id](mailto:arief.yanto@unimus.ac.id)

South East Asia Nursing Research, Vol 2 No 1, March 2020

ISSN:2685-032X

DOI: <https://doi.org/10.26714/seanr.2.1.2020.16-21>

material. Certain research concluded that students found that Prezi is more interesting than any other presentation media.<sup>11</sup> Prezi could also stimulate students to be more productive in writing the report.<sup>12</sup> In this case, nursing education learns about humans as the learning object. Therefore, comprehension and observation of the object of learning are highly required during the nursing subject learning process. Prezi can integrate the interesting visual and storyline to make the viewer comprehend the material deeper.<sup>13</sup> The result of the interview from 20 nursing students found that 40% of students did not interested in the presentation delivered by the lecturers. From the background above, the researcher would like to find out the significance of Prezi as learning media toward nursing students; comprehension.

## **METHODS**

It was an experimental quantitative research with a pretest-posttest control group design. The subject of the research was the students of undergraduate and diploma programs in nursing in the second semester who actively attended the lecturing in the classroom. The research subject was taken using non-probability sampling. Meanwhile, the number of research subjects was counted using the G-Power Program by considering Compute required sample size analysis which drawn 176 students to be divided into two groups. Therefore, the sample size for each group was 88 students.

The research was conducted from February to June 2019. In that period, the students attended classical lecturing. This research was conducted in undergraduate and diploma programs in nursing. One of the teaching methods used during the learning process was lecturing. The research data were obtained from multiple sources, which were students and other lecturer or the peer observer.

The data was collected using a mini-quiz technique. The mini-quiz was designed to

assess students' comprehension of the given material. it was in the form of questions to assess students' knowledge and comprehension, the ability of students in comprehending the material was descriptively analyzed using comparative descriptive by comparing the result of the mini quiz before and after the implementation of Prezi as the learning media.

The research objectives and stages were explained to the respondents before the research process. Therefore, the score from the data collection was not recorded as academic achievement. The name of the respondents was not written to keep the consent.

## **RESULTS**

The research was conducted at the undergraduate and diploma program of nursing of the Faculty of Nursing and Health Sciences at Universitas Muhammadiyah Semarang. The research subject was the second-semester students of the mentioned programs. All of the respondents had the same characteristics and treatments in terms of material.

The treatment was in the form of learning media implementation. The research subject was divided into two groups of treatment. Both groups received the same material, yet the lecturer implemented the different learning media for each group. It was Prezi for one group, and Microsoft PowerPoint for the other group, therefore, the group was then named after the Prezi group and PowerPoint group.

Table 1

Characteristics of Research Respondents, n = 176		
Indicators	f	%
Group		
Power Point	88	50.0
Prezi	88	50.0
Study program		
Diploma program in Nursing	60	34.1
The undergraduate program in Nursing	116	65.9
Gender		
Male	32	18.2
Female	144	81.8

The research finding showed that both groups had the same proportion, which was 50:50. However, the number of undergraduate students was more than the diploma students. Meanwhile, the Prezi group was dominated by female students with 79.9% and the rest 20.5% was male students. It was also the same in the PowerPoint group, with 84.1% female students and 15.9% male students.

The efficacy of the learning media implementation was scored based on the student comprehension of the given material. The students' comprehension included the knowledge and comprehension about the mind map of the nursing process. The measured points in knowledge comprehension were definition, new terms, clinical manifestation, cause, effect, and affecting factors. On the other hand, the measured points in mind map comprehension were mechanism on how problems affect human health, the mechanism of health problem along with the symptoms, and the process of nursing problem.

The data were analyzed using the non-parametric statistical test as an alternative since the data distribution for each group was nonnormal. The difference of means between groups was analyzed using Mann-Whitney Test, while the difference of means before and after the intervention was analyzed using the Wilcoxon test.

Table 2

The difference of means between students' knowledge comprehension, n = 176			
Indicators	Prezi	Powerpoint	p
The mean before the intervention, (SD)	16 (1,667)	16 (1,668)	0.502*
The mean after the intervention, (SD)	18 (1,407)	17 (1,479)	0.018*
p	0,0001**	0,0001**	

\* Mann-Whitney test

\*\* Wilcoxon test

The research data showed no difference between groups' mean in comprehending the knowledge ( $p > 0.05$ ). Therefore, it could be concluded that both groups had the same comprehension baseline about knowledge. On the other hand, the mean of both groups' knowledge comprehension after the implementation of the learning media showed a significant difference ( $p < 0.05$ ) with Z value = -2.356. The students' comprehension after the implementation of Prezi as the learning media was significantly improved compared to the implementation of PowerPoint.

The research showed a significant difference in students' knowledge comprehension before and after the implementation of Prezi ( $p = 0.0001$ ). It meant the implementation of Prezi could significantly improve students' knowledge comprehension. On the other hand, the implementation of PowerPoint could also improve the students' knowledge comprehension ( $p = 0.0001$ ). From the findings, it could be concluded that both learning media could improve students' knowledge comprehension, especially Prezi which was more effective in improving students' knowledge comprehension.

Table 3

The difference of means between students' mind map comprehension, n = 176

Indicators	Prezi	Powerpoint	p
The mean before the intervention, (SD)	10 (1,138)	10 (1,387)	0.602 *
The mean after the intervention, (SD)	18 (1,495)	13 (2,300)	0,0001 *
p	0,0001 **	0,0001 **	

\* Mann-Whitney test

\*\* Wilcoxon test

The research data showed no difference in both groups' mean in mind map comprehension ( $p > 0.05$ ). Therefore, it could be concluded that both groups had the same mind map comprehension baseline. On the other hand, the mean of both groups' mind map comprehension after the implementation of the learning media showed a significant difference ( $p < 0.05$ ) with  $Z = -10.211$ . The students' mind map comprehension improved more significantly after the implementation of Prezi than after the implementation of PowerPoint.

The research showed a significant difference in students' mind map comprehension before and after the implementation of Prezi ( $p = 0.0001$ ). It meant the implementation of Prezi could significantly improve students' mind map comprehension. On the other hand, the implementation of PowerPoint could also improve the students' mind map comprehension ( $p = 0.0001$ ). From the findings, it could be concluded that both learning media could improve students' mind map comprehension, especially Prezi which was more effective in improving students' mind map comprehension.

The research finding showed that Prezi was more effective in improving students' knowledge comprehension and stimulating students' mind map comprehension. The significance of the media was further described in the table below:

Table 4

The significance of Prezi implementation toward students' comprehension, n = 176

Indicators	R Square	F	p
Understanding of knowledge	0.029	5,278	0.023
Understanding mind maps	0.613	275,455	0,0001

Linear regression test

From the research, it was shown that the implementation of Prezi as the learning media affects students' knowledge comprehension at 2.9%, while the rest 97.1% was affected by the other factors. On the other hand, the implementation of Prezi has significantly affected students' comprehension in the mechanism or process-related material at 61.3%, while the rest 38.7% was contributed by other factors.

### DISCUSSION

From the finding above, it was mentioned that both groups of students had the same knowledge comprehension baseline. The subject of the research was the undergraduate and diploma program in nursing students in the second semester. The research subject was chosen based on the criteria of freshmen students. The freshmen were expected to be able to master basic concepts to learn nursing sciences. The basic concept material would later be employed in the next learning stages. The material learned by freshmen is emphasized on human anatomy and physiology which requires comprehension of each alteration. The proper learning management will lead to nursing students' self-concept improvement.<sup>14</sup>

The material given as intervention to the students was the concept of human fulfillment of oxygenation needs. It was a basic material expected to be mastered by the students. The topic was chosen based on the existed curriculum for both diploma and undergraduate in nursing programs.

The research finding showed that Prezi was more effective in improving students'

knowledge comprehension. It was in line with previous research explained about the implementation of Prezi which can improve students' cognitive ability, and able to be used as an alternative for more conceptual learning to reduce the cognitive load of students.<sup>15</sup>

Prezi has a more attractive display compared to PowerPoint media which triggered students to give more attention to the material delivered using Prezi. An attractive learning media could improve students' learning motivation.<sup>16</sup> Corresponding research also explained that students were more interested in Prezi than Powerpoint.<sup>11</sup> The high students' interest in visual media could be useful to achieve the learning objectives. Students' interests may contribute to students' motivation to give more attention to the given learning material.

Prezi was found to be more effective media in improving students' comprehension related to mechanism or alteration process. The comprehension of the mechanism or process needed deeper internalization on the given material. The students were required to understand each component while studying the correlation between components as a whole. In this case, Prezi offered unlimited reading room to display a mind-map.<sup>7</sup>

Prezi was found to significantly improve students' comprehension of process or mechanism related material. the mind map could be helpful for students in mastering knowledge about related factors, prevention, early observation and emergency treatment on the post-surgical complication.<sup>17</sup> The improvement of critical thinking ability in students using mind map should also consider the risk of stress experienced by students, as stress might be contrary to the critical thinking ability.<sup>18</sup>

As nurses, they are required to think critically in making any decision related to the nursing care given to the patient.

Therefore, it is important to prepare the students as nurses candidates to think critically even from the early stage. As explained above, Prezi based learning media could improve the critical thinking skill of students.<sup>19</sup> It could be concluded that the right choice of media is one of the valid predictors for better nursing care in the future. Therefore, Prezi is highly recommended as a learning media for students, especially nursing students.

## CONCLUSION

The implementation of Prezi during the learning process can improve students' knowledge and mind map comprehension, as Prezi was found to be more effective in improving students' comprehension related to the knowledge and nursing process mind map. The implementation of Prezi has less significant in improving students' knowledge related comprehension, yet highly significant in improving mechanism or process-related material (mind-map).

## ACKNOWLEDGMENTS

The researcher would like to say thank you to all the students who participated as research respondents. A big thanks would also be expressed to the Nursing Study Program for the permission and support during the research.

## CONFLICTS OF INTEREST

Neither of the authors has any conflicts of interest that would bias the findings presented here.

