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SEANR

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Original Research

Therapy of Brain Exercise on The Quality of Sleeping in Elderly

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Abstract

The aging is a natural process that cannot be avoided with age. Even though it is a natural thing, the process of aging still causes problems both physically, biologically, mentally and socio-economically due to a decline which is called a degenerative process The process of degeneration that occurs in the elderly, causes time. World Health Organization (WHO) confirmed that there were 600 million elderly people in 2012 worldwide. WHO also noted that there are 142 million elderly people in the Southeast Asia region. Meanwhile, according to the Central Statistics Agency (BPS), it was noted that the number of elderly people in Indonesia reached 28 million in 2012 from only 19 million in 2006. The results of the data recapitulation of the Central Java health office recorded 3 million elderly people in Central Java. The method in this study was experimental research and quasi-experimental design type with quasi-experimental design and village control group. Sample determination using the Total Sampling technique with a sample size of 30 respondents. Data analysis was performed using the Wilcoxon test. The results obtained before being given an intervention that has a level of good sleep quality amounted to 43.3% and after given an intervention that has a level of quality of sleep that is good, the minimum is 76.7%. Statistically obtained a p-value of 0,000 (<0.05) can be interpreted that there is a significant influence on brain gymnastics on the quality of sleep in the elderly.

INTRODUCTION

Aging is a natural process that cannot be avoided with age. Even though it is a natural thing, the process of aging still causes problems both physically, biologically, mentally and socio-economically due to a decline which is called a degenerative process The process of degeneration that occurs in the elderly, causes time. Effective sleep will decrease so that adequate quality of sleep is not achieved and will cause various kinds of sleep complaints or sleep disturbances.[1] The disturbance of sleep patterns causes suffering for the elderly because it reduces the quality of life so that it needs attention from health workers. The approach in managing sleep disorders must be systematic and comprehensive both physically and mentally, not only medical drugs but complementary therapies need to be developed by training the elderly to relax their thoughts before going to sleep such as taking deep breaths, reading books, using aromatherapy, or using aromatherapy. brain exercise therapy.[2]

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Sleep problems faced by the elderly can be used as a reference for providing appropriate nursing interventions in overcoming problems related to sleep fulfilment. Physical exercise is proven to increase the fulfilment of sleep needs in the elderly because it can get relaxation, improve blood circulation, and can reduce stress.[3] World Health Organization (WHO) confirmed that there were 600 million elderly people in 2012 worldwide. WHO also noted that there are 142 million elderly people in the Southeast Asia region. Meanwhile, according to the Central Statistics Agency (BPS), it was noted that the number of elderly people in Indonesia reached 28 million in 2012 from only 19 million in 2006. The results of the data recapitulation of the Central Java health office recorded 3 million elderly people in Central Java. This figure shows an increase in the number of elderly people by 22.5% from 2,323,541 in 2010. Quantitatively, this parameter is higher than the national size. Data from the Central Statistics Agency show that the number of elderly people over 60 years of age in Central Java Province has experienced an increase in life expectancy.

The increase in the elderly in the coming year can bring new social problems if the elderly is the responsibility of the population of productive age in the future. In 2014 the number of elderly people reached 3.83 million people or 11.43 per cent of the total population of Central Java Province then increased to 3.96 million people or 11.72% in 2015. Meanwhile, based on the results of the Projection Figures 18 Profile of the Elderly in Central Java 2018 Population in 2018, the number of elderly people in Central Java Province increased to 4.49 million people or 13.03%.[4]

Changes in sleep patterns in the elderly can result in changes in the neurological system which can decrease the number and size of neurons in the central nervous system. Changes in sleep can affect sleep quality related to the aging process such as increased sleep latency, waking early can reduce the stages of deep sleep. To overcome sleep disorders in the elderly it is necessary to carry out non-pharmacological therapies such as brain exercise. Brain gym or brain exercise is a simple movement that uses the brain as a whole. Brain exercise is *Educational Kinesiology* which means *"Educare* " (pulling out) and " *Kinesis"* (the study of body movements). So that with brain exercise, we can draw out the potential that is buried in us through body movements.

Based on the results of preliminary studies on elderly social care homes Potroyudan Jepara on the 29th of January 2020, there are 3 0 elderly who live in nursing, a male total of 11 elderly and female amounted to 19 elderly people with an average age above 60 years. Based on interviews conducted by researchers with 10 respondents, 4 people said they were often sleepy in the morning because they often wake up at night and have difficulty sleeping again. Meanwhile, as many as 6 people complained of going to bed early and waking up again at midnight. Based on this reason, the authors are interested in knowing the quality of sleep for the elderly in the Potroyudan Jepara elderly social centre.

METHODS

The type in this research is quasi-experimental or quasi-experimental with one group pretest and posttest. The population in this study were elderly patients who experienced quality sleep in Potroyudan Social Service Institutions in Jepara. Where the population is 30 people. There is also a total sample size of 30 samples and the determination of the sample using the Total Sampling technique. The inclusion criteria in this study were elderly people aged 5 0 years and above. The elderly with poor sleep quality are taking sleeping pills. The exclusion criteria were the elderly outside the Potroyudan social service institutions in Jepara. The elderly who do not have problems with sleep disorders are not willing to be

respondents. Elderly who have chronic diseases. The location of this research was located at the Potroyudan Social Service Home in Jepara in July 2020. Instrument of research is using SOP gymnastics Brain and observation sheets and questionnaires PSQI. The results of this study used the *Wilcoxon* test statistical *test*.

RESULTS

Based on table 1, the results show that the age of most respondents is 66-80 years old, with 18 respondents with a percentage of 60.0 %, followed by 50-65 years of age, whose respondents were 19 people with a percentage of 40.0%. The number of men was 12 people (40.0 %) and female were 18 people (60.0 %).

Table 1
Frequency Distribution based on Age of elderly respondents at the Potroyudan Social Institution in Jepara in July 2020 (n = 30)

Indicators	f	%
Age		
50-65	12	40.0
66-80	18	60.0
Sex		
Male	12	40.0
Female	18	60.0

Based on table 2, before giving the intervention, there were 13 people with a good sleep quality level with a percentage of 43.3% and 17 people who had a bad sleep quality level with a percentage of 56.7%. Whereas in the category after giving the intervention, there were 23 people with a good sleep quality level with a percentage of 76.7% and 7 people who had a bad sleep quality level with a percentage of 23.3%. The statistical test results obtained p-value 0.00 0 (<0.05), it can be concluded that Ho is rejected so that it can be interpreted statistically there is the effect of brain exercise on the quality of sleep in the elderly.

Table 2
Distribution of Frequency of Sleep Quality in the elderly before and after being given brain exercise therapy at the Potroyudan Social Institution in Jepara in July 2020 (n = 3 0)

Indicators		f	%
Before being given Brain Gym	Good	13	43.3
	Bad	17	56.7
After being given Brain Gym	Good	23	76.7
	Bad	7	23.3
p		0.000	

DISCUSSION

From the results of research conducted at the Potroyudan Social Institution in Jepara, based on the age characteristics of the respondents, it was found that the age of the most respondents was 66-80 years with a percentage of 68.3%. This is in line with research conducted[5] most of the respondents aged 60-80 years stated that a person will experience a decrease in organ function when entering old age. This makes the elderly more susceptible to diseases such as joint pain, *osteoporosis, Parkinson's* and others which tend to affect poor sleep quality due to decreased physiological functions.[6] The aging process will tend to experience many problems from various changes in the physiology of organs that take place over time. Also, the aging process will increase the likelihood of disease and even death. In the end, aging results in a decrease in anatomical and cellular conditions due to the metabolic buildup that occurs in the cell. In the elderly, there is a decrease in the hormone melatonin. The hormone melatonin plays a role in the hours and quality of sleep in the elderly.

From the results of the analysis of the characteristics of the gender of the respondents, it was found that the response of female was more (53.3 %) compared to male respondents. This is also supported by research conducted by Ismahmudi most of the respondents are female (68.7%) who say that it is influenced by the life expectancy of female who are greater than men. more sleep disturbances occur than in men.[7] Female tend to have poor sleep

quality due to a decrease in the hormones estrogen and progesterone which have receptors in the hypothalamus. This has a direct influence on circadian rhythm and sleep patterns. Psychological conditions such as increased anxiety, anxiety, and emotions are often out of control in female due to decreased estrogen which causes sleep disturbances.

Based on the results of the *Wilcoxon* statistical test, it was found that the p-value was 0.000 (<0.05).it can be concluded that Ho was rejected so that it could be interpreted statistically that there was an effect of brain exercise on the quality of sleep in the elderly with a frequency value before giving intervention that had a Good Sleep quality level. 13 people with a percentage of 43.3% and those who have a poor sleep quality level are 17 people with a percentage of 56.7%. Whereas in the category after giving the intervention, there were 23 people with a good sleep quality level with a percentage of 76.7% and 7 people who had a bad sleep quality level with a percentage of 23.3%.

This is in line with the results of Ismahmudi's research, where the results of Odds ratio value = 7.875, there is a significant relationship between brain vitalizing exercises and the quality of sleep in the elderly. Which states that any exercise done by the elderly is proven to improve sleep disorders in the elderly. Because exercise that is done regularly will stimulate the HPA axis activity and increase O2 transport throughout the body, thereby increasing the fulfilment of sleep needs. Gymnastics for the elderly also stimulates a decrease in sympathetic nerve activity and an increase in parasympathetic activity which affects the decrease in *adrenal* hormones, *noneprinefrin* and *catecholamines* as well as vasodilation of blood vessels which results in oxygen transport throughout the body, especially the brain smoothly. Also, the secretion of melatonin helps fulfil sleep needs, in this condition it will improve the quality of sleep in the elderly.

This is also following the research conducted by othe research obtained the quality of sleep in the elderly after having intervened in ergonomic exercise for 8 times in 4 weeks, there was an increase in sleep quality (69.2%) with a statistical value of $\alpha < 0.05$, meaning that ergonomic exercise affected the quality of sleep in the elderly. sleep disorders. which states that there are several non-pharmacological management for the management of sleep disorders, one of which is doing daily exercise/exercise and one of them is gymnastics. Exercise can increase oxygen in the brain which will stimulate increased serotonin secretion which can make the body calm and easier to sleep which can also improve the cycle and pattern of REM and NREM sleep.