## REFERENCES

1. Arsyad A. Media pembelajaran. 2011.
2. Cory A. Etika berkomunikasi dalam penyampaian aspirasi. *J Komun.* 2012;1(1).
3. Burklow JT. Chapter 41 - The Clinical Researcher and the Media. In: Gallin JL, Ognibene FP, Johnson LLBT-P and P of CR (Fourth E, eds. Boston: Academic Press; 2018:703-712. doi:<https://doi.org/10.1016/B978-0-12->



- 849905-4.00041-1
4. Muhson A. Pengembangan Media Pembelajaran Berbasis Teknologi Informasi. *J Pendidik Akunt Indones.* 2010;8(2).
  5. Kadir A. Pengenalan Sistem Informasi Edisi Revisi. 2014.
  6. Rohmah L. Pengembangan Media Pembelajaran Berbasis. *SKRIPSI Jur Teknol Pendidikan-Fakultas Ilmu Pendidik UM.* 2011.
  7. Perron B, Stearns A. A review of a presentation technology: Prezi. 2010.
  8. Ortega RA, Brame CJ. The synthesis map is a multidimensional educational tool that provides insight into students' mental models and promotes students' synthetic knowledge generation. *CBE Life Sci Educ.* 2015;14(2). doi:10.1187/cbe.14-07-0114
  9. Duffy RM, Guerandel A, Casey P, Malone K, Kelly BD. Experiences of Using Prezi in Psychiatry Teaching. *Acad Psychiatry.* 2015;39(6):615-619. doi:10.1007/s40596-014-0204-x
  10. Chou P-N, Chang C-C, Lu P-F. Prezi versus PowerPoint: The effects of varied digital presentation tools on students' learning performance. *Comput Educ.* 2015;91:73-82. doi:http://dx.doi.org/10.1016/j.compedu.2015.10.020
  11. Moulton ST, Türkay S, Kosslyn SM. Does a presentation's medium affect its message? PowerPoint, Prezi, and oral presentations. Allen P, ed. *PLoS One.* 2017;12(7):e0178774. doi:10.1371/journal.pone.0178774
  12. Kiss G. MS Power Point vs Prezi in Higher Education. *Turkish Online J Educ Technol - TOJET.* 2016;15(3):126-130.
  13. Mayhew E. The New Generation of Prezi Presentation Software, Provided by Prezi Inc., and Student Engagement and Learning Within Political Science. *J Polit Sci Educ.* 2019;15(3):406-409. doi:10.1080/15512169.2018.1485572
  14. Fatimah F. Analisis Perbedaan Konsep Diri Awal Dengan Konsep Diri Setelah Melewati Proses Pada Mahasiswa Memilih Keperawatan Sebagai Profesi (Studi Longitudinal Retrospektif) Di Kota Makassar. *J Ilm Kesehat Diagnosis.* 2018;12(5):522-525.
  15. Akgün ÖE, Babur A, Albayrak E. Effects of Lectures with PowerPoint or Prezi Presentations on Cognitive Load, Recall, and Conceptual Learning. *Int Online J Educ Sci.* 2016;8(3):1-11. doi:10.15345/iojes.2016.03.001
  16. Tafonao T. Peranan Media Pembelajaran Dalam Meningkatkan Minat Belajar Mahasiswa. *J Komun Pendidik.* 2018;2(2):103. doi:10.32585/jkp.v2i2.113
  17. Qing-fen Z, Ling Y. Application of mind map in the clinical teaching of postoperative complications of pancreatic cancer patients among undergraduate nursing students-- 《Chinese Journal of Nursing Education》 2016年 08期. *Chinese J Nurs Educ.* 2016;12(8). http://en.cnki.com.cn/Article\_en/CJFDTotals-ZHHU201608016.htm. Accessed April 8, 2019.
  18. Momeni H, Salehi A, Sadeghi H. Comparing the Effect of Problem Based Learning and Concept Mapping on Critical Thinking Disposition of Nursing Student - Education Strategies in Medical Sciences. *Sci J Educ Strateg Med Sci.* 2017;10(4):234-244. http://edcbmj.ir/article-1-961-en.html. Accessed April 8, 2019.
  19. Widowati C, Purwanto A. Pengembangan Media Pembelajaran Berbasis Prezi Dalam Meningkatkan Berpikir Kritis Siswa Pada Materi Sistem Pernapasan Makhhluk Hidup. *Proc - Open Access J.* 2018;1(01):115-119.



## Original Research

# The Role of Volunteers in Improving Services in Elderly Integrated Service Centers

Edy Soesanto<sup>1</sup>, Naufal Najib Abdurrahman<sup>1</sup>

<sup>1</sup> Universitas Muhammadiyah Semarang, Indonesia

### Article Info

#### Article History:

Accepted March 30th, 2020

#### Keywords:

Volunteer Role; Service improvement; elderly integrated service centre

### Abstract

The elderly attendance rate at the elderly integrated service centre for healthy sources of kangkung village is only 14.31%, this is far from the national coverage rate of 80%. The role of the volunteer is one of the factors supporting the presence of the elderly, through increasing the role of volunteer it is expected to be able to increase elderly visits. The Objective of this research to describe the role of the volunteer in the elderly integrated service centre in the village of kangkung. This research used descriptive research with cross-sectional approach. The study population was a cadre of healthy elderly integrated service centre sources kangkung village mranggen district. The research sample uses a total sampling technique. Data analysis in this study used univariate. As many as 12 people (60%) volunteer played a good role as coordinators, as many as 12 people (60%) played a good role as community mobilizers, as many as 10 people (50%) played a good role as providers of health promotion, as many as 15 people (75 %) played a good role in terms of basic aid providers, as many as 16 people (80%) played a good role in the documentation. The role of coordinator, community mobilizer, basic assistance provider and documentation has been going well, the role as health promotion provider is still poor. The volunteer is expected to be more active in playing roles in improving the services of elderly integrated service centre.

## INTRODUCTION

An increase in the morbidity rate for the elderly wherein 2014 the morbidity rate for the elderly was (25.05%) and in 2015 it increased to (28.62%).<sup>1</sup> is evidence that the elderly group is one of the community groups risks of disease, when viewed from the region, the health of the elderly living in urban areas tends to be better than the elderly living in rural areas, according to data the morbidity rate for the elderly in urban areas is (26, 89%) while the

morbidity rate for the elderly in rural areas is (30.14%).<sup>1</sup>

Kangkung village has an elderly population of 834 people or (11.1%) of the total population of 7488 people. According to data from the health centre mranggen one the year 2018 most diseases suffered by the elderly are hypertension (57%), joint disease (40%), anaemia (30%), cataracts (15%). These diseases are the main causes of decreasing the degree of health and productivity of the elderly.

Corresponding author:

Edy Soesanto

[edysoes@unimus.ac.id](mailto:edysoes@unimus.ac.id)

South East Asia Nursing Research, Vol 2 No 1, March 2020

ISSN:2685-032X

DOI: <https://doi.org/10.26714/seanr.2.1.2020.22-26>

One of the efforts of the community in responding to the health problems of the elderly, especially in the village of kangkung is to establish a healthy elderly at the elderly integrated service centre, this elderly integrated service centre has been established in 2009 and now has 20 cadres. The establishment of the elderly integrated service centre must be balanced with efforts to utilize the health facilities both from the role of cadres and the community. The attendance list of elderly in elderly integrated service centre Sumber Sehat in the past year shows that the coverage number of elderly integrated service centre visits from sources is only 14.31%.

The role of cadres is one of the important factors because elderly integrated service centre cadres are responsible for the health of the local community, they work and act as a social actor of an elderly integrated service centre health system, if the cadre's role is carried out maximally then the number of elderly integrated service centre utilization will increase.<sup>2</sup>

Based on preliminary studies and interviews conducted by researchers on May 11, 2019, through interviews of three elderly people, the elderly revealed they were reluctant to come to the healthy source elderly integrated service center because they prioritized their work as farmers, lack of notification of the holding of elderly integrated service center where the announcement of the implementation of elderly integrated service center was only announced once through the mosque so that sometimes the elderly forget or even do not hear, the elderly claim the role of cadres as providers of health promotion is less than the maximum because health promotion tends to often use lecture methods rarely leaflets are distributed to the elderly where due to decreased memory sometimes the elderly forget what delivered at the health center, the elderly stated that the drug given by the midwife was only given for the next three days and sometimes it could not reduce the health complaints of the elderly.

The lack of maximum coverage for elderly attendance is also related to the ability of cadres in health examinations and health promotion, the lack of equal capacity of cadres is not matched by the willingness to actively explore the knowledge, in the field implementation cadres have the perception that if there are cadres who are proficient, cadres who have not proficient in health examination and health promotion do not want to explore the hat, because elderly integrated service centre can still run, cadres' unwillingness to explore the material due to the lack of understanding of cadres in understanding the material, and there is no willingness to be able to apply to the community, this phenomenon can affect what elderly integrated service centre services do when implementing elderly integrated service centre, many skilled cadres are absent.

From the description above, the researcher is interested in researching The Overview of the Volunteer Role in Improving Services at elderly integrated service centre Sumber Sehat, Kangkung Village, Mranggen Regency Sub-District, to be a reference for improving services in an elderly integrated service centre with healthy sources.

## **METHODS**

The research design used by researchers is descriptive with a cross-sectional approach. The study population was a cadre of healthy elderly at elderly integrated service centre sources kangkung village mranggen district. The research sample uses a total sampling technique. The data analysis of this study used univariate. This research was conducted at the elderly integrated service centre Sumber Sehat Kangkung Village in march 2020. The data collection tool in this study used a cadre role questionnaire to describe the cadre role. Validity test is done by the product-moment correlation test, while the reliability test uses the Cronbach alpha statistical test.

**RESULTS**

Based on table 1 shows that of the 20 respondents, namely an average age of 43 years with the youngest age of 32 years and the oldest 56 years, in terms of a long experience being a cadre the average cadre joined since 9 years with the youngest experience of 1 year and the youngest 10 years old, the majority of the male sex is 14 people (70%), the majority cadre education is primary school 8 people (40%).