Brain therapy aims to increase blood flow to the brain, as well as stimulate the two hemispheres of the brain to work. Brain exercise can activate the brain in three dimensions, namely laterality-communication, focusing-understanding and centring-regulation. Light movements with a play through the hands and feet can provide stimulation or stimulus to the brain. The movement that produces this stimulus can increase cognitive abilities (alertness, concentration, speed, perception, learning, memory, solving, problems and creativity).[8]

Sleep quality is an important constituent of an essential part of a person's quality of life.[9] Based on this understanding, sleep quality is a condition in which a person's awareness of something decreases, but the brain still works in such a way in regulating digestive function, heart and blood vessel activity and maintaining immunity, in providing energy to the body and in cognitive processes.[10]

The quality and quantity of sleep are strongly influenced by several factors, one of which is physical exercise, a tired person usually gets restful sleep, fatigue is the

result of work or fun exercise. Exercising 2 hours or more before bedtime keeps the body cool and maintains fatigue that promotes relaxation.[11] The aging process makes it easier for the elderly to experience sleep disorders. Elderly people often complain of three main problems in initiating and maintaining sleep.

brain gymnastics is aimed at relaxing or centring dimensions, stimulating or lateral dimensions and lightening or focusing dimensions. The concentration dimension can increase blood flow to the brain, increase oxygen reception so that it can eliminate negative thoughts, envy, jealousy, and others that can trigger stress. The lateral dimension will stimulate the coordination of the two hemispheres, namely the left and right, improve breathing, stamina, release tension, reduce fatigue, and so on. The focusing dimension to help remove focus barriers from the brain corrects inattention, lack of concentration, etc. Each dimension has a specific task so that the exercise movements that are carried out can vary. With Brain Gym movements, you can activate the neocortex and parasympathetic nerves to reduce the increase in adrenal hormone in the body which can relieve psychological and physical tension. So that the soul and body become relaxed and balanced.[8]

It is necessary at the time of the elderly require a factor driving because organs and physiological functions have been decreased. Sleep patterns can be improved if you do physical exercise, brain exercise or other things that make the body do activities so that the quality of the body can be better.

CONCLUSION

The results of the study can be concluded based on the characteristics of the age of the most respondents aged 66-80 years. Based on the results of the statistical test, it was found that statistically there is an effect of brain exercise on the quality of sleep of the elderly in Potroyudan social institutions in Jepara.

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CONFLICTS OF INTEREST

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

REFERENCES

1. Darmojo RB. Teori proses menua. dalam: Martono HH, Pranarka K, pengarang. Buku ajar boedhi-darmojo geratri. 4th ed. Jakarta: Balai penerbit fakultas kedokteran universitas indonesia; 2011. 3-12. p.
2. Claproth R. The Powerful Danger of Midbrain Activation. Jakarta: Grasindo; 2010.
3. Sharma, S. Parashar D. Effect of Resistance Training Over Aerobic Exercice in improving quality of sleep in older Adults. Indian J phystotherapy Occup Ther. 2013;7 (4),.:197–202.
4. PBS. Profil Lansia Provinsi Jawa Tengah 2019. Badan Pusat Statistik. 2019.
5. Oktora dwi S et al. The Effect of Murottal Al Qur'an Therapy on the Quality of Sleep of the Elderly in the Dewanata Cilacap Social Rehabilitation Unit. Soedirmaan J Nurs. 2016;11(3):168–73.
6. Azizah L. Elderly nursing. Yogyakarta: Graha I lmu; 2011.
7. Khasanah et al. Kualitas Tidur Lansia Balai Rehabilitasi Sosial "MANDIRI" Semarang. J Keperawatan Diponegoro. 2012;1(1):189–96.
8. Astuti N. Management of Insomnia at Older Age. 2015;
9. Luo et al. Prevalence and risk factors of poor sleep quality among chinese elderly in an urban community: results from the Shanghai Aging Study. 2013;
10. Sari R. The Effect of Rose Aromatherapy on Improving Sleep Quality in the Elderly.

Muhammadiyah Universiti of Surakarta; 2015.

11. Hidayat et al. Introduction to human sleep needs. 2015.

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Original Research

The Analysis of Factors Influencing Exclusive Breastfeeding Given By Working Mothers

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Abstract

Breast milk is a food source for infants with essential nutrition for their health, growth, and development. Breast milk has various benefits including preventing children from a variety of conditions that can inhibit their growth and development such as malnutrition. Malnutrition is associated with 45% of deaths and illnesses of children. Exclusive breastfeeding is considered to be able to help overcome nutritional problems such as stunting and malnutrition. A report from the Ministry of Health Republic of Indonesia in 2015 showed that 18.8% of toddlers suffer from malnutrition while 12.7% experience stunting. This study aimed to analyse factors influence breastfeeding given by working mothers. This was a quantitative descriptive study with a cross-sectional approach. The study involved 101 respondents who were working mothers of children aged 7-24 months old. The respondents were selected using questionnaire measurement tools. Data analysis used the Chi-Square test with an alpha value of 0.05. The results show that there was no relationship between knowledge of breastfeeding and exclusive breastfeeding. However, there was a significant relationship between family support and exclusive breastfeeding. Good knowledge must be followed by a good attitude and family support, especially from the husband, so that the mother will give exclusive breastfeeding to the baby.

INTRODUCTION

The benefits of breast milk should be known by every mother. Breast milk is a food source for babies with essential nutrition for the health, growth, and development of infants. The content of breast milk cannot be replaced with any type of baby food since its contents, such as anti-oxidants, some vitamins, and inflammatory agents are very beneficial for babies. Moreover, breast milk is a natural food that is easily digested with a balanced nutritional composition[1–3].

Breast milk is not only beneficial for babies but also the mothers. The benefits of breast milk for mothers and babies include preventing some diseases, obesity in children, asthma, allergies, hypertension, and diabetes in children and their mothers, as well as increasing infants' cognitive abilities.[4] WHO reports that 800,000 toddlers can be saved every year if breastfeeding is given optimally from ages 0-23 months. Breast milk has many benefits that can reduce the morbidity and mortality rates of infants and children.[5] Meanwhile,

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other benefits of breast milk include preventing obesity in children, providing antibodies and emotional closeness between mother and baby to improve the psychomotor development and social abilities of the baby.

Kudus Regency is an industrial regency where there are many industries with a high number of female employees. Exclusive breastfeeding for 6 months cannot be given especially from female workers in Indonesia due to the company policy where the workers are only given 1 – 3 months of maternity leave. Besides, the lack of knowledge regarding the importance of exclusive breastfeeding also influences the decision of the mothers to not give exclusive breastfeeding to their infants. is supported by ignorance about management about the condition and lack of knowledge of the importance of breastfeeding. Several studies explain that infants who do not get exclusive breastfeeding will have a lower nutritional status and cognitive function.

Malnutrition is associated with 45% of deaths and illnesses of children.[5,6] Exclusive breastfeeding is considered to be able to help overcome nutritional problems such as stunting and malnutrition in toddlers, which also occur in Indonesia according to a report from the Indonesia Ministry of Health in 2015.[7]

Research conducted by the Millenium Challenge Account (MCA-Indonesia) in 10 provinces in 2014 showed that 55 % of mothers in Indonesia did not provide exclusive breastfeeding for a variety of reasons. 43 % of mothers still considered breast milk is not enough to provide the nutrition of their children. Meanwhile, if not resolved, stunting will have a broad impact on children's growth and development. Stunting is associated with suboptimal intelligence or, from an economic perspective, stunting is also associated with a decrease in productivity of up to 20 %.[7]

This study aimed to determine the factors that influence exclusive breastfeeding in working women. These factors are analyzed to find a solution to improve the lack of exclusive breastfeeding in working women.

METHODS

This was a quantitative descriptive study with a cross-sectional approach, where the cause and effect variables that occurred in the research object were measured and collected simultaneously. This was a quantitative descriptive study with a cross-sectional approach. The study involved respondents who were obtained by purposive sampling techniques using a questionnaire consisting of sociodemographic of the mothers (age, education level, and employment status), respondent's level of knowledge, and the support of their spouse. The study involved 101 respondents who were working mothers of children aged 7-24 months old and live in the working area of Ngemplak Health Center. The respondents were selected using questionnaire measurement tools. Data analysis used the Chi-Square test with an alpha value of 0.05. The study was conducted in June 2019.

RESULTS

The result of this study explains respondents characteristics, namely working mothers with children under 2 years consist of the respondent's age, respondent's educational background, respondent's occupation and the age of the last child owned by the respondent. Table 1 shows that more than half of respondents aged between 21-30 years as many as 52 respondents (51.4%), age <20 years and age> 40 years is the age with the lowest %age of respondents as much as 2 respondents or 2% and age 31-40 years as many as 45 (44.6%) respondents. The educational background of most respondents was high school education by 40 respondents or 43.6%, elementary school education 38 (37.6%) respondents

and only 18.8% or 19 respondents had a university education. The types of work owned by the most respondents were labourers (44.6%) or 45 respondents and the occupation with the lowest %age was farmers namely 5 (5%) respondents while self-employed and other occupations were 29 respondents or 28.7% and 13 (12.9%), followed with work as teachers as many as 9 (8.9%) respondents. Most children's age of respondents was 13-24 months (55.5%) or as many as 56 respondents and aged 7-12 months were 45 respondents or 44.5%.

Table 1
Respondents Characteristics (n=101)

Indicators	f	%
Age		
<20 years old	2	2
21 – 30 years old	52	51.4
31 – 40 years old	45	44.6
> 40 years old	2	2
Educational background		
Elementary school	38	37.6
High School	44	43.6
University	19	18.8
Occupation		
Labor	45	44.6
Entrepreneur	29	28.7
Farmer	5	5
Teacher	9	8.9
Other	13	12.9
Toddler's age		
7 - 12 months old	45	44.5
13 - 24 months old	56	55.5

Table 2 is a table about exclusive breastfeeding analysis, which was obtained from 101 respondents 52 respondents (51.5%) gave exclusive breastfeeding and 48.5% or 49 respondents did not give exclusive breastfeeding. While the respondent's knowledge about exclusive breastfeeding 96 (95%) of respondents was well-informed and only 5 (5%) of respondents were adequate-informed. Most family support that is owned by respondents is enough family support as many as 48 respondents or 46.5%, 44 respondents or 43.5% of respondents get good family support, while a small proportion of respondents namely 9 respondents or 9% have less family support.

Table 2
Exclusive Breast Feeding Analysis (n=101)

Indicators	f	%
Exclusive breastfeeding		
Given	52	51.5
Not given	49	48.5
Knowledge of breastfeeding		
Adequate	5	5
Good	96	95
Family support		
Poor	9	9
Moderate	48	46.5
Good	44	43.5

Table 3 will explain the analysis of factors that influence exclusive breastfeeding for working mothers, where the results show that the factors that influence exclusive breastfeeding are family support with significant value. While respondents' knowledge about exclusive breastfeeding does not affect exclusive breastfeeding in working mothers with significant values.

Table 3
Influence Factors Analysis (n=101)

Indicators		Exclusive breastfeeding		p
		Given	Not given	
Knowledge of breastfeeding	Adequate	40%	60%	0.672
	Good	52.1%	47.9	
Family support	Poor	22.2%	77.8%	0.001
	Moderate	37.5%	62.5%	
	Good	72.7%	27.3%	

DISCUSSION

The results show that most of the respondent (52.1%) with good knowledge of breastfeeding gave exclusive breastfeeding. The Chi-Square analysis results obtained a P-Value of 0.672 which was higher than α=0.005, meaning there was no significant relationship between the knowledge of breastfeeding with exclusive breastfeeding.

The finding is in line with previous research where the results showed that there was no influence of knowledge of breastfeeding and the mothers' behaviour of giving exclusive breastfeeding in Padalangan village,

Banyumanik District, Semarang with a P-value of 0.300.[8]

Mother's behaviour in exclusive breastfeeding is influenced by knowledge and is supported by a good attitude. This is consistent with Green's theory that knowledge will form good behaviour if it is based on a good attitude and self-awareness.

Another study also obtained similar results where there was no relationship between knowledge and exclusive breastfeeding of mothers in the community health centre in Sebapai, Pemengkat District, Sambas Regency, with a P-value of 0.054.[9]

Other factors that influence exclusive breastfeeding are occupation and mother's age. In this study, most working mothers who have babies aged 12-24 months are labourers (44.6%) aged 21-30 years old. This is in line with the research that found the age of the child and mother influence the exclusive breastfeeding in the legal Amazon and Northeast, Brazil.[10]

The results show that the majority of respondents who gave exclusive breastfeeding (72.2%) had good family support. The Chi-Square test results obtained a p-value of 0.001, which means that there was a significant relationship between family support and exclusive breastfeeding.

Previous research explains that most mothers who gave exclusive breastfeeding had good family, superior, and coworker supports, with the %age reached 75.5%, 65.7%, and 68.8%, respectively. Their study found that factors that influence the exclusive breastfeeding of working mothers are age, knowledge, attitude, availability of facilities, as well as support from family, superiors, and coworkers.[11]

Another study conducted obtained similar results where the majority of mothers who gave exclusive breastfeeding (75.4%) had good family support with a P-value of 0.000.[12]

Family support, especially from the husband, and community support for nursing mothers include providing advice and space for mothers to breastfeed quietly. Lack of family support can cause mothers to be less motivated in breastfeeding and switch to infant formula or other complementary feedings.[13]

Another research conducted found that there was a significant relationship between family support and exclusive breastfeeding with a p-value of 0.003.[14]

The form of husband support to a breastfeeding mother includes motivating and accompanying the mother while breastfeeding, giving praise, taking care of the baby, and looking for information on breastfeeding. These will make the wife motivated and enthusiastic about breastfeeding.[15]

Another research conducted in 2013 found that there is a relationship between the support of closest people with exclusive breastfeeding in the working area of Tuladenggi community health centre in Telaga Biru Sub-district with a p-value of 0.016.[16]

CONCLUSION

There was no significant relationship between the knowledge of breastfeeding and the exclusive breastfeeding given by mothers working. There was a significant relationship between the family support and the exclusive breastfeeding given by mothers.

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CONFLICTS OF INTEREST

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

REFERENCES

1. Bobak, Lowdermilk J. *Buku Ajar Keperawatan Maternitas*. 6th ed. Jakarta: EGC, 2010.
2. Prakoso H. *Pengguanaan ASI dan Rawat gabung dalam Ilmu Kebidanan.* Jakarta: Yayasan Bina Pustaka Sarwono Prawirohardjo, 2002.
3. Masoara S. *Manfaat ASI Untuk Bayi, Ibu Dan Keluarga. Program Manajemen Laktasi.* Jakarta: Perkumpulan Perinatologi Indonesia, 2003.
4. Alimoradi F et all. An overview of importance of breastfeeding. *J Compr Pediatr*; 2.
5. Giri M. K. W. Hubungan pemberian ASI eksklusif dengan status gizi balita usia 6-24 bulan di Kampung Kajanan. *J sains dan Teknol*; 2.
6. Novita L. et all. Perbandingan Fungsi Fognitif Bayi Usia 6 Bulan yang Mendapat dan yang Tidak Mendapat ASI Eksklusif. *Sari Pediatr*; 6.
7. Dinas Kesehatan. *Profil kesehatan provinsi jawa tengah tahun 2012.* Semarang: Dinas Kesehatan Provinsi Jawa Tengah, 2014.
8. Rahmawati M. D. Faktor-faktor yang mempengaruhi pemberian ASI eksklusif pada ibu menyusui di kelurahan Pedalangan kecamatan Banyumanik kota Semarang. *J KesMaDasKa*; 1.
9. Fricilia dan Agustiansyah. Faktor – faktor yang Mempengaruhi Ibu dalam Pemberian ASI Eksklusif kepada Bayi di Puskesmas Sebangkau Kecamatan Kecamatan Pemengkat Kabupaten Sambas. *Pontianak Nutr J*; 1.
10. Neves A.C.M.D. et all. Factors associated with exclusive breastfeeding in the Legal Amazon and Northeast regions, Brazil, 2010. *Rev Nutr* 2014; 1: 81–95.
11. Septiani B dan K. Faktor – Faktor yang Berhubungan dengan Pemberian ASI Eksklusif oleh Ibu Menyusui yang Bekerja sebagai Tenaga Kesehatan. *J Ilmu Kesehat* 2017; 2: 159–174.
12. Sohimah dan Lestari. Analisis Faktor yang mempengaruhi pemberian ASI Eksklusif di Wilayah Kerja Puskesmas Cilacap Tengah I Kabupaten Cilacap Tahun 2017. *J Ilm Kebidanan* 2017; 8: 125–137.
13. Prasetyono. Dwi Sunar. *Buku pintar ASI eksklusif (pengalaman, praktik dan kemanfaatan-kemanfaatannya).* Yogyakarta: Diva Press, 2012.
14. Anggorowati. Hubungan Antara Dukungan Keluarga dengan Pemberian ASI Eksklusif Pada Bayi. *J Keperawatan Matern*; 1.
15. Yuliarti N. *Keajaiban ASI- Makanan Terbaik Untuk Kecerdasan dan Kelincahan si Kecil.* Yogyakarta, 2010.
16. Hilala Agnes. Faktor – Faktor yang Berhubungan dengan Pemberian ASI Eksklusif di Wilayah Kerja Puskesmas Tuladenggi Kecamatan Telaga Biru. *J S1 Keperawatan UNG*.

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Original Research

Incidence of Neonatal Asphyxia Events In Mothers Maternity With Early Ruptured Amniotic Fluid

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Abstract

Asphyxia and Intrauterine fetal dead (IUFD) are a threat if a premature rupture of membranes is not immediately treated quickly and appropriately. Neonatal asphyxia can occur due to complications from premature rupture of membranes. IMR in Indonesia is the fifth country for ASEAN countries, 35/1000 birth. Based on data from RA Kartini Hospital in Jepara, asphyxia cases from approximately (12,6%) and incidence of premature rupture of membranes 816 cases or around (85,8%). While the incidence of neonatal asphyxia born from PROM totalled 15 cases or about (1,6%). This research using quantitative descriptive methods with cross-sectional design. This research was conducted on April 21-23, 2020 using a total sampling method of 148 respondents. The data used are secondary data with a single variable, namely the incidence of neonatal asphyxia in mothers with maternity premature rupture of membranes. Data analysis uses a descriptive statical test. Aims to know the description of the incidence of neonatal asphyxia in mothers with maternity premature rupture of membranes in General Hospital of Raden Ajeng Kartini Jepara 2019 and describe the incidence of neonatal asphyxia in mothers with maternity premature rupture of membranes in General Hospital Raden Ajeng Kartini Jepara 2019. The result showed that of 148 respondents on average had no risk age (20-35 years) as many as 120 respondents (81,1%) and the average parity PROM mothers as many as 148 respondents had multiparous parity of 85 respondents (57,4%). Then from 148 PROM mothers, 6 respondents (4,1%) gave birth to babies who had asphyxia. The highest incidence of neonatal asphyxia in mothers with maternity premature rupture of membranes was mild asphyxia of 3 respondents (2,0%), moderate to severe asphyxia of 2 respondents (1,4) and moderate asphyxia of 1 respondent (0,7%). The average degree of asphyxia in women with premature rupture of membranes is mild asphyxia.