Table 1  
Frequency Distribution of Respondent Characteristics in the elderly integrated service centre, Sumber Sehat, Kungkung Village Mranggen District (n = 20)

Characteristics	Median	SD	n	%
age	43,20	7,19		
Long time as a cadre	9.00	3,22		
Gender				
Male			14	70%
Female			6	30%
Education				
Primary school			8	40%
Junior high school			5	25%
High school			7	35%

Based on table 2 shows that there are various training cadres ever participated, including training in elderly integrated service centre governance attended by 20 people (100%) or all cadres, health education training attended by 20 people (100%) or all cadres, emergency training the basis was attended by 14 people (70%), 30 people participated in the herbal management training (85%).

Based on table 3, the role of elderly integrated service centre cadres with healthy sources is that the majority of respondents carry out their duties properly, with 12 respondents (80%) having less than 8 cadres (20%).

Table 2  
Distribution of Training Cadres Participated in elderly integrated service centre Sumber Sehat Kungkung Village, Demak Regency (n = 20)

Training	Result	f	%
Elderly integrated service centre governance	Attended	20	100%
	Not attended	0	0
Health education training	attended	20	100
	Not attended	0	0
Emergency training	Attended	14	70%
	Not attended	6	30%
The herbal management training	Attended	17	85%
	Not attended	3	15%

Table 3  
Frequency distribution of volunteer roles in elderly integrated service centre Sumber Sehat Kungkung Village, Demak Regency (n = 20)

Role	f	%
Less	8	20%
Well	12	80%
Total	20	100%

**DISCUSSION**

The role of cadres as a good coordinator in terms of, active cadres attend coordination meetings, active cadres propose a division of tasks to the elderly integrated service centre coordinator, active cadres propose plans for achieving goals in coordination meetings, cadres can perform different roles in the implementation of the elderly integrated service centre, and cadres play a role when preparing for the implementation of the elderly integrated service centre. This is because cadres feel there is the greatest pride because they can benefit others.<sup>3,4</sup>

The role of cadres as good community activists in terms of active cadres attending meetings with village leaders to discuss technical issues and the problem of funding elderly integrated service centre and active cadres to mobilize the presence of the elderly through announcements on the forum and conducting pickup in elderly homes, this is because the village officials are a very open dialogue with cadres and

successful organizing in community empowerment.<sup>5,6</sup> While those who are not active in the case of cadres do not actively go to the homes of residents to move the elderly to the elderly integrated service centre and cadres do not actively evaluate the elderly who have not been present for the elderly integrated service centre, this is because the number of elderly people is not matched by the number of cadres.<sup>7</sup>

The role of cadres as providers of health promotion has a balanced value while its role is only half of the active cadres who want to apply their knowledge in counselling and in conducting counselling following SAP training on health promotion received by cadres, namely providing leaflets, providing props, practising teaching aids the elderly asked at the end of the session and evaluated the understanding of the elderly. The role of health promotion is not good because cadres feel they lack confidence and are not interested in studying health promotion materials.<sup>8</sup>

The role of cadres as good basic aid providers in terms of cadres being able to perform tasks at the registration desk, cadres can perform tasks in measuring nutritional status, cadres can perform tasks on blood pressure checks, cadres can perform tasks in simple lab examinations, this is because besides enrichment motivation is also often done by to improve the ability of cadres.<sup>4,7</sup> As for what is lacking in examining the mental status of the elderly, this is influenced by the cadre's perception of the difficulty of applying mental status checks to the elderly.<sup>8,9</sup>

The role of cadres as documentation if cadres can document the presence of the elderly, cadres can document the health problems of the elderly, cadres can complete KMS, the kade when evaluating reveals the results of addressing technical problems and provides follow-up recommendations to be documented, this is because the evaluation system has been

established. in the elderly integrated service centre so that the management of the evaluation can run well.<sup>10</sup>

## CONCLUSION

The role of coordinator, community mobilizer, basic assistance provider and documentation has been going well, the role as health promotion provider is still poor. Researchers suggest that posyandu cadres for elderly with healthy sources be more active in their role as cadres so that the interest of older people to attend increases. This research is expected to be a source of literature for future researchers to deepen the elderly integrated service centre by involving other variables such as government support in improving the services of the elderly integrated service centre.

## ACKNOWLEDGMENTS

The researcher would like to say thank you to all the posyandu cadres who participated as research respondents.

## CONFLICTS OF INTEREST

Neither of the authors has any conflicts of interest that would bias the findings presented here.

## REFERENCES

1. Kemenkes P. Profile Kesehatan Indonesia Tahun 2018. Jakarta; 2018. [https://pusdatin.kemkes.go.id/resources/download/pusdatin/profil-kesehatan-indonesia/Profil\\_Kesehatan\\_2018\\_1.pdf](https://pusdatin.kemkes.go.id/resources/download/pusdatin/profil-kesehatan-indonesia/Profil_Kesehatan_2018_1.pdf). Accessed September 7, 2019.
2. Armiyati Y, Soesanto E, Hartiti T. Pemberdayaan Kader Posbindu Lansia Sebagai Upaya Peningkatan Kualitas Hidup Lansia Di Desa Kangkung Demak (Empowerment of Elderly Posbindu Cadre to Improv the Elderly Quality of Life in Kangkung Village Demak). Vol 0; 2014. <http://103.97.100.145/index.php/psn12012010/article/view/1232>. Accessed September 7, 2019.
3. Husniyawati YR. Analisis Pengaruh Motivasi,

- Komitmen dan Faktor Organisasi terhadap Kinerja Kader Posyandu (Studi tentang Peningkatan Partisipasi Ibu Balita di Posyandu Wilayah Kerja Puskesmas Sidotopo Wetan Kota Surabaya). 2016. <http://lib.unair.ac.id>. Accessed September 7, 2019.
4. Afifa I. Kinerja Kader dalam Pencegahan Stunting: Peran Lama Kerja sebagai Kader, Pengetahuan dan Motivasi. *J Kedokt Brawijaya*. 2019;30(4):336. doi:10.21776/ub.jkb.2019.030.04.19
  5. Restuastuti T, Zahtamal Z, Chandra F, Restila R. Analisis Pemberdayaan Masyarakat di Bidang Kesehatan. *J Kesehat Melayu*. 2017;1(1):14. doi:10.26891/jkm.v1i1.2017.14-19
  6. Azwar S. *Penyusunan Skala Psikologi*. Ed. 2, cet. Pustaka Pelajar; 2015.
  7. Armiyati Y, Soesanto E, Hartiti T. Optimalisasi Pemberdayaan Kader Posbindu Lansia Sebagai Upaya Peningkatan Kualitas Hidup Lansia di Demak. *J Keperawatan Komunitas*. 2014;2(2):57-63. <https://jurnal.unimus.ac.id/index.php/JKK/article/view/4044>. Accessed September 7, 2019.
  8. Sulaiman S, Sutandra L, Vera Y, Anggriani A. Pendampingan Kader Posyandu Lansia di Suka Raya. *J Dedicators Community*. 2018;2(2):116-122. doi:10.34001/jdc.v2i2.712
  9. Supriyatno. Faktor-faktor yang Mempengaruhi Kinerja Kader Posyandu Lansia. *Jurnal Ilmiah Kesehatan*. <https://ejournal.umpri.ac.id/index.php/JIK/article/view/1108>. Accessed September 7, 2019.
  10. Soesanto E, Sandra Fatmawati D. Increased the Intensity of Elderly Visit to Posyandu with Family Support. *South East Asia Nurs Res*. 2019;1(3). doi:10.26714/seanr.1.3.2019.137-141



## Original Research

# Therapeutic Effect of Al-Quran Murattal (Surah Yusuf) on Blood Pressure Level in Pregnant Women with Preeclampsia

Sri Rejeki<sup>1</sup>, Sumastia Trimuliani<sup>1</sup>, Machmudah Machmudah<sup>1</sup>, Nikmatul Khayati<sup>1</sup>

<sup>1</sup> Universitas Muhammadiyah Semarang, Indonesia

### Article Info

#### Article History:

Accepted March 4th, 2020

#### Keywords:

Surah Yusuf murattal therapy; Blood Pressure; pre-eclampsia

### Abstract

Pre-Eclampsia was recorded as a cause of maternal death in Indonesia in 2017, which was 28.8%. Hypertension is a sign of pre-eclampsia. Murattal Therapy Letter Yusuf is a non-pharmacological therapy that can be used to reduce blood pressure. The purpose of this study is to determine the effect of Murattal Therapy in reducing blood pressure in pregnant women with pre-eclampsia. The design of this study used the Quasy Experiment design with One Group Pretest and Posttest Design. As the population are pregnant women who are diagnosed with pre-eclampsia. 15 respondents were selected using purposive sampling. Data collection tool with an observation sheet and tensimeter. The data collection technique was carried out using the respondent placed in a conditioned room, then listening to the letter of Joseph for 15 minutes using a tape recorder and then his blood pressure was measured. From the 15 respondents after Murotal therapy, the result of a decrease in blood pressure with a statistical test using a paired t-test obtained a p-value of systolic blood pressure of 0,000 and diastolic blood pressure of 0,000. Murattal therapy can stimulate a controlled autonomic nerve and cause secretion of epinephrine and norepinephrine by the controlled adrenal medulla. Control hormones epinephrine and norepinephrine will inhibit the formation of angiotensin which can reduce blood pressure. Surah Yusuf's Murattal Therapy can reduce the blood pressure of pregnant women with pre-eclampsia.