INTRODUCTION

Neonatal asphyxia is a condition in which the baby is unable to breathe spontaneously and regularly after birth. This is caused by fetal hypoxia in the uterus. One of the causes of asphyxia in newborns is complications of early rupture of amniotic fluid due to the occurrence of funicular prolapse, namely the umbilical cord is depressed between the baby's head and pelvis, resulting in compression that causes the cessation of

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fetoplacental perfusion resulting in reduced blood flow from the mother to the fetus so that the baby has hypoxia or O2 exchange disorders to fetal distress and continues to become asphyxia of the newborn. [1]

Based on the survey demographic and Indonesian health on 2017 show mortality of neonates 1.000, 15 per live births the infant mortality rate per live births, 1.000 24 and the child mortality life 1.000. 32 per live births Child mortality rate has reached the target sustainable development (TPB / SGDS) 2030 which is 25 / 1.000. live births Neonatal death rate continued to decline from years of 1.000 1991-2017 32-15 live births.[2]

The causes of Maternal Mortality Rate in Indonesia are bleeding 25%, unsafe abortion 13%, eclampsia 12%, and 20% others. Infection is the third cause of high AKI. The cause of infection is due to the processes that are passed during pregnancy and childbirth such as premature rupture of membranes (PROM) 65%, febrile 17%, amnionitis 0.5-1.5%, urinary tract infections 15%. Premature rupture of membranes is the first sequence of causes of infection that can cause Maternal Mortality Rate.[3]

The incidence of premature rupture of membranes ranges from 10% of all pregnancies. In term pregnancy the incidence varies between 6-9%. Whereas in pre-term pregnancy the incidence is 2% of all pregnancies. Nearly all preterm premature rupture of membranes will be born before term or labor will occur within one week after rupture of the membranes.[4]

Based on data obtained from RA Kartini Hospital Jepara, cases of asphyxia from December 2018 to December 2019 totaled 120 cases or approximately (12.6%), from December 2018 to December 2019 the incidence of premature rupture of membranes was 816 cases or around (85.8%). Meanwhile, the incidence of neonatal asphyxia that was born from labor of ruptured membranes was 15 cases or approximately (1.6%). The incidence of premature rupture of membranes has increased from year to year, according to medical records of cases of premature rupture of membranes, including the top 10 diseases that often occur in the hospital.[5] Because of this background and the absence of this study, the authors are interested in researching the "Preview Event on Mother Maternity Neonatal Asphyxia Membranes Rupture With Early RA Kartini Hospital in Jepara district.

METHODS

This type of research is a descriptive study, which is research conducted to see a description and description of a situation.[6] This type of research is a descriptive study of the incidence of neonatal asphyxia in women who give birth with premature rupture of membranes. This research design uses a cross sectional approach, which is a study that studies the relationship between risk factors (independent) and effect factors (dependent), which makes observations or measurements of variables once and at the same time.[6] The design of this study by looking at medical records where the respondents studied were mothers who experienced premature rupture of membranes who gave birth to babies with asphyxia. The location in this study was carried out at the RA Kartini Jepara Hospital and was held on 21-23 April 2020. Population is all subjects who meet certain characteristics to be used in a study.[6]

The population in this study were all medical records of women who gave birth with premature rupture of membranes, as many as 148 cases recorded in the medical records of RA Kartini Hospital Jepara from October to December 2019. In this study, the sampling technique in this study used the total sampling method, where in taking the sample of population members were used as samples.[7] In this study, the sample used was 148 cases of maternal medical

records with PROM. The research instrument is a tool used to obtain data.[8] Medical records containing data on mothers who gave birth with PROM and APGAR-Score assessments of infants with asphyxia were used in this study to obtain data on mothers who gave birth to premature rupture of membranes and asphyxic babies. This study used secondary data from maternal medical record records with premature rupture of membranes and medical record records for asphyxia babies from October-December 2019, the questionnaire was filled in by researchers including: respondent identity including age, maternal parity, and incidence of neonatal asphyxia in mothers giving birth with premature rupture of membranes. The data in this study were analyzed using univariate analysis. Univariate analysis was performed on the variable incidence of neonatal asphyxia in women who gave birth with premature rupture of membranes.

RESULTS

Based on Table 1 shows that the frequency distribution of the age of mothers giving birth with premature rupture of membranes is mostly at the non-risk age (20 - 35 years) as many as 120 respondents (81.1%), young at risk age is 8 respondents (5.4%) and age 20 respondents (13.5%) at risk of being old. The mean age of women with premature rupture of membranes was 30.37 years. The frequency distribution of mothers with premature rupture of membranes is mostly multiparous as many as 85 respondents (57.4%), primiparous as many as 62 respondents (41.9%), then grande multipara as many as 1 respondent (0.7%). The mean parity of women with premature rupture of membranes was multiparous. The result shows that the frequency distribution of neonatal asphyxia in women with premature rupture of membranes is mild asphyxia by 3 respondents (2.1%), moderate severe asphyxia by 2 respondents (1.4%), and moderate asphyxia as many as 1 respondent (0.7%). The average status of asphyxia in women with premature rupture of membranes is mild asphyxia.

Table 1
Distribution of the age, parity, and neonatal asphyxia of mothers giving birth with premature rupture of membranes (n = 148)

Indicators	f	%
Age		
Young Risk <20 Years	8	5.4
No Risk 20-35 Years	120	81.1
At risk Old> 35 years	20	13.5
Parity		
Primipara	62	41.9
Multiparous	85	57.4
Grande multipara	1	0.7
Neonatal asphyxia with premature rupture		
Mild asphyxia babies	3	2.1
Moderate asphyxia babies	1	0.7
Severe asphyxia babies	2	1.4
Not asphyxiated	142	95.8

DISCUSSION

The results of this study indicate that the frequency distribution of the age of mothers who give birth with premature rupture of membranes is mostly at non-risk age (20 - 35 years) as many as 120 respondents (81.1%), young at-risk age is 8 respondents (5.4%) and age at risk of old as many as 20 respondents (13.5%). The mean age of women with premature rupture of membranes was 30.37 years. The incidence of premature rupture of membranes at the age of the mother who is not at risk is due to an incompetent cervix at the age of the mother who is not at risk (20-35). Cervical incompetence is more common in mothers who are> 20 to 35 years old. This condition is a condition in which the flexibility of the cervix to withstand the pregnancy begins to disappear. This occurs due to repeated labor and a history of curettage. An incompetent cervix can also cause premature rupture of the membranes, this can occur because of a history of curettage and age 20-35 years which is caused by a lack of strength in the cervix to hold the conception, making it prone to complications of premature rupture of membranes.[9] The age for optimal reproduction for a mother is 20-35 years.

Ages <20 and> 35 are classified as at risk in the process of preparing for pregnancy and childbirth. The age of a mother so much will affect her reproductive system. Because the reproductive organs are underripe and too old, their ability and plasticity to accept pregnancy have started to decrease. Maternal age at risk can lead to complications in mothers such as premature rupture of membranes and complications in infants.

Research conducted by Aprilla (2018) at Bangkinang Regional Hospital found that 32 respondents (58.18%) aged <20 and> 35 years old, the results research are by the theory that women who give birth are under 20 years of age or more than 35. years is a risk factor for premature rupture of membranes that can lead to maternal death. [3] Affandi's research (2012) shows that most mothers who experience premature rupture of membranes are mostly at risk ages <20 and> 35 years (71.4%). This shows that most of the respondents aged 20-35 are of the healthy reproductive age with the lowest risk that occurs to mothers and their babies. The results of this study indicate that the frequency distribution of mothers giving birth with premature rupture of membranes is mostly multiparous as many as 85 respondents (57.4%), primiparous as many as 62 respondents (41.9%), then grand multipara as many as 1 respondent (0.7%). The mean parity of women with premature rupture of membranes is multiparous. Multiparous parity has a very high risk, this is because multiparous parity has experienced labor more than once so that it can affect the reduced strength of the uterine muscles which are very susceptible to complications of premature rupture of membranes. Based on the theory of primiparous parity and grand multipara, it is one of the factors of premature rupture of membranes. women with primiparous parity will be more at risk of experiencing complications of premature rupture of membranes than women with multiparous status because the uterus is still elastic and the reproductive organs are not ready to accept a pregnancy. so that any adjustment is needed to the uterus. Whereas in the multiparous grande the incidence of premature rupture of membranes occurs more often because the resistance of the reproductive organs of the mother has begun to weaken and too often the mother gives birth so that pregnant women will again stretch the uterus and the strength of the connective tissue and vascularity decreases, causing fragility which can affect complications premature rupture of membranes.[10]

The results of Aisyah's (2012) study at Lamongan Regional Hospital stated that multiparity parity (80%) can affect the complications of premature rupture of membranes compared to primiparous parity (65%). The results of Pujiningsih's (2012) research at Sidoarjo Regional Hospital stated that the incidence of premature rupture of membranes occurred in mothers with primiparas parity of 55 respondents (77.46%), multiparity parity of 101 respondents (59.20%), and Grande multipara parity of 4 respondents. (36.36%). It is concluded that the parity of mothers who experience premature rupture of membranes in mothers with multiparous parity.[11] The results of this study indicate that the frequency distribution of neonatal asphyxia among women with premature rupture of membranes is mild asphyxia by 3 respondents (2.0%), moderate-severe asphyxia by 2 respondents (1.4%), and moderate asphyxia. as much as 1 respondent (0.7%). The average status of asphyxia in women with premature rupture of membranes is mild asphyxia.[11]

Wiknjosastro (2014) Premature rupture of membranes is one of the causes of complications in the fetus in the form of newborn asphyxia and infection. Hypoxia that occurs in the fetus can cause the baby to experience asphyxia after birth due to interference with the exchange of O2 gas transport from mother to fetus, there is a disturbance in the supply of O2 and in eliminating CO2. Complications caused by

premature rupture of membranes, such as infection in the mother and fetus, resulting in prematurity and Respiratory Dystrome (RDS), can increase perinatal mortality and morbidity. [12]

The results of Utami's (2013) research at dr Soedarso Hospital, there was a relationship between PROM and the incidence of neonatal asphyxia but there was no significant relationship (Adjusted OR = 0.96; 95% CI = 0.254-1.389; p = 0.811). For respondents, mothers with PROM 90 were (52.63%) and mothers without PROM were 81 (47.37%) and 27 asphyxic babies from PROM mothers were 27 (47.37%) and asphyxic babies born to mothers who were not PROM as much as 30 (52.63%). In this study, the researchers concluded that there was an association between PROM incidence and asphyxia but there was no significant relationship, but the factor that greatly influenced the incidence of asphyxia was obstructed labor, labor duration> 12 hours had a 20.04 greater chance of occurrence of neonatal asphyxia compared to delivery <12 hours. [13] Komsiyati (2014) research results at Ambarawa Regional Hospital found that mothers who experienced PROM experienced asphyxia incidence (69.4%), while mothers who did not experience PROM incidence of asphyxia (15.7%). Where babies born to mothers who experience premature rupture of membranes are at risk of 2,809 times greater risk of neonatal asphyxia than babies born to mothers who do not experience premature rupture of membranes. [14]

The assumption of the researchers in this study concluded that the preparedness of medical personnel and medical personnel in dealing with the incidence of PROM in mothers who gave birth at RA Kartini Jepara Hospital was to prevent complications that would occur to the mother and the fetus. Judging from the medical record data of RA Kartini Jepara Hospital 2019, it can be concluded that the condition of PROM in mothers giving birth <24 hours and> 24 hours will be carried out quickly such as: providing stimulation to accelerate the opening of the cervical mouth, vacuum action due to too slow progress in labor and delivery through Sectio Caesarea. Measures to prevent neonatal and maternal emergencies endeavored at reducing the risk of complications such as neonatal emergency in the form of newborn asphyxia.

CONCLUSION

The most incidence of neonatal asphyxia in women with premature rupture of membranes was mild asphyxia as many as 3 respondents (2.0%), moderate asphyxia by 2 respondents (1.4%), and moderate asphyxia by 1 respondent (0.7%).

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CONFLICTS OF INTEREST

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

REFERENCES

1. Prawirohardjo S. *Buku Acuan Nasional Pelayanan Kesehatan Maternal dan Neonatal.* 4th ed. Jakarta: Yayasan Pustaka Sarwono Prawirohardjo, 2010.
2. Indonesia KK. *Profil Kesehatan Indonesia Tahun*. Jakarta, 2018.
3. Aprilla Nia. Faktor Risiko Ibu Bersalin Yang Mengalami Ketuban Pecah Dini Di RSUD Bangkinang Tahun 2017. *J Kesehat Masy* 2018; 2: 48–57.
4. Surasmi A. *Perawatan Bayi Resiko Tinggi*. Jakarta: EGC, 2011.
5. Kartini RMRR. *Data Penyakit Neonatal*. Jepara, 2019.
6. Riyanto A. *Aplikasi Metodologi Penelitian Kesehatan*. Jogjakarta: Nuha Medika, 2011.
7. Ariani AP. *Aplikasi Metodologi Penelitian Kebidanan dan Kesehatan Reproduksi.* Jogjakarta: Nuha Medika, 2014.

8. Nursalam. *Konsep dan Penerapan Metodologi Penelitian Ilmu Keperawatan*. Jakarta: Salemba Medika, 2011.
9. Prawirohardjo S. *Ilmu Kebidanan*. 4th ed. Jakarta: PT Bina Pustaka Sarwono Prawirohardjo, 2010.
10. Puspitasari RN. Korelasi karakteristik dengan penyebab ketuban pecah dini pada ibu bersalin di RSU Denisa Gresik. *Indones J Heal Sci* 2019; 3: 24.
11. Supadrtini, dan Mudzolifah S. Hubungan Antara Usia Dan Paritas Dengan Letak Sungsang Pada Ibu Bersalin Supartini. *Embrio, J Kebidanan* 2012; I: 30–35.
12. Prawirohardjo S& TR. ketuban pecah dini. In: *Ilmu Kebidanan*. Jakarta: PT Bina Pustaka Sarwono Prawirohardjo, 2014.
13. Utami RB. Risiko terjadinya asfiksia neonatorum pada ibu dengan ketuban pecah dini. *J Vokasi Kesehat* 2011; 1: 9–17.
14. Komsiyati. *Hubungan Ketuban Pecah Dini dengan Kejadian Asfiksia Neonatorum di RSUD Ambarawa*. STIKES Ngudi Waluyo, 2014.

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Original Research

Differences in The Measurement of The Right And Left Form of Blood Pressure in Hypertension Patients

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Abstract

Hypertension is one of the number one causes of death, globally. Hypertension is the most common cause of cardiovascular events and is a major problem in both developed and developing countries. Cardiovascular is also the number one cause of death in the world every year. Respondents in this study were patients with a diagnosis of hypertension in hospitalized patients at Mardi Rahayu Kudus Hospital, totalling 41 people. the characteristics of hypertension patient respondents seen from the age of the most patients are in the late adult age category (36-45 years), namely 31 people (75.6%), while for early adulthood (26-45 years). 35 years) as many as 10 people (24.4%). The characteristics of hypertension patient respondents seen from the sex of the most patients were male, namely 25 people (61.0%), while the female gender was 16 people (39.0%). Results The highest systolic blood pressure was 170 mmHg and the lowest was 145 mmHg. The average systolic blood pressure was 152.90 mmHg. In hypertensive patients on the left arm, the highest systolic blood pressure was 170 mmHg and the lowest was 145 mmHg. The average systolic blood pressure was 152.90 mmHg. Based on the dependent t-test, the t value is -12.491 with a p-value of 0.000. It can be seen that the p-value is 0.000 <⍰ (0.05), this indicates that there is a significant difference in the results of blood pressure measurements between the right arm and the left arm in hypertensive patients in the inpatient room of Mardi Rahayu Kudus Hospital. The difference in blood pressure variations obtained in this study is still considered normal because the difference in MAP between the right and left arms is 6.11 mmHg (normal 10-20 mmHg).

INTRODUCTION

Hypertension is defined as an increase in blood pressure that remains above an agreed normal limit, ie diastolic 90 mmHg or systolic 140 mmHg. Hypertension is one of the number one causes of death, globally. Hypertension is the most common cause of cardiovascular events and is a major problem in both developed and developing countries. Cardiovascular is also the number one cause of death in the world every year.[1]

The results of measuring blood pressure are influenced by several factors, namely the activities carried out before the measurement, the pressure or stress to be

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experienced, the measurement time, and the position when the measurement is standing or sitting[2]. Lifestyle changes such as smoking, obesity, physical inactivity and psychosocial stress can cause various diseases, one of which can attack the cardiovascular system, especially hypertension. WHO, data shows that around 1.13 billion people in the world suffer from hypertension. This means that 1 in 3 people in the world are diagnosed with hypertension, only 36.8% of them are taking medication.

The number of hypertension sufferers in the world continues to increase every year, it is estimated that by 2025 there will be 1.5 billion people affected by hypertension. It is also estimated that every year 9.4 million people die from hypertension and complications.[3] In Indonesia, based on Kemenkes RI, 2019 data, the prevalence of hypertension in Indonesia is 25.8%, the highest prevalence is in Bangka Belitung (30%) and the lowest is in Papua (16.8%). Meanwhile, data from the 2016 National Health Indicator Survey shows an increase in the prevalence of hypertension among people aged 18 years and over by 32.4%.[4] In addition, according to BPJS Health data, the cost of hypertension services has increased every year, namely Rp. 2.8 trillion in 2014, Rp. 3.8 trillion in 2015, and Rp. 4.2 trillion in 2016. Based on the Basic Health Research (Riskesdas) the prevalence of hypertension in Central Java increased from 7.6 per million in 2007 to 9.5 peril in 2013.[5] This means that out of a thousand inhabitants it is estimated that there are more than 9 people suffering from this disease. Meanwhile, based on data from the Central Java Provincial Health Office 2017, of the eleven types of non-communicable diseases, hypertension is the most common disease suffered by the people of Central Java with a proportion of 55%, while the data available at Mardi Rahayu Kudus Hospital between January to October 2018 were obtained. hypertension cases were 1340 cases.[6]

Hypertension which continues to increase should be controlled. The way is to measure blood pressure correctly. According to several existing theories that the way blood pressure measurements should be done on both arms (right and left). Variations in blood pressure can be found in different arteries. Normal variation is common in both arms, but should not exceed 5 - 10 mmHg. A difference of more than 10 mmHg is an indication of vascular disorders, and if the difference is greater than 20-30 mmHg in both arms indicates a suspicion of organic disturbances in blood flow in areas with low blood pressure.[2]

In fact, where there is measurement of blood pressure on only one arm, especially at Mardi Rahayu Kudus Hospital. Likewise, when facing SNARS accreditation in 2018, blood pressure measurement tools are required to use a digital tensimeter related to mercury tensimeter which is not recommended again.[7] From these phenomena, this study aims to determine the differences in measurements on the right and left arms of the results of blood pressure in hypertensive patients in the inpatient room of Mardi Rahayu Kudus Hospital.

METHODS

The design of this study is to use a comparative analytical research design with a cross sectional approach, where the research object is only observed once and measurements are made of the status of the character or object variable at the time of examination by approaching and collecting data at once. The measuring instrument uses a digital tensimeter. The test test used is the dependent t test. The sample in this study was 41 respondents at the Mardi Rahayu Kudus hospital in April 2019 with a purporsive sampling technique. In this study, researchers took blood pressure measurements taken on the respondents' right and left arms, then analyzed the extent to which the measurement results differed in the respondent's two arms.

RESULTS

Respondents in this study were patients with a diagnosis of hypertension in hospitalized patients at Mardi Rahayu Kudus Hospital, totaling 41 people. Based on table 1 above, it shows that the characteristics of hypertension patient respondents seen from the age of the most patients are in the late adult age category (36-45 years), namely 31 people (75.6%), while for early adulthood (26-45 years). 35 years) as many as 10 people (24.4%). It shows that the characteristics of hypertension patient respondents seen from the sex of the most patients were male, namely 25 people (61.0%), while the female gender was 16 people (39.0%).

Table 1
Frequency Distribution Based on Age and Gender of Hypertension Patients in the Inpatient Room

Indicators	f	%
Age		
Early Adult	10	24,4
Late Adult	31	75,6
Sex		
Man	25	61,0
Female	16	39,0

The result shows that the results of measuring the blood pressure of hypertensive patients on the right arm, the highest systolic blood pressure is 175 mmHg and the lowest is 150 mmHg. The mean systolic blood pressure was 159.68 mmHg with a standard deviation of 6.28 mmHg. Then for diastolic blood pressure has a highest value of 120 mmHg and a low value of 95 mmHg. The average diastolic pressure was 105.56 mmHg with a standard deviation of 5.78 mmHg. Furthermore, from the results of systolic and diastolic blood pressure in the right arm, the highest MAP value was 138.3 mmHg and the lowest was 114.0 mmHg with an average result of 122.94 mmHg with a standard deviation of 5.44 mmHg.