## INTRODUCTION

The main complications that cause almost 75% of maternal deaths are heavy bleeding, infection, high blood pressure during pregnancy (preeclampsia or eclampsia) and complications from unsafe abortion.<sup>1</sup> Based on the distribution of the causes of maternal mortality, it is known that the cause of maternal death is 30.3% bleeding, 28.8% hypertension, 7.3% infection, 1.8% prolonged labour, 1.6% abortion and 40.8%

others.<sup>2</sup> The causes of maternal death in Central Java are hypertension in pregnancy i.e. 32.97% (Pre-eclampsia), bleeding 30.37%, circulatory system disorders 12.36%, infections 4.34%, metabolic disorders 0.87% and others 19.09%.<sup>3</sup>

Pre-eclampsia is one of the highest causes of maternal death besides bleeding and infection with a significant incidence. Pre-eclampsia is a collection of symptoms that arise in pregnant and puerperal women

Corresponding author:

Sri Rejeki

[srirejeki@unimus.ac.id](mailto:srirejeki@unimus.ac.id)

South East Asia Nursing Research, Vol 2 No 1, March 2020

ISSN:2685-032X

DOI: <https://doi.org/10.26714/seanr.2.1.2020.27-32>

consisting of increased blood pressure, oedema, and proteinuria that appear in pregnancy from 20 weeks until the end of the first week after delivery.<sup>4</sup>

The impact of pre-eclampsia-eclampsia on the fetus can result in low birth weight, impaired placental function, fetal hypoxia, intrauterine growth restriction (IUGR), prematurity, dysmaturity, and IUFD or fetal death in the womb. The impact of pre-eclampsia-eclampsia on the mother is placental abruption, hypofibrinogenemia, hemolysis, brain haemorrhage, damage to the capillaries of the eye to blindness, pulmonary oedema, liver necrosis, heart damage, HELLP syndrome, kidney disorders. The most severe complication of pre-eclampsia-eclampsia is maternal death.<sup>5</sup>

Al-Qur'an is one method of treatment that has all kinds of programs and data needed to treat various kinds of disorders of the body's cells. Murattal (listening to the reading of the Qur'an) is one of the healing methods using the Qur'an. Listening to the murattal of the Qur'an can affect emotional intelligence (EQ), intellectual intelligence (IQ), as well as one's spiritual intelligence (SQ). Listening to Murattal will have a calming and relaxing effect on a person so that it will also contribute to the reduction in blood pressure.<sup>6</sup>

According to Kartini, the Murattal Alqur'an technique is proven to provide a calm and relaxing effect because it provides a positive perception response which can further stimulate the hypothalamus to release endorphins which are hormones that make a person feel happy so that they can reduce the blood pressure.<sup>7</sup> Kartini's research is also supported by the results of research from Diki<sup>8</sup>. There is an effect of Murattal Therapy on blood pressure or there is a difference in blood pressure before and after getting the treatment.<sup>6</sup> The Murattal used in this study was Surah Yusuf. Surah Yusuf consists of 111 verses, where Surah contains the story of the Prophet Joseph.

Surah Yusuf is believed to have virtue as a means (Washilah) to get offspring who have a face and character as beautiful as the Prophet Yusuf.<sup>9</sup>

Based on the above information, the present research deals with the therapies that can reduce blood pressure in pregnant women with pre-eclampsia. The effect of Murattal Surah Yusuf's Therapy was examined on the blood pressure of preeclamptic pregnant women.

## METHODS

### Population and sample

This research is a quantitative study with a Quasy Experiment research design with One Group Pretest and Posttest Design. The population is pre-eclampsia pregnant women who check their contents in the poly content of Rowosari Puskesmas and Kedungmundu Puskesmas. The method of taking samples uses purposive sampling so that the number of samples is 15 respondents. This research was conducted in the working area of Rowosari Community Health Center and Kedungmundu Health Center. Data collection tool with an observation sheet and tensimeter as a blood pressure gauge. The research process takes place from March-April 2019.

### Statistic analysis

Descriptive analysis is performed for all variables. Data were analyzed univariately and bivariate. Bivariate analysis using paired t-test. The statistical significance test is defined by  $p \leq 0.05$ . All data were analyzed using SPSS VERSION 17. Values for measurements are presented as mean  $\pm$  SD.

## RESULTS

The respondents are with an average age of 34.47 years, most mothers with 3rd pregnancy status were 6 respondents (40%) and, the average gestational age was 27 weeks, and there was no risk of



depression as many as 15 respondents (100%).

Table 1  
The characteristics of respondents by age and gestational age (n=15)

Indicators	Min	Max	Mean	SD
Age	27	46	34.47	5.055
Gestational age	21	38	27	4.405

Based on Table 2 it could be seen the average systolic blood pressure and diastolic blood pressure of respondents on the 1st, 2nd and 3rd day before being given Murattal Surah Yusuf Therapy. The mean systolic blood pressure of the respondents before the highest treatment was on the first day of 148 mmHg and the standard deviation was 5.815 with the highest systolic blood pressure of 160 mmHg and the lowest of 140 mmHg. The average of systolic blood pressure on the second day was 144 mmHg and the standard deviation was 5.499 with the highest blood pressure of 155 mmHg and the lowest was 140 mmHg. The average diastolic blood pressure of respondents before the highest treatment on day 1 was 95 mmHg and the standard deviation was 4.805 with the highest diastolic blood pressure of 100 mmHg and the lowest was 90 mmHg. The lowest diastolic blood pressure was on the 3rd day of 92 mmHg and the standard deviation was 4.169 with the highest diastolic blood pressure of 100 and the lowest of 90 mmHg.

Based on table 2, it can be found that the average systolic blood pressure and diastolic blood pressure of respondents on the 1st, 2nd and 3rd day after being given Murattal Surah Yusuf Therapy. The mean systolic blood pressure of the respondents after treatment on the first day was 136 mmHg and the standard deviation was 5.815 with the highest systolic blood pressure of 150 mmHg and the lowest was 130 mmHg with the highest diastolic blood

pressure of 100 mmHg and lowest of 80 mmHg. The mean systolic blood pressure of the respondents after treatment on the second day was 134 mmHg and the standard deviation was 4.952 with the highest systolic blood pressure of 140 mmHg and the lowest was 130 mmHg with the highest diastolic blood pressure of 90 mmHg and lowest of 80 mmHg. The average systolic blood pressure of the respondents after treatment on the 3rd day was 134 mmHg and the standard deviation was 4.419 with the highest systolic blood pressure of 140 mmHg and the lowest was 130 mmHg. The average diastolic blood pressure of the respondent after treatment on the 3rd day was 86 mmHg and the standard deviation was 4.499 with the highest diastolic blood pressure of 90 mmHg and lowest of 80 mmHg.

Based on table 2, it can be said that the mean systolic blood pressure from 3 treatments before performing the Murattal Therapy of Surah Yusuf was 145 mmHg with a standard deviation of 4.355 with the highest systolic blood pressure of 153 mmHg and the lowest systolic blood pressure of 140 mmHg. The average of diastolic blood pressure before performing Murattal Therapy Surah Yusuf was 93 mmHg with a standard deviation of 3.241 with the highest diastolic blood pressure of 100 mmHg and the lowest diastolic blood pressure of 90 mmHg.

Based on table 2, it can be found that the average of systolic blood pressure from 3 treatments after the Murattal Surah Yusuf Therapy was 134 with a standard deviation of 4.024 with the highest systolic blood pressure 143 mmHg and the lowest systolic blood pressure of 130 mmHg. The average of diastolic blood pressure after performing Murattal Surah Yusuf Therapy was 86 with a standard deviation of 3.360 with the highest diastolic blood pressure of 93 mmHg and the lowest diastolic blood pressure of 82 mmHg.

Table 2  
Average of blood pressure before and after being given Murattal Surat Yusuf therapy days 1, 2 and 3 (n=15)

Indicators	Day 1	Day 2	Day 3
Before therapy			
Systolic, mean (SD)	148 ( $\pm 5,815$ )	144 ( $\pm 5,499$ )	145 ( $\pm 4,577$ )
Diastolic, mean (SD)	95 ( $\pm 4,806$ )	93 ( $\pm 4,082$ )	92 ( $\pm 4,169$ )
After therapy			
Systolic, mean (SD)	136 ( $\pm 5,815$ )	134 ( $\pm 4,952$ )	134 ( $\pm 4,419$ )
Diastolic, mean (SD)	86 ( $\pm 6,114$ )	85 ( $\pm 4,169$ )	86 ( $\pm 4,499$ )

## DISCUSSION

As a result of this study, it was found that the respondents' blood pressure measurements carried out 10 minutes before the Murattal Surat Yusuf Therapy. It was carried out on all respondents experiencing high blood pressure. The highest blood pressure was 153/100 mmHg and the lowest was 140/90 mmHg. While the average respondent's blood pressure was 145.67 / 93.80 mmHg. An increase in the blood pressure of respondents who were pregnant women with a womb >2 weeks of age had a pregnancy-specific syndrome which was mainly related to the lack of organ perfusion due to vasospasm and endothelial activation, which manifests with blood pressure and proteinuria or so-called preeclampsia.<sup>8</sup>

After the respondent was given Murattal Surat Yusuf Therapy treatment, the respondent was remeasured for blood pressure in 10 minutes after the Murattal Surat Yusuf Therapy was performed. The result showed that all respondents (n=15) experienced a decrease in blood pressure either in systolic or diastolic pressure after Murattal Surat Yusuf Therapy. The highest blood pressure became 143/93 mmHg, while the lowest blood pressure was 130/82 mmHg. The average blood pressure of the respondent became 134.56 / 86.22 mmHg. Listening to the Murattal of the Qur'an gave influence on emotional intelligence, (EQ) intellectual intelligence (IQ), and spiritual intelligence (SQ) of a person. Listening Murattal would cause a calm and relaxing effect on a person so that it would also contribute to reducing the

blood pressure, anxiety levels and pain intensity.<sup>6</sup>

The result showed that Murattal Surat Yusuf Therapy influenced blood pressure causing reduction of blood pressure among pregnant women who had pre-eclampsia. The result showed a significant decrease in blood pressure seen from the difference in average blood pressure before and after the Murattal Surat Yusuf Therapy for 15 minutes, which amounted to 11.104 mmHg at systolic pressure and 7.578 mmHg at diastolic pressure. A paired *t*-test of systolic pressure obtained *p*-value=0.000. While the test on the paired diastolic pressure *t*-test resulted in *p*-value=0.000,  $H_a$  was accepted, and  $H_o$  was rejected, and it meant that there was an influence of Murattal Surat Yusuf Therapy in the blood pressure of pregnant women with pre-eclampsia at Community Health Center of Rowosari and Kedungmundu.