Based on table 2, it shows that the results of measuring blood pressure in hypertensive patients on the left arm, the highest systolic blood pressure is 170 mmHg and the lowest is 145 mmHg. The mean systolic blood pressure was 152.90 mmHg with a standard deviation of 5.93 mmHg. Then for diastolic blood pressure, the highest blood pressure is 110 mmHg and the lowest is 85 mmHg. Diastolic blood pressure averaged 98.80 mmHg with a standard deviation of 5.8 mmHg. Furthermore, from the systolic and diastolic blood pressure results in the left arm, the highest MAP value was 130.0 mmHg and the lowest MAP value was 106.0 mmHg, with an average result of 116.83 mmHg with a standard deviation of 5.59 mmHg.

This bivariate analysis was used to determine differences in measurements on the right and left arms of the results of blood pressure in hypertensive patients in the inpatient room of Mardi Rahayu Kudus Hospital. To find out this difference, a difference test in the results of the MAP of the right and left arms was used in hypertensive patients using the dependent t test.

Based on table 2, it shows that the average MAP result for the right arm is 122.94 mmHg, while on the left arm shows the MAP result is lower, which is 116.83 mmHg, with an average MAP difference of 6.11 mmHg. Furthermore, after the normality test was carried out, it was found that the two data were normally distributed, namely MAP kiri sig. 0.821 and MAP right sig. 0.346 (p> 0.05). Based on the results of the normality test, then continued with the dependent t test, the t value is -12.491 with a p-value of 0.000. It can be seen that the p-value is 0.000 <□ (0.05), this indicates that there is a significant difference in the results of blood pressure measurements between the right arm and the left arm in hypertensive patients in the inpatient room of Mardi Rahayu Kudus Hospital.

Table 2
Mean differences of blood pressure in the Right and Left Arm in Patients Hypertension in the Inpatient Room (n=82)

Indicators	Group		p
	Right Arm	Left Arm	
Systolic	159,68 (±6,28)	152,90 (±5,93)	0.000
Diastolic	104,56 (±5,78)	98,80 (±5,88)	
MAP	122,94 (±5,44)	116,83 (±5,59)	

DISCUSSION

Based on the research conducted, it shows that the results of blood pressure measurements of hypertensive patients on the right arm, the highest systolic blood pressure is 175 mmHg and the lowest is 150 mmHg. The mean systolic blood pressure was 159.68 mmHg with a standard deviation of 6.28 mmHg. Then for diastolic blood pressure has a highest value of 120 mmHg and a low value of 95 mmHg. The average diastolic pressure was 105.56 mmHg with a standard deviation of 5.78 mmHg. Furthermore, from the results of systolic and diastolic blood pressure in the right arm, the highest MAP value was 138.3 mmHg and the lowest was 114.0 mmHg with an average result of 122.94 mmHg with a standard deviation of 5.44 mmHg.

The results of this study were obtained after measuring the right arm of 41 respondents who suffered from hypertension by measuring the patient in a lying position on the bed. The highest systolic blood pressure value was 170 mmHg and the lowest was 150 mmHg and the highest diastolic pressure was 120 mmHg and the lowest was 95 mmHg. This is in accordance with the theory which says that a person is said to have hypertension, which means that the average arterial pressure is higher than the limit considered normal. In a resting state when the mean arterial pressure is higher than 110 mmHg (normal around 90 mmHg) then this is considered hypertension; this value occurs when the diastolic blood pressure is greater than 90 mmHg and the systolic pressure is greater than approximately 135 to 140 mmHg.[8]

Many factors play a role in the occurrence of hypertension, apart from cardiac output factors, peripheral vessel resistance, blood volume, viscosity and elasticity of the walls of blood vessels in a person's body which causes blood pressure not to be constant. Artiyaningrum, B., Azam, M 2016 identified several conditions that can affect blood pressure, including age, weight, emotions, activity, race, gender, and drugs. In the study, the most age group suffering from hypertension was late adulthood (aged 36-45 years), namely 31 people (75.6%) from a total of 41 respondents. This is in accordance with the theory that a person's age affects blood pressure in humans, the older a person, generally his blood pressure will increase.[9]

In children there is no significant difference in blood pressure between boys and girls. However, after puberty, men tend to have higher blood pressure. Conversely, after menopause women have higher blood pressure than men their age. This is in line with the results of the research obtained, that some of the respondents were male, namely 25 people (61.0%), while the female gender was 16 people (39.0%).

Based on the results of the study showed that the results of measuring blood pressure in hypertensive patients on the left arm, obtained the highest systolic blood pressure of 170 mmHg and the lowest of 145 mmHg. The mean systolic blood pressure was 152.90 mmHg with a standard deviation of 5.93 mmHg. Then for diastolic blood pressure, the highest blood pressure is 110 mmHg and the lowest is 85 mmHg. Diastolic blood pressure averaged 98.80 mmHg with a standard deviation of 5.8 mmHg. Furthermore, from the systolic and diastolic blood pressure results in the left arm, the highest MAP value was 130.0 mmHg and the lowest MAP value was 106.0 mmHg, with an average result of 116.83 mmHg with a standard deviation of 5.59 mmHg.

The results of this study were also obtained after measuring the left arm of 41 respondents who suffered from hypertension by measuring the patient in a lying position on the bed. The age group suffering from hypertension ranged from 36-45 years and there were more men. Hypertension or high blood pressure is an increase in systolic blood pressure of more than 140 mmHg and diastolic blood pressure of more than 90 mmHg on two measurements with an interval of five minutes in a state of rest / calm.[5]

Based on the results of research related to differences in measurements on the right and left arms on the results of blood pressure in hypertensive patients in the inpatient room of Mardi Rahayu Kudus Hospital, it was found that there was a significant difference in measurements between the right arm and the left arm. This is indicated by the MAP average result for the right arm of 122.94 mmHg, while the left arm shows the lower MAP result of 116.83 mmHg, with an average MAP difference of 6.11 mmHg. After doing the test with the dependent t test, the t value is -12.491 with a p-value of 0.000. It can be seen that the p-value is 0.000 < α (0.05), this indicates that there is a significant difference in the results of blood pressure measurements between the right arm and the left arm in hypertensive patients in the inpatient room of Mardi Rahayu Kudus Hospital. The difference in blood pressure variations obtained in this study is still considered normal because the difference in MAP between the right and left arms is 6.11 mmHg, this is supported by the theory that blood pressure variations can be found in different arteries. Normal variation is common in both arms, but should not exceed 5 - 10 mmHg. A difference of more than 10 mmHg is an indication of a vascular disorder, and if the difference is greater than 20-30 mmHg in both arms, it indicates a suspicion of an organic disturbance of blood flow in areas with low blood pressure.[2]

High blood pressure (hypertension) is an increase in blood pressure in the arteries. In general, hypertension is an asymptomatic condition, in which abnormally high pressure in the arteries leads to an increased risk of stroke, aneurysm, heart failure, heart attack and kidney damage. Meanwhile, according to iqbal and jamal, hypertension is a condition in which a person experiences an increase in blood pressure above normal which results in an increase in morbidity and mortality.[10]

Blood pressure in adults is classified into 6, namely normal blood pressure, high normal, stage 1 (mild hypertension), stage 2 (moderate hypertension), stage 3 (severe hypertension), and stage 4 (malignant hypertension). Normal blood pressure is blood pressure where the systolic pressure is below 130 mmHg and the diastolic pressure is below 85 mmHg, while normal high blood pressure is blood pressure where the systolic pressure is 130-139 mmHg and the diastolic pressure is 85-89 mmHg. Stage I blood pressure (mild hypertension) is blood pressure where the systolic pressure is 140-159 mmHg and the diastolic pressure is 90-99 mmHg. Stage 2 blood pressure (moderate hypertension) is blood pressure where the systolic pressure is 160-179 mmHg and the diastolic pressure is 100-109 mmHg. Stage 3 blood pressure (severe hypertension) is blood pressure where the systolic pressure is 180-209 mmHg and the diastolic pressure is 110-119 mmHg. Stage 4 blood pressure (malignant hypertension) is blood pressure where the systolic pressure is 210 mmHg or more and the diastolic pressure is 120 mmHg or more.[10]

The results of the above study are also in line with the previous study entitled "Analysis of differences in the results of blood pressure measurements between the right arm and the left arm in hypertensive patients at RSUD. DR.H. Abdul Moeloek, Lampung Province" by Arwani and Sunarno. The results of statistical analysis show that there is a significant difference

between the results of blood pressure measurements taken on the right arm and the results of blood pressure measurements taken on the left arm in hypertensive patients at RSUD DR. H. Abdul Moeloek Lampung (p = 0.012).

CONCLUSION

Based on the dependent t test, the t value is -12.491 with a p-value of 0.000. It can be seen that the p-value is 0.000 < 0.05, this indicates that there is a significant difference in the results of blood pressure measurements between the right arm and the left arm in hypertensive patients in the inpatient room of Mardi Rahayu Kudus Hospital. The difference in blood pressure variations obtained in this study is still considered normal because the difference in MAP between the right and left arms is 6.11 mmHg (normal 10-20 mmHg).

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CONFLICTS OF INTEREST

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

REFERENCES

1. Carey RM, Whelton PK, Aronow WS, et al. Prevention, detection, evaluation, and management of high blood pressure in adults: Synopsis of the 2017 American College of Cardiology/American Heart Association Hypertension Guideline. *Ann Intern Med* 2018; 168: 351–358.
2. Ratulangi USAM, Danes VR, Skripsi K, et al. Analisa Hasil Pengukuran Tekanan Darah Antara Posisi Duduk Dan Posisi Berdiri Pada Mahasiswa Semester Vii (Tujuh) Ta. 2014/2015 Fakultas Kedokteran Universitas Sam Ratulangi. *eBiomedik* 2015; 3: 125–129.
3. Organization WH. *World Health Statistics Overview 2019: monitoring health for the SDGs, sustainable development goals*. Geneva, 2019.
4. Badan Penelitian dan Pengembangan Kesehatan. Riset Kesehatan Dasar (RISKESDAS) 2013. *Lap Nas 2013* 2013; 1–384.
5. Kementerian Kesehatan. *Hasil Utama Riset Kesehata Dasar (RISKESDAS)*. 2018. Epub ahead of print 2018. DOI: 10.1088/1751-8113/44/8/085201.
6. Dinas Kesehatan Provinsi Jawa Tengah. *Profil Kesehatan Provinsi Jateng Tahun 2019*. 2019.
7. Komisi Akreditasi Rumah Sakit. Standar Nasional Akreditasi Rumah Sakit Edisi 1. 2017; 421.
8. Tanto C, Liwang F, Hanifati S PE. *Kapita Selekta Kedokteran*. 2017.
9. Muhadi. JNC 8 : Evidence-based Guideline Penanganan Pasien Hipertensi Dewasa. *Cermin Dunia Kedokt* 2016; 43: 54–59.
10. Iqbal AM JS. Essential Hypertension. [Updated 2020 Jul 10]. *Treasure Island (FL): StatPearls Publishing* 2020; https://www.ncbi.nlm.nih.gov/books/NBK539859/.

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Original Research

The Effect of Starfruit Juice to Reduce The Blood Pressure In Elderly Patients

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Abstract

Hypertension is classified as a disease that is often called the Silent Killer. Hypertension can attack various ages, including the elderly. Hypertension in the long term will cause various complications. In Treatment of hypertension, many natural plants that can be consumed, one of which is star fruit. Sweet starfruit juice is very useful for lowering blood pressure because of its fiber, potassium, phosphorus and vitamin C content. This study was to determine the effect of starfruit juice on lowering blood pressure in elderly people with hypertension at the integrated service center in the working area of Rejosari Dawe Kudus Public Health Center. This study used a Quasy experiment method with a pre-test-post-test research design with a control group. A sample of 20 people, divided into two groups, namely 10 people in the experimental group and 10 people in the control group. The results of the independent t-test, the results of the posttest systolic blood pressure p value = 0.004, while the diastolic blood pressure posttest p value = 0.014, so it can be seen that the p value <0.05, then H0 is rejected and Ha is accepted. In this study, it can be concluded that there is an effect of giving star fruit juice on reducing blood pressure in elderly people with hypertension at the integrated service center in the working area of the Rejosari Dawe Kudus Community Health Center.

INTRODUCTION

The process of aging is a process of disappearing slowly the ability of the network to repair itself replace and maintain its normal function.[1] Many elderly people today suffer from several degenerative diseases, namely hypertension. Hypertension is classified as a disease that is often referred to as a silent killer because it can cause the sufferer to die, hypertension does. not immediately kill the sufferer, but hypertension triggers the emergence of a deadly disease. [2] Hypertension in the long term will cause various complications. Extremely high blood pressure can damage the inside of a small artery, possibly blood clots, if this happens it can lead to heart attack, blindness, kidney failure, and stroke. [3]

The incidence of hypertension has increased in the world. According to WHO (2013) hypertension kills 9.4 million people in the world every year.[3] Based on data sourced from Riskesdas 2016.[4] The prevalence of elderly hypertension in Indonesia is 45.9% for 55-64 years, 57.6%

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for 65-74 years and 63.8% for> 75 years.[5] According to the Central Java Provincial Health Office, the number of people at risk, from the results of blood pressure measurements, as many as 1,153,371 people or 12.98% stated hypertension.[6] From the data from the Kudus Regency Health Office in 2016, there were 451,224 people aged 18 years and over, of the 188,208 people examined, 75,074 were men, (8.26%) had hypertension and (41.71%) were not hypertensive. Of the 105,494 women examined, 10,530 (9.98%) had hypertension and 94,964 (99.8%) did not have hypertension. [7]

To reduce the incidence of hypertension, an approach is needed that is done, namely pharmacologically and non-pharmacologically. The pharmacological approach is to use antihypertensive drugs, while the non-pharmacological approach includes limiting salt intake, quitting smoking, and by using fruit and vegetable juice therapy. One of the fruit juice therapies is the provision of sweet starfruit juice for hypertension sufferers.[8] This sweet star fruit is very useful for lowering blood pressure because of its fiber, potassium, phosphorus and vitamin C content. Based on the DASH (Dietary Approaches to Stop Hypertension) research, it is said that to lower blood pressure, it is highly recommended to consume foods that are high in potassium and fiber. [9]

The results of research by Putri Aulia (2018) on the Effect of Giving Starfruit Juice on Changes in Blood Pressure of Hypertension Patients in Nursing Homes with a quasi-experimental method. The research was conducted for 7 days with a sample of 10 people, divided into two groups of control and experiment. The results showed that 5 respondents who were given star fruit juice had a change in blood pressure with an average difference in systolic blood pressure before and after administration with *P value* = 0.014, meaning that there was a significant difference. The results obtained in research on the effect of giving Averrhoa carambola juice on the reduction of blood pressure in the elderly with hypertension. The quasi-experimental method of 10 respondents who had been selected by means of purposive sampling showed the effect of starfruit juice on reducing blood pressure.[10]

From the results of the preliminary survey, the data obtained by the elderly who suffer hypertension comes to do a health check at the the integrated service center, which is numbered 20 people. After interviewing researchers, most of the elderly have risk factors hypertension, namely the habit of consuming coffee, smoking and consuming salt. Elderly control blood pressure using medicine from a doctor, besides that, the community does not yet know about non-pharmacological therapy with herbal therapy, namely using starfruit juice is useful for lowering blood pressure.

Based on the description of the data above, the researcher is interested in conducting a research entitled The effect of giving star fruit juice on reducing blood pressure in elderly people with hypertension at the integrated service center in the working area of Rejosari Public Health Center.

METHODS

This type of research is quantitative, the research design is Quasy Experiment with the design of the pre-test-post-test design with the control group, namely by comparing the results obtained before and after being treated in the experimental group and the control group. This research was conducted on December April 20 to 27 2019 at the village health post in Japan, the working area of the Rejosari Community Health Center Holy Dawe. In this study the population was all elderly who came to the elderly integrated service center in Japan village who experienced hypertension. The sample is elderly suffering from hypertension who meet the inclusion criteria. The sampling technique was purposive sampling with a sample size of 20

people with details of 10 people as the experimental group and 10 people as the control group. To find out the respondent's blood pressure, a calibrated sphygmomanometer was used. The analytical test used in this study used the Independent t test.

RESULTS

The results show that the blood pressure before being given the juice Star fruit in the experimental group, it was found that the average systolic blood pressure of the respondents was 183.20 mmHg while the average diastolic blood pressure was 100.00 mmHg with a standard deviation of Systole 10.560 and Diastole 5,270. The results show that the respondent's blood pressure after being given starfruit juice in the experimental group, the average systolic blood pressure of the respondents was 155.60 mmHg, while the average diastolic blood pressure was 90.30 mmHg, with a standard deviation of Systole 10.700 and Diastole 2.710. The results indicate that the respondent's blood pressure before given starfruit juice in the control group, the average systolic blood pressure of the respondents was 188.80 mmHg while the mean diastolic blood pressure was 105.00 mmHg with a standard deviation of Systole 24.027 and Diastole 11.671. The results indicate that the blood pressure of the respondents after being given star fruit juice in the control group obtained an average pressure The respondent's systolic blood was 182.30 mmHg while the mean diastolic blood pressure was 99.90 mmHg, with a standard deviation of Systole 22,886 and Diastole 10,754.

The results show that the mean and standard deviation of blood pressure systole and diastole between measurements before and after juicing star fruit in the experimental group. The mean BP of systole before giving star fruit juice was 183.20 mmHg with SD 10,560, while the mean diastole was 100.00 mmHg and SD 5.270. On the measurement of the systole After giving star fruit juice was 155.60 mmHg with SD 10.700 while the average diastole was 90.30 mmHg with SD 2.710. This effect was tested by using the paired t test, namely using the paired test The sample t-test obtained p value = 0.000, so it can be seen that the p value <0.05, it can be concluded that there is an effect of giving starfruit juice on reducing blood pressure in elderly people with hypertension at the village health post in Japan village working area of Rejosari Dawe Kudus Health Center.

The results show that the mean and standard deviation of blood pressure systole and diastole between measurements before and after juicing star fruit in the control group. The mean BP of systole before giving star fruit juice was 188.80 mmHg with SD 24.027, while the mean diastole was 105.00 mmHg with SD 11,671. The systole blood pressure after giving star fruit juice was 182.30 mmHg with SD 22,886, while the average diastole was 99.90 mmHg with SD 10,754. This effect was tested by using the paired t test, namely using the paired test The sample t-test obtained p value = 0.000, so it can be seen that the p value <0.05, it can be concluded that there is no effect of starfruit juice on lowering blood pressure in elderly people with hypertension in the village of Japan in the working area of Rejosari Dawe Kudus Health Center.

The results indicate that the statistical analysis is in the form of averages and standard deviation of systolic and systolic blood pressure after being given star fruit juice between the experimental group and the control group. Systole average The experimental group was 155.60 mmHg with SD 10,700 while the mean diastole was 90.30 mmHg and SD 2.710. In the control group systole measurement was 182.30 mmHg with SD 22,886 while the mean diastole was 99.90 mmHg and SD 10,754.

This effect was tested by using the unpaired t test, namely using the test The independent t-test obtained the results

from the posttest systole in the experimental group p value = 0.004, the results from the diastole pos test in the experimental group p value = 0.014, so it can be seen that the p value <0.05, it can be concluded that there is an effect of giving juice starfruit on lowering blood pressure in elderly people with hypertension at the village health post in Japan, the working area of the Rejosari Dawe Kudus Health Center.

Table 1
Mean difference of blood pressure in elderly people with hypertension

Indicators	Group		p
	Intervention group	Control group	
Systole before intervention	183.20 (±10.560)	188.80 (±24.027)	0.004**
Systole after intervention	155.60 (±10.70)	182.3 (±22.88)	
p	0.0001*	0.0001*	
Diastole before intervention	100.00 (±5.270)	105.00 (±11.67)	0.014**
Diastole before intervention	90.3 (±2.71)	99.9 (±10.75)	
p	0.0001*	0.0001*	

* Paired t-test
** Independent t-test

DISCUSSION

Hypertension is not known the cause factor. Which factor may affect it from genetics or heredity and environment.[11] In addition, there are risk factors that can cause an increase in blood pressure, including gender, age, stress, smoking habits, drinking coffee, physical activity, salt intake.[12] Based on the description above, the researchers concluded that the respondents' high blood pressure was due to various factors of an unhealthy lifestyle. Therefore, researchers suggest that respondents who suffer from hypertension are expected to reduce the factors that affect blood pressure increase, by increasing awareness to adopt a healthy lifestyle.