Based on these results, it could be concluded that Murattal Surat Yusuf Therapy could reduce the blood pressure in pregnant women who got pre-eclampsia. The positive perception obtained from the Murattal Al-Quran would stimulate the hypothalamus to release endorphins, as we know that this hormone would make someone feel happy. Furthermore, the amygdala would stimulate the activation and control of the autonomic nerve which consists of the sympathetic and parasympathetic nerves. The parasympathetic nerves are connected to the heart, and it made the heart work slowly. Meanwhile, parasympathetic nerves played vice versa role. Controlled autonomic nerve stimulation would cause

epinephrine secretion and norepinephrine by the adrenal medulla. Controlled by epinephrine hormone and norepinephrine would inhibit the formation of angiotensin which could further reduce the blood pressure.<sup>9</sup>

Before giving Murattal Surah Yusuf Therapy, the blood pressure of all respondents was mean of 145.67 / 93.80 mmHg with the highest blood pressure of 153/100 mmHg and the lowest of 140/90 mmHg. After the respondent was given treatment, the result showed that all respondents (n=15) experienced a decrease, the highest blood pressure being 143/93 mmHg and the lowest was 130/82 mmHg. So, the average blood pressure of the respondent becomes 134.56 / 86.22 mmHg. Surah Yusuf murattal therapy is effective in lowering the blood pressure of pregnant women who got pre-eclampsia both in the case of systolic blood pressure ( $p=0.000$ ) and diastolic blood pressure ( $p=0.000$ ).

The nurses are expected to apply Murattal Surah Yusuf Therapy in providing comprehensive and holistic nursing care to pregnant women who got pre-eclampsia. The recommendation for nursing education is expected to be one of the treatment discussions to reduce blood pressure in pre-eclampsia pregnant women in counselling activities to the wider community. It is expected that future research should be carried out by considering the adequacy of the research sample and can also by comparing other therapies such as SEFT, Acupuncture or Acupressure Therapy.

## CONCLUSION

The nurses are expected to apply Murattal Surah Yusuf Therapy in providing comprehensive and holistic nursing care to pregnant women who got pre-eclampsia. The recommendation for nursing education is expected to be one of the treatment discussions to reduce blood pressure in pre-eclampsia pregnant women in counselling activities to the wider community. It is

expected that future research should be carried out by considering the adequacy of the research sample and can also by comparing other therapies such as SEFT, Acupuncture or Acupressure Therapy.

## ACKNOWLEDGMENTS

We would like to express our appreciation to all patients who participated in this study and to the heads and nurses of Rowosasi and Kedung Mundu puskesmas who provided valuable assistance during data collection.

## CONFLICTS OF INTEREST

Neither of the authors has any conflicts of interest that would bias the findings presented here.

## REFERENCES

1. World Health Organization. Maternal Mortality. [accessed 6 March 2020]. Available at: <https://www.who.int/en/news-room/fact-sheets/detail/maternal-mortality>
2. Kementerian Kesehatan Republik Indonesia. 2015 Profil Kesehatan Indonesia. [accessed 6 March 2020]. Available at: <https://www.kemkes.go.id/resources/download/pusdatin/profil-kesehatan-indonesia/profil-kesehatan-Indonesia-2015.pdf>
3. Dinas Kesehatan Kota Semarang. Profil Kesehatan Kota Semarang Tahun 2017. [accessed 6 March 2020]. Available at: <https://dinkes.semarangkota.go.id/asset/upload/Profil/Profil/Profil%20Kesehatan%202017.pdf>
4. Sukarni I. Patologi: Kehamilan, Persalinan, Nifas dan Neonatus Resiko Tinggi. Yogyakarta: Nuha Medika; 2014.
5. Kurniasari D, Arifandini F. Hubungan Usia, Paritas Dan Diabetes Mellitus Pada Kehamilan Dengan Kejadian Preeklamsia Pada Ibu Hamil Di Wilayah Kerja Puskesmas Rumbia Kabupaten Lampung Tengah Tahun 2014. *Jurnal Kesehatan Holistik*. 2015;9(3):142-150.
6. Yuliani DR. Terapi Murattal sebagai Upaya Menurunkan Kecemasan dan Tekanan Darah pada Ibu Hamil dengan Preeklamsia: Literature Review Dilengkapi Studi Kasus. *Jurnal Kebidanan*. 2018;8(2):79-98.

7. Kartini K, Fratidhina Y, Kurniyati H. Pengaruh mendengarkan murattal terhadap penurunan tekanan darah pada ibu hamil preeklamsi di RSIA PKU Muhammadiyah tangerang. Jurnal JKFT. 2016;2(2):40-47.
8. Lalenoh DC. Preeklampsia Berat dan Eklampsia: Tatalaksana Anastesia Peioperatif. Yogyakarta: Deepublish: 2018.
9. Erlina E, Raharjo SB. Terapi Murattal Ar-Rahman Terhadap Perubahan Tekanan Darah Pasien Hipertensi Di Rsudza Banda Aceh. Bandung: RuangKata Imprint Kawan Pustaka: 2016.

## Original Research

# Chickenpox prevention behaviour in the Ras Laffan Industrial City Qatar

Djuhari Djuhari<sup>1</sup>

<sup>1</sup> Medical Departement Qatar Petroleum

### Article Info

#### Article History:

Accepted March 4th, 2020

#### Keywords:

Knowledge; Behaviour;  
Chickenpox

### Abstract

Chickenpox is a highly contagious infectious disease caused by the Varicella Zoster virus, characterized by a characteristic eruption on the skin and can affect people of all ages. Increasing knowledge and behaviour to prevent chickenpox transmission is very important for mining workers, especially in their accommodation environment. The purpose of this study was to determine the relationship between knowledge of mining workers and prevention behaviour of chickenpox transmission. The type of research used is associative descriptive. The respondents of this study were 67 mining workers who lived in the Ras Laffan Industrial City Qatar accommodation, which were obtained through total sampling. The results showed that there was a relationship between knowledge and the behaviour to prevent chickenpox transmission with a significant value of  $p = 0.023$ ,  $p < \alpha (0.05)$ . Suggestions for workers in the Ras Laffan Industrial City Qatar accommodation environment, especially those related to preventing the transmission of chickenpox, should be more aware of the very fast transmission of chickenpox.

## INTRODUCTION

Chickenpox is derived from the language of Latin, Varicella. <sup>1</sup> This disease is known by the term Chickenpox. <sup>2</sup> Varicella is a disease infections are very contagious that is caused by a virus Varicella Zoster, is characterized by the eruption of the typical on the skin. Disease Chickenpox can attack all layers of age, but generally the disease is attacking the children. <sup>3,4</sup>

The incidence of chickenpox in the world is still high. <sup>5-7</sup> The number of cases of Chickenpox were registered in Qatar has always increased in three years last, began the year 2012 to 2014. The high number of

events that require measures of prevention and treatment is good. <sup>7</sup>

Symptoms of chickenpox water usually begin to appear in time 10 to 21 days after the body infected with the virus varicella. Symptoms are usually in the form of fever, no appetite eat, myalgia, sore head. But in the case of Chickenpox adults complaint, a major form of the sense of pain that is experienced will be very beyond ordinary. The pain will sometimes go away for a long time, even though the other main complaints have reduced or disappeared. <sup>4,8</sup>

Qatar is one of the destinations for migrant workers. A large number of workers migrant The cause needs service health

Corresponding author:

Djuhari

[djuharie@yahoo.com](mailto:djuharie@yahoo.com)

South East Asia Nursing Research, Vol 2 No 1, March 2020

ISSN:2685-032X

DOI: <https://doi.org/10.26714/seanr.2.1.2020.33-38>

increased.<sup>9</sup> The labor migrants are generally working in the sectors of industry and construction, as well as maid house stairs. In general, the worker or workers migrants are not aware or less aware of things that relate to the importance of maintaining the health of the body as well as a history of immunization were obtained in the past. In addition to the condition of a place to stay they were overbooked can accelerate the process of transmission of Chickenpox. Displacement of the population of workers migrant can improve the transmission of disease from one place to place another.<sup>10</sup>

Based on a survey conducted in the environment accommodation of workers mining Ras Laffan Industrial City Qatar found the number of visits patients were infected with chickenpox water to Al Madinah Medical Center in Ras Laffan Industrial City the period of January through to December 2011 Google Translation vary each month. The average number of visits patients pox water ranging from 5 of total visits as many as 67 people each month.<sup>11</sup>

From the results of the survey in the field against the worker's mine who came for treatment to the clinic Al Madinah Health Center Ras Laffan, is found among workers mine who suffered from Chickenpox and workers are not suffering from Chickenpox mingle and interact with one each other without using a tool of protection themselves. They seem less understanding about what the disease Chickenpox, means of transmission and how to prevent it.

The objective of this research is to know the relationship between knowledge about how the prevention of transmission of Chickenpox with behavioural prevention of transmission of chickenpox.

## **METHODS**

This study has used an associative descriptive research design. This study has

used a cross-sectional approach. This study measures respondents' knowledge about the transmission and prevention of chickenpox and their prevention behaviour.

Respondents research it is working mine who worked and lived in the neighbourhood for accommodation Ras Laffan Industrial City Qatar both were infected with Chickenpox and were not infected with Chickenpox. The number of research respondents was 67 people. Technics taking samples which have been used in research this is a total sampling.

The instrument of research that has been used in research this is a questionnaire. The research instrument consisted of 24 statement items. The questionnaire has been declared valid and reliable. The questionnaire has been carried out by expert tests to assess content validity. Then a questionnaire carried out a test try instrument to assess the construct validity. The results of the instrument validity test showed that the research instrument had a value of  $r = 0.367-0.853$  with a Cronbach Alpha value = 0.957.

Researchers have explained to prospective respondents before the retrieval of data. It consists of: the purpose of research, benefits of research, and the consequences that should be done during becoming respondents. Respondents who had been willing to be the subject of study are required to sign pieces of informed consent. Researchers keep the identity of respondents in the research data a secret.

The process of making the data has been carried out for one month. Data result of research has been carried out the analysis using a test correlation Spearman rho. The test is performed to determine the relationship between knowledge workers about transmission and prevention of disease Chickenpox with behaviours to prevent disease Chickenpox.

## RESULTS

This research is carried out in the area of accommodation Mine Qatar Ras Laffan City, where the entire respondents were taken researchers are workers mine who works at Ras Laffan Industrial City. Research carried out in the period of February through to December 2017 with the number of respondents as many as 67 people.

Data were taken from 67 respondents were divided into three characteristics respectively: by Status of Citizens State of respondents who made the object of research the majority are citizens of the State of India as many as 30 people, followed Philipines and Nepal, each of which amounted to 15 people, citizens of the State of Sri Lanka as many as 3 people and finally 2 citizens of Pakistan and Bangladesh each. , The level of education is based on the level of education the majority of educated high school many as 33 people, SMP many as 11 people, Diploma as many as 10 people, Bachelor of as many as nine people and the last elementary school as much as 4 people and group work. Based on the type of work the majority of the respondents work in class Employee Staff (Labor) for 53 people and remaining there in the group of senior staff of as many as 14 people.

Results of the study showed that the level of knowledge workers mine on how the prevention of transmission of Chickenpox are divided into two groups, namely high and low. From the results of data processing, it is known that 60 people (89.6%) have low knowledge and 7 people (10.4%) have high knowledge. The values Mean knowledge about how the prevention of transmission of Chickenpox workers mine for 1.10 then the value median of 1.00. A minimum value of knowledge workers mines on how the prevention of transmission of Chickenpox by 1 and the value of a maximum of 2, while the standard deviation ranging from 0308.

Results of the study show the behaviour of the prevention of the transmission of Chickenpox be categorized into two groups, namely low and high. From the results of the processing of the data is known behaviour of prevention of transmission of Chickenpox workers mine low as 57 people (85.1%) and 10 men (14.9%) with behavioural prevention high. Then the obtained value Mean of 1.15, and the value of median of 1.00. Minimum value 1 and the value of maximum 2, while the standard deviation of 0.359.

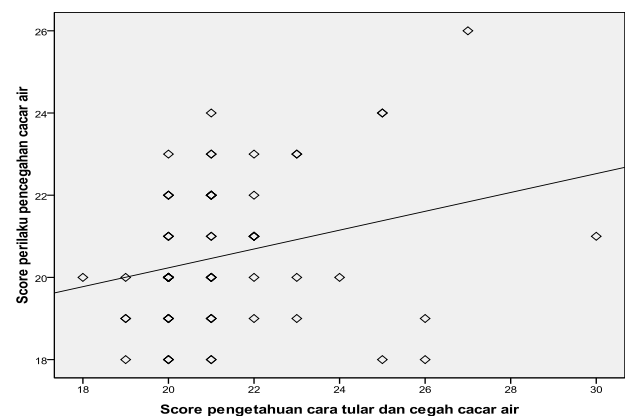


Figure 1  
The Relationship between Knowledge About Prevention of Chickenpox Transmission with Chickenpox Prevention Behaviour

## DISCUSSION

The results of the analysis test using Spearman's rho showed a significance value of 0.023 is following the theory that the p-value is less than 0.05, which means that Ho refused to conclude there is a relationship between knowledge workers mine about ways of transmission and prevention of transmission of disease chickenpox with behavioural prevention of chickenpox in the environment of accommodation Ras Laffan Industrial City Qatar.

The result shows knowledge of the workers mine on how the prevention of transmission of the disease chickenpox known to generally low 89.6%, regard this possibility which becomes the cause of the disease chickenpox is still spreading in the

environment accommodation of workers mining Ras Laffan Industrial city of Qatar. While the data supporting such as Status of Citizens State, level of education, Group Works by answers to a questionnaire on knowledge about how the prevention of transmission of chickenpox was distributed to those obtained frequency level of knowledge of the majority of the low of 60 (89.6%) of the total frequency is 67 (100%), the value of Mean of 1.10, the value Median 1.00 and standard deviation of 0.308, it can be described that the level of education, nationality and type of work does not affect the level of knowledge workers mine on how the prevention of transmission of chickenpox.

Knowledge is an effort that underlies a person's thinking is scientific, while its level depends on scientific knowledge or basic education people are.<sup>12</sup> Heigh and the low level of knowledge of the workers mine against disease chickenpox depends on the information that is received and does not depend on the level of education of each individual. This means that not all workers mine who has a level of education is high know about how the prevention of transmission of chickenpox much better than the worker's mine who has a level of education low.<sup>13</sup>

Knowledge is not obtained from education formal course, will however be obtained through education non-formal. Knowledge someone about an object contains two aspects, namely the aspect of positive and aspects negative. The second aspect of this which will determine the attitude of a person, the more many aspects of positive and object are known, then it will lead to an attitude more positive towards the object specified. One form of the object's health can be described by the knowledge that is gained from the experience itself.<sup>14</sup>

Prevention behaviour of chickenpox disease among mining workers such a the research results is generally low 85.1%. Behaviour in here to explain about the role they are to

perform the prevention of transmission of chickenpox on worker mine in the environment of accommodation Ras Laffan Industrial City. While the data supporting such as Status of Citizens State, Education Level, Class Works by answers to a questionnaire on knowledge about how the prevention of transmission of chickenpox was distributed to those obtained frequency level of knowledge of the majority of the low of 57 (85.1 %) of the total frequency 67 (100%), the value of Mean of 1.10, the value Median 1.00 and standard deviation of 0.308, it can be described that the level of education, nationality and type of education does not affect the level of behaviour workers mine to attempt the prevention of transmission of chickenpox in the environment accommodation of workers Qatar Industrial City's Ras Laffan mine.

The more low-behavioural prevention of chickenpox water in the environment accommodation of workers mining, the process of transmission and spread of the disease chickenpox becomes very easy. Starting from individual to individual other than spread from the environment one into the environment more.<sup>3,15</sup> So it can be concluded lack of behavioural prevention of transmission of chickenpox on worker mine very closely related with the level of knowledge of them against the disease chickenpox, as stated in the above that level knowledge workers mine on how the prevention of transmission of chickenpox against the disease was itself generally low.

It is following studies of other states that the act of a person constituted by what is known and what is considered to be good to him.<sup>16,17</sup> A person's actions are often interpreted in the same way as one's behaviour. Good health knowledge is directly proportional to health behaviour.<sup>18</sup> This means that the better a person's knowledge is, the better his health behaviour will be.

Based on the results of the analysis above, the role of health workers, especially nurses



who work at Ras Laffan Industrial City, is very much needed, especially in terms of providing intensive counselling and socialization on efforts to prevent the transmission of chickenpox in the accommodation environment of mining workers in Ras Laffan Industrial City Qatar. Starting from providing information about chickenpox covering the causes, symptoms and signs of someone having chickenpox, the mode of transmission, the complications caused to how to prevent the transmission of chickenpox to all mining workers in the Ras Laffan Industrial City Qatar accommodation environment.

Emphasizing the importance of implementing a clean and healthy lifestyle to mining workers both in times of health and illness. Especially for mining workers infected with chickenpox, they should comply with all instructions given by health workers such as washing hands before and after carrying out activities, always being in an isolation room during the treatment period, always using personal protective equipment such as masks when meeting visiting guests., changing clothes every day, cutting fingernails and so on related to personal hygiene.

Through the above activities, it is hoped that the knowledge of mining workers about how to prevent the transmission of chickenpox will increase, it is hoped that it will lead to positive behaviour among mineworkers regarding efforts to prevent chickenpox transmission in their accommodation environment. The final result expected from all of the above actions is of course to minimize the incidence of chickenpox transmission in the Ras Laffan Industrial City Qatar accommodation, which will also greatly affect the work productivity of mining workers at Ras Laffan Industrial City.

## CONCLUSION

The results showed that knowledge has a unidirectional relationship with the

prevention behaviour of chickenpox in the accommodation environment of Las Laffan industrial city Qatar. The level of knowledge of respondents about how to prevent chickenpox transmission in the Ras Laffan Industrial City Qatar accommodation environment is generally still low, while the level of behaviour to prevent chickenpox transmission is generally also low.

Considering that the results of this study are very meaningful towards efforts to reduce the number of people with chickenpox in the Ras Laffan Industrial City Qatar accommodation environment, the participation of health workers, especially nurses who work at Ras Laffan Industrial City, is very much needed, especially in terms of providing intensive counselling and socialization of efforts. prevention of transmission of chickenpox in the accommodation of mining workers in the Ras Laffan Industrial City Qatar. Always emphasize the importance of implementing a clean and healthy lifestyle for mining workers both in times of health and illness.

## ACKNOWLEDGMENTS

I would like to express our appreciation to all respondents who participated in this research and to all units that have supported the implementation of this research.

## CONFLICTS OF INTEREST

Neither of the authors has any conflicts of interest that would bias the findings presented here.

## REFERENCES

1. Kennedy PGE, Gershon AA. Clinical features of varicella-zoster virus infection. *Viruses*. 2018;10(11):609.
2. Presterl E, Diab-El Schahawi M, Lusignani LS, Paula H, Reilly JS. General Definitions. *Basic Microbiol Infect Control Midwives*. Published online 2018:1.
3. Yang J, Liu J, Xing F, et al. Nosocomial transmission of chickenpox and varicella zoster

- virus seroprevalence rate amongst healthcare workers in a teaching hospital in China. *BMC Infect Dis.* 2019;19(1):1-7.
4. Duncan DL. Chickenpox: Presentation, transmission, complications and prevention. *Br J Sch Nurs.* 2019;14(10):482-485.
  5. Królasik A, Paradowska-Stankiewicz I. Chickenpox in Poland in 2016. *Przegl Epidemiol.* 2018;72(3). doi:10.32394/pe.72.3.5
  6. Bogusz J, Paradowska-Stankiewicz I. Chickenpox in Poland in 2017. *Przegl Epidemiol.* 2019;73(4). doi:10.32394/pe.73.38
  7. Sallam M, Nadeem S, Kumar N. Epidemiological situation of chickenpox in Qatar (2012-2014). *J Emerg Med Trauma Acute Care.* 2016;2016(2):5. doi:10.5339/jemtac.2016.icepq.5
  8. Ballestas HC, Caico C. *Pathophysiology of Nursing.*; 2014.
  9. Ali FMH, Nikoloski Z, Reka H. Satisfaction and responsiveness with health-care services in Qatar—evidence from a survey. *Health Policy (New York).* 2015;119(11):1499-1505.
  10. Goodman A. The development of the Qatar healthcare system: a review of the literature. *Int J Clin Med.* 2015;6(03):177.
  11. RLMC C. RLMC-Rashid Latif Medical College.
  12. Hyde L. Chapter 2 - Information as a Commodity. In: Phelps S, Hyde L, Wolf JPBT-TI, eds. Chandos Publishing; 2018:19-30. doi:https://doi.org/10.1016/B978-0-08-101282-6.00002-5
  13. Shin J, Dronjic V, Park B. The interplay between working memory and background knowledge in L2 reading comprehension. *TESOL Q.* 2019;53(2):320-347.
  14. Boyd G, Heaton PA, Wilkinson R, Paul SP. Nursing management of childhood chickenpox infection. *Emerg nurse J RCN Accid Emerg Nurs Assoc.* 2017;25(8):32-41.
  15. Stryczyńska-Kazubska J, Małecka I, Biskupska M, Bilski B, Pietrzycka D, Wysocki J. Can a healthcare worker be a source of an infection of a patient—a risk of transmitting the chickenpox and shingles virus VZV by the staff of hospital wards—preliminary research findings. *J Med Sci.* 2017;86(1):30-35.
  16. Jahan Y, Rahman A. Management of dengue hemorrhagic fever in a secondary level hospital in Bangladesh: A case report. *IDCases.* 2020;21:e00880. doi:10.1016/j.idcr.2020.e00880
  17. Randolph PK, Hinton JE, Hagler D, et al. Measuring competence: collaboration for safety. *J Contin Educ Nurs.* 2012;43(12):541-547, quiz 548-549. doi:10.3928/00220124-20121120-79
  18. Glanz K, Rimer BK, Viswanath K. *Health Behavior: Theory, Research, and Practice.* John Wiley & Sons; 2015.



## Case Study

# Implementation of The Tiered Supervision as a Supervision Function

Retno Wahyu Nugrahini<sup>1,2</sup>, Vivi Yosafianti Pohan<sup>2</sup>

<sup>1</sup> Rumah Sakit Islam Sultan Agung Semarang, Indonesia

<sup>2</sup> Universitas Muhammadiyah Semarang, Indonesia

### Article Info

#### Article History:

Accepted March 4th, 2020

#### Keywords:

Nursing Supervision;  
Nursing Management;  
Supervision Function

### Abstract

Tiered supervision that supports improving the quality of nursing services in the field of nursing at Sultan Agung Islamic Hospital has not been carried out in a structured and documented manner. Baitul Izzah 1 room as a disease treatment room in class III, the head of the room has not yet supervised the Person in Charge of Care (PPJA) and so on PPJA to the Associate Nurse (PP). The supervision that has been carried out so far is only to ask directly about existing problems to the head of the room and directly observe the activities of implementing nursing care by PPJA and PP. Tiered supervision does not go well, because there are no references and standards for its implementation. The purpose of this study was to determine Implementation of The Tiered Supervision as a Supervision Function. It was found that the implementation of tiered supervision instruments improved the performance of the head of the room, PPJA and PP, then the patient's medical record document increases in completeness charging especially the patient's Islamic education document. In conclusion, tiered supervision instruments are very helpful in the implementation of the supervisory function as well as monitoring and evaluation in nursing management in the implementation of nursing care in the inpatient room. The recommendation for the role of the nursing field that is most important in controlling the quality of nursing care is to actively involve staff to jointly ensure the continuity of the implementation of tiered nursing supervision.

## INTRODUCTION

Nursing management is a process of planning, organizing, managing staff, directing, supervising and controlling each other. The role of the nursing manager cannot be separated from the management process carried out, including applying attention to material resources and nursing human resources. The role of the manager that is actually applied is able to bring transformation for other nursing staff to apply nursing quality standards. Standards

are set to measure the performance of objective, measurable and achievable nursing care and services.<sup>1</sup>

The nursing management process is carried out with an open systems approach, where each component is interconnected, which includes input, process, output, control and feedback. Nursing managers are required to plan (plan), organize (organize), lead and evaluate (evaluate) the facilities and infrastructure available to be able to provide nursing care that is as effective and

Corresponding author:

Retno Wahyu Nugrahini

retnowahyu2408@gmail.com

South East Asia Nursing Research, Vol 2 No 1, March 2020

ISSN:2685-032X

DOI: <https://doi.org/10.26714/seanr.2.1.2020.33-39>

efficient as possible for individuals, families and communities.<sup>2</sup>

Supervision or controlling is the application of methods and tools to ensure that the plan has been implemented according to what has been determined. Supervision through communication, namely supervising and communicating directly with the team leader and executor regarding the nursing care provided to patients. Supervision in nursing management through supervision with direct and indirect supervision.

Nursing supervision is a supervision and guidance activity carried out continuously by supervisors covering nursing service problems, manpower and equipment problems so that patients receive quality service at all times.<sup>3</sup> Supervision or controlling is the application of methods and tools to ensure that the plan has been implemented according to what has been determined. Supervision through communication, namely supervising and communicating directly with the team leader and executor regarding the nursing care provided to patients. Supervision in nursing management through supervision with direct and indirect supervision.

Tiered nursing supervision at Sultan Agung Islamic Hospital in Semarang has not been implemented. The head of the nursing department carries out supervision of the head of the room in completing his duties, only asking things that have problems in the treatment room. The head of the room in monitoring and evaluating PPJA's duties in providing nursing care to patients does not have standardized tools or references, as well as PPJA evaluating PPJA is not well documented. The absence of supervision through supervision from nursing management, the head of the room and PPJA in a documented and structured manner so that the evaluation cannot be carried out continuously because there are no records used as evaluation material.

The supervision instrument as a reference in the implementation of tiered supervision as a form of supervision activities, if it is carried out and documented in a structured manner and there is a clear supervision assessment format, the supervisory function will run smoothly.

The assessment format is the nurse's performance record for further improvement and the supervised nurse will also have a performance record as material for self-evaluation. Thus it will be easy to make improvement efforts in nursing services. However, if the supervision activities are not carried out in a structured and well-documented manner and there is no evaluation format for standard supervision, then the form of evaluation that is carried out cannot be carried out continuously because there are no notes used as material for a structured evaluation.<sup>4</sup>

The purpose of this research is to find out the extent of the supervisory function of nursing management through tiered supervision, providing solutions by making supervision instruments and evaluating the implementation of supervision instruments at Sultan Agung Islamic Hospital Semarang.

Increased supervision by the head of the room, the nursing committee, and the nursing department needs to be improved, by means of an organizational structure approach in order to motivate the performance of the nurse executing.<sup>5</sup> The importance of clinical supervision apart from managerial supervision is therefore, that an effective clinical surveillance support system is strengthened to support managerial supervision.<sup>6</sup>

The purpose of this study was to determine Implementation of The Tiered Supervision as a Supervision Function.

## **METHODS**

The research design uses descriptive qualitative methods, namely the research method is basically a scientific way to obtain data with specific purposes and uses as well as to determine how to find, collect, process and analyze research data.<sup>7</sup> The method was chosen to obtain natural data about the understanding of the supervisory function through tiered supervision and its implementation using the supervision instrument through interviews.

## RESULTS

Assessment according to the priority of the problem in the Baitu Izzah 1 room obtained 2 (two) problems, namely: the frequency of Islamic education with the number of 96, and the number of 256 tiered nursing supervision activities that have not been implemented. Tiered supervision activities have not been carried out because there is no reference for implementation, so that the completion of routine work has no target. Supervision is a coaching activity that is planned to assist nursing personnel in doing their job effectively.<sup>8</sup>

The intervention was carried out by conducting socialization on nursing supervision, making supervision instruments, and making supervision of Standard Operating Procedures (SOP). Socialization about supervision material with Focus Group Discussion (FGD), Socialization carried out directly to the Head of Nursing, Head of Department of Education, PPJA and PP continued with the implementation of supervision instruments on December 9, 2020. Tiered supervision instruments can be implemented properly from the field of nursing, Head of Department and PPJA well .. Group clinical supervision as an intervention to support nurse resilience in the hospital as a recommendation for practice, to improve development through clinical supervision.<sup>9</sup>

Evaluation of the implementation of tiered supervision instruments by conducting interviews and observations to three

participants, namely the Head of Nursing, the Head of the Room and the PPJA.

*... With the supervision instrument it makes it easier for me to monitor the memnitor of the head of the room... "(P1)*

*... This supervision instrument turned out to make it easier to complete supervisory tasks for PPJA and my duties as head of the room .. (P2)*

*... After there are supervision instruments, all of which become my job as PPJA to monitor and evaluate PP in providing nursing care to be better and more directed... .. (P3)*

Observations are made by looking at the filling of the supervisi instrument. The supervision instruments are well implemented and fully stocked. Clinical nursing supervision has an influence on nurses' experiences of well-being and in relation to their psychosocial work environment. Nurses attending clinical nursing supervision reported increased satisfaction with their psychosocial work environment.<sup>10</sup>

## DISCUSSION

The supervisory function will run well with the implementation of supervision. Tiered supervision is carried out as an effort to observe and monitor the implementation of nursing management or the provision of nursing care on an ongoing basis including nursing service problems, workforce problems, and care so that patients receive quality service at all times.<sup>2</sup>Based on the evaluation of the implementation of tiered supervision through the supervisi instrument, the performance of the head of the room, PPJA and PP is different from the previous one which was seen only providing routine nursing care. Supervision of the head of the room has a positive and significant effect on nurse performance. This means that the better the supervision of the head of the room, the nurse's performance will increase. Conversely, the

less good the supervision of the head of the room, the lower the performance of the nurse. Supervision of the head of the room, workload, and motivation simultaneously (together) have a significant effect on the performance of nurses. This means that the better the supervision of the head of the room, workload, and motivation together, the nurse's performance will increase. On the other hand, the supervision of the head of the room is not good.<sup>11</sup>

Completeness of the documentation found in the second priority problem is the Islamic education medical record document, with the implementation of supervision, it is hoped that it can be completely filled. Existence of supervision by documenting nursing care indicates that the need for supervision action for hospitals that have not implemented supervision and for hospitals that have implemented supervision is expected to further improve the implementation of the supervision. Because with this supervision, a nurse will feel that someone is accompanying her and this will have a positive impact on the nurse's own performance.<sup>12</sup>

The description of the supervision of the head of the room that is perceived by the nurse states and the description of how 53% of the nursing care documents are completely filled. A good head of the room increases the documentation of nursing care so that the head of the room should carry out the supervision properly and schedule to continue to improve the quality of nursing care documents.<sup>13</sup>

In Asmawati's research, Yuanita Ananda, Alkafi (2018), in her research it can be concluded that from 12 nurse respondents before being given supervision, the average development of nursing care documentation was 34.56 with a standard deviation of 4,912. Furthermore, it appears that the minimum value of 20 is classified as incomplete documentation and the maximum value of 32 is classified as complete documentation. Of the 12 nurse

respondents after being given supervision, the average development of documentation of nursing care was 28.38 with a standard deviation of 4.773. Furthermore, it can be seen that the minimum value of 21 is classified as complete documentation and the maximum value of 38 is classified as complete documentation. There is a difference in documenting nursing care before and after being given supervision with a P value of 0,000.<sup>14</sup>

Supervision or supervision material is adjusted to the job descriptions of each supervised nursing staff. For the head of the room, supervision material includes managerial skills and nursing care. The team leader is supervised regarding team management skills and the ability to provide nursing care. Implementing nurses undergo supervision related to the ability of nursing care carried out.

Some of the activities that can be supervised by the person in charge of the room / head of the room for the orphans are:

- a. Conducting pre conference and post conference
- b. Implementation of patient consideration
- c. Implementation of nursing assessments
- d. Implementation of nursing diagnoses
- e. Implementation of nursing plans
- f. Implementation of nursing implementation
- g. Implementation of nursing evaluation
- h. Implementation of nursing care documentation
- i. Implementation of universal precautions
- j. Implementation of patient safety
- k. Implementation of case reflection discussions
- l. Implementation of discharge planning
- m. Compliance with SPO
- n. Implementation of the nursing round

Some of the activities that can be supervised by the orphan of the implementing nurses are:

- a. Implementation of nursing care for patients
- b. Implementation of nursing care documentation
- c. Compliance with SPO
- d. Implementation of universal precautions
- e. Implementation of patient safety

Nursing interventions are oriented towards 14 (fourteen) basic nursing components including:

- a. Meet the needs of oxygen.
- b. Meet the needs of nutrition, fluid and electrolyte balance
- c. Meet the needs of elimination.
- d. Meet security needs.
- e. Meet the needs of cleanliness and physical comfort.
- f. Meet the needs of rest and sleep.
- g. Meet the needs of movement and physical activity.
- h. Meet spiritual needs.
- i. Meet emotional needs.
- j. Meet communication needs
- k. Prevent and overcome physiological reactions.
- l. Meet medical needs and help the healing process.
- m. Meet extension needs.
- n. Meet rehabilitation needs

Supervision in hospital accreditation is also an element in the assessment, as a basis for monitoring evidence of implementation, namely at

### **Access to Hospitals and Service Continuity (AHSC)**

In Access to Hospitals and Service Continuity (AHSC) 3.3, it is stated "If the patient is in the management of the patient service manager (MPS), the continuity of the above process is monitored, followed,

and the transfer is supervised by the patient service manager (MPS)".

### **Competence and Authority of Staff (CAS)**

In Staff Competency and Authority (CAS) 5, it is stated that "All staff are supervised and evaluated periodically to ensure continuity of competence in their position".

### **Hospital Governance (HG).**

- a. In Hospital Governance (HG) 8.6. stated "The organizational structure can support the control process on the quality of clinical services".
- b. In Hospital Governance (HG) 11, it is stated that "the head of the service unit improves the quality and safety of patients by participating in the quality improvement and patient safety program of the hospital, monitoring, and improving specific patient care in his unit. The head of the service unit involves all his staff in quality improvement and patient safety activities that reflect the overall priorities of the hospital and conducts monitoring of clinical and non-clinical activities specific to the service unit ".<sup>15</sup>

Theory Conformity: Supervision is a professional process carried out by supervisors through a continuous process of direction, guidance and evaluation to supervisees (supervisory participants) to increase the ability of supervisees in carrying out their work in order to achieve professional service quality and protection of patient safety.

Nursing management activities will run well and improve service quality by approaching management functions must always be carried out optimally, including planning, organizing, directing, and controlling (monitoring and evaluation). Nursing service management focuses on the 5 M components (Man, Money, Material,

Method, Machine). In every management activity, it always begins with planning and ends with control which is a recurring cycle.

## CONCLUSION

The results of the evaluation of the implementation of the supervision instrument are very helpful in the implementation of tiered supervision in the nursing management of Sultan Agung Islamic Hospital Semarang. The implementation of nursing leveled supervision is quite effective in increasing the insight in the field of nursing, the Head of Runag, PPJA and PP. A good perception from the Head of the Room about the importance of nursing clinical supervision is a good initial capital to make changes and improvements in carrying out its functions. This supervisory function requires hospital support in its implementation.

The recommended suggestion is that the role of nursing is most important in controlling the quality of nursing care is to actively involve staff to jointly ensure the continuity of the application of nursing leveled supervision. Development into an online application is the task of the nursing field.

## ACKNOWLEDGMENTS

Special thanks to Dr. Ms. Vivi Yosafianti Pohan, M.Kep for their guidance and motivation in completing this task. may Allah bestow good deeds and blessings.

## CONFLICTS OF INTEREST

Neither of the authors has any conflicts of interest that would bias the findings presented here.

## REFERENCES

1. Julianto M. Peran dan fungsi manajemen keperawatan dalam manajemen Konflik. *Fatmawati Hosp J*. Published online 2016:1-7.
2. Nursalam. *Manajemen Keperawatan: Aplikasi Dalam Praktik Keperawatan Profesional*. 5th ed. Salemba Medika; 2015.
3. Marquis B, Huston C. Kepemimpinan dan Manajemen Keperawatan Teori & Aplikasi. *Manag Keperawatan*. Published online 2010.
4. Nursalam. Manajemen Keperawatan Aplikasi dalam Praktik Nursalam. (2011). *Manajemen Keperawatan Aplikasi dalam Praktik Keperawatan Profesional Edisi 3*. Salemba Medika. <https://doi.org/10.1001/archinte.165.22.2659> *Keperawatan Profesional Edisi 3*. *Salemba Medika*. 2011.
5. Zahara Y, Sitorus R, Sabri L. Faktor-faktor Motivasi Kerja: Supervisi, penghasilan dan hubungan interpersonal. *J Keperawatan Indones*. 2011;14(2011):73-82.
6. Cutcliffe JR, Hyrkäs K. Multidisciplinary attitudinal positions regarding clinical supervision: A cross-sectional study. *J Nurs Manag*. Published online 2006. doi:10.1111/j.1365-2934.2006.00720.x
7. Sugiyono. Metode Penelitian Kuantitatif Kualitatif dan Kombinasi (Mixed Methods). *J Chem Inf Model*. Published online 2016.
8. Cope V, Murray M. Leadership styles in nursing. *Nurs Stand*. Published online 2017. doi:10.7748/ns.2017.e10836
9. Francis A, Bulman C. In what ways might group clinical supervision affect the development of resilience in hospice nurses? *Int J Palliat Nurs*. Published online 2019. doi:10.12968/ijpn.2019.25.8.387
10. Bégat I, Severinsson E. Reflection on how clinical nursing supervision enhances nurses' experiences of well-being related to their psychosocial work environment. *J Nurs Manag*. Published online 2006. doi:10.1111/j.1365-2934.2006.00718.x
11. Hastuti AT. Hubungan persepsi perawat pelaksana tentang kemampuan supervisi kepala ruang dengan kinerja perawat di instalasi rawat inap rumah umum daerah kota semarang. *FIKKes J Keperawatan*. Published online 2014.
12. Publikasi N, Studi P, Keperawatan I, Kedokteran F, Tanjungpura U. Hubungan supervisi dengan pendokumentasian asuhan keperawatan di ruang rawat inap rumah sakit tk ii kartika husada kubu raya. Published online 2017.
13. Alidosti M, Delaram M, Dehgani L, Maleki Moghadam M. Relationship Between Self-Efficacy and Burnout Among Nurses in Behbahan City, Iran. *Women's Heal Bull*. Published online 2016. doi:10.17795/whb-



- 30445
14. ananda yuania, Asmawati A, Alkafi A. Pengaruh Supervisi Kepala Ruangan Terhadap Pelaksanaan Pendokumentasian Asuhan Keperawatan Di Ruang Rawat Inap RSU Aisyiyah Padang Tahun 2018. *JIK- J ILMU Kesehatan*. 2018;2(2):108-112. doi:10.33757/jik.v2i2.125
15. KARS. *Standar Nasional Akreditasi Rumah Sakit (SNARS)*. 1.1. Komisi Akreditasi Rumah Sakit; 2019.