After being seen from the results of blood pressure measurements before giving star fruit juice and compared with the results of blood pressure measurements after giving star fruit juice, it was found that there was a decrease in blood pressure both systolic and diastole after giving star fruit juice to the respondents. This shows that star fruit juice has benefits in lowering systolic and diastolic blood pressure in hypertensive sufferers.

The use of traditional medicines such as star fruit juice can lowers blood pressure and is very attractive to respondents. This sweet star fruit is very useful for lowering blood pressure because of its fiber, potassium, phosphorus and vitamin C content. Based on the DASH (Dietary Approaches to Stop Hypertension) research it is said that to lower blood pressure, it is highly recommended to consume foods high in potassium and fiber.[9] Based on the description above, the researchers concluded that star fruit juice is quite effective in reducing blood pressure in people with hypertension.

Paired t test results obtained p value = 0.000, so it can It is known that the p value <0.05, it can be concluded that there is an effect of giving starfruit juice on reducing blood pressure in elderly people with hypertension at the integrated service center in the working area of Rejosari Dawe Kudus Health Center.

These results indicate that star fruit juice is effective for reducing blood pressure in elderly people with hypertension, star fruit juice given is starfruit juice as much as 200 cc taken once a day after meals and carried out for 7 consecutive days in elderly people with hypertension. There is an effect of star

fruit juice on blood pressure seen from the decrease in the average blood pressure of both systole and diastole between before and after star fruit juice, the average decrease in systolic blood pressure was 27.6 mmHg, while diastole was 9.02 mmHg,this decrease occurs due to star fruit juice.

The results of Vetri Nathalia's research (2017) show that 5 respondents who were given star fruit juice had a change with the average difference in systolic blood pressure before and after administration with p value = 0.014, meaning that there was a significant difference between blood pressure after and before giving star fruit juice.[13] The results of Adianto's research (2014) show that from 30 respondents who were given star fruit juice, there was a change using Wilcoxon, it was found that the systolic p value = 0,000 and the diastolic p-value = 0,000 then Ha was accepted, and Ho was rejected, meaning that there was an effect of giving starfruit juice on lowering blood pressure in the elderly with hypertension.[14]

According to researchers, star fruit juice has an effect in reducing blood pressure in hypertensive patients, where by drinking star fruit juice regularly can reduce the workload of the heart. Because star fruit contains potassium which can lower blood pressure in sufferers.

The paired t test results obtained p value = 0.000, so it can be seen that the p value <0.05, it can be concluded that there is an effect of giving starfruit juice on reducing blood pressure in elderly people with hypertension at the integrated service center in the working area of Rejosari Dawe Kudus Health Center. The results showed the measurement of pressure before and After giving star fruit juice in the control group also experienced a decrease, namely the decrease in the mean systolic blood pressure was 6.5 mmHg while the mean decrease in diastolic pressure was 5.1 mmHg.

These results indicated that the control group had a decrease in blood pressure between measurements before and after giving star fruit juice because of the effect of taking anti-hypertensive drugs. At the time of the study before being given star fruit juice intervention, the elderly measured blood pressure first from both groups, after that, the experimental group was given intervention and the control group was not given intervention because the control group was using anti-hypertensive drugs, for 30 minutes a re-measurement was carried out in the control group. So that there are elderly people who experience a decrease in blood pressure, both systolic and diastolic.

The results of Cholifah's research (2018) stated that the value of blood pressure in the intervention group or the group given star fruit juice showed that the p value of systole after the study was 0.03 and diastole was 0.014. This shows a p value <0.05, so Ho is rejected, which means that there is an effect of giving sweet starfruit juice on blood pressure.[15]

The test results with unpaired t test that is using the test independent t-test, the results obtained from systolic blood pressure at p value = 0.004, while diastolic blood pressure p value = 0.014. So it can be seen that the p value <0.05, it can be concluded that there is an effect of starfruit juice on the decline Blood pressure in elderly people with hypertension at the village health post in Japan, the working area of the Rejosari Community Health Center, Dawe District, Kudus Regency.

The effect of star fruit juice on reducing blood pressure can be seen from the difference in the average systolic and diastolic blood pressure between the experimental group and the control group, where the average systolic blood pressure in the experimental group is 155.60 mmHg, while the average diastolic blood pressure is 90.30 mmHg. In the control group blood pressure measurement, the mean systolic

blood pressure was 182.30 mmHg, while the average diastolic pressure was 99.90 mmHg.

The results of Vetri Nathalia's research (2017) show that 5 respondents who were given star fruit juice had a change with the average difference in systolic blood pressure before and after administration with p value = 0.014, meaning that there was a significant difference between blood pressure after and before giving star fruit juice. This is because the experimental group was given star fruit juice and the control group only used anti-hypertensive drugs.[13]

CONCLUSION

The result was found that blood pressure systole posttest p value was 0.004 and diastole p value was 0.014, so it can be seen that the p value <0.05. then H0 is rejected and Ha is accepted, there is an effect of giving star fruit juice on reducing blood pressure in elderly people with hypertension at the integrated service center in Japan village, the working area of the Rejosari Dawe Health Center.

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CONFLICTS OF INTEREST

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REFERENCES

1. Lilik Ma'rifatul Azizah. *Keperawatan Lanjut Usia*. Yogyakarta: Graha Ilmu, 2011.
2. Ratna Dewi Pudiastuti. *Penyakit-Penyakit Mematikan*. Yogyakarta: Nuha Medika, 2013.
3. World Health Organization. Ageing and Life Course.
4. Hipertensi di Indonesia berdasarkan riskesdas. riskesdas.
5. Kemenkes RI. Situasi Lanjut Usia (Lansia) di Indonesia. *Infodatin Pus Data dan Inf Kementeri Kesehat Republik Indones*.
6. Dinkes Jateng. *Profil Kesehatan Provinsi Jawa Tengah Tahun 2017*. 2017.
7. Dinkes Kudus. Profil Kesehatan Kabupaten Kudus.
8. Muhammadun. *Hidup Bersama Hipertensi Seringai Darah Tinggi Sang Pembunuh Sekejap*. Yogyakarta: In-Books, 2010.
9. Chaturvedi, M. K. and Bassin JK. Assessing The Water Quality Index of Water Treatment Plant, and Bore Wells, in Delhi, India. *Env Monit Assess* 2011; 449–453.
10. Arza PA, Irawan A. Pengaruh Pemberian Jus Averrhoa carambola terhadap Penurunan Tekanan Darah pada Lansia Penderita Hipertensi. *J Kesehat* 2018; 9: 51.
11. Nurarif .A.H. dan Kusuma. H. *Aplikasi Asuhan Keperawatan Berdasarkan Diagnosa Medis & NANDA NIC-NOC*. Yogyakarta, 2015.
12. Robert Kowalski. *Terapi Hipertensi: Program 8 Minggu Menurunkan Tekanan Darah Tinggi. Alih Bahasa Rani Ikawati*. Bandung: Qanita Mizan Pustaka, 2010.
13. Nathalia V. Pengaruh Pemberian Jus Buah Belimbing Terhadap Perubahan Tekanan Darah Penderita Hipertensi Di Panti Jompo Effect Of Carambola Fruit Juice Of Changes In Blood Pressure Patients With Hypertension In Nursing Homes Latar Belakang Hipertensi saat ini masih me. 2017; 201–216.
14. Ardiyanto I, Nuraeni A, Supriyono M. Efektifitas Jus Belimbing Terhadap Penurunan Tekanan Darah Pada Lansia Di Kelurahan Tawangmas Baru Kecamatan Semarang Barat. *J Ilmi Keperawatan Dan Kebidanan* 2014; 1–8.
15. Cholifah N, … SS-… IK dan, 2018 U. Pengaruh Juice Belimbing Manis (Averrhoa Carambola Linn) Terhadap Tekanan Darah Pada Lansia Dengan Hipertensi Di Desa Lemah Putih. *J Ilmu Keperawatan dan Kebidanan* 2018; 9: 118–125.

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Original Research

Factors Associated with Psychological Health Issues in Diploma Nursing Students: A Cross-sectional Study

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Abstract

Psychological health is the expression of harmonic expression of harmonic expression of human's personality and is often disrupted by multiple factors. The aim of this study to assess psychological health status and its associated factors among diploma nursing students. A cross-sectional study design was employed. The sample comprised 542 nursing students attending this anonymous survey by completed The Symptom Checklist 90 questionnaire. Descriptive statistics and logistic regression analysis were attempted to analyze overall data. The positive rate of psychological symptoms of diploma nursing students is 20.9%; the total score of SCL-90 and the scores of each factor are higher than the national norm; grade, personality, number of friends, parenting style, love experience, whether it is an only child, and physical exercise are influential. The main factors of the mental health status of secondary vocational nursing students. The contribution of Emotional Intelligence and Spirituality is crucial to the acquisition of well-being, happiness and meaning in life..

INTRODUCTION

Admission to a professional program marks the beginning of fulfilling a career goal. Student life is characterized as the intermediate from adolescence to adulthood. They usually live alone and away from the family home and begin to bond with their peers who often come from other places.[1] They, therefore, are leaving behind a safe and controlled environment of the family and their surroundings and come into contact with different habits and perceptions, while still possessing many of the adolescence features, are experiencing a process of moving away from the family environment.[2] However, the rigors of professional education can be demanding. Stress, depression, and anxiety (SDA) can interfere with learning, affect academic performance, and impair clinical practice performance.[3]

During their studies, some individuals can experience mental difficulties that are related to their inability to leave their family in combination with the feeling of loneliness and difficulties to create relationships in a new environment. The ability of the individual to live alone reflects his or her emotional maturity and is the foundation for achieving autonomy.[4] Finally, a significant risk to students 'mental health is the intense feeling of insecurity regarding

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their financial and occupational rehabilitation. The high levels of unemployment, the financial crisis, the lack of recognition in some cases of qualification lead to discouragement and the creation of intense feelings of anxiety, insecurity and even mental disorders manifested by symptoms such as insomnia, shortness of breath, eating disorders and difficulties in concentration and organization.[5] Then students often develop dysfunctional ways of managing these problems, so their self-image is affected, and they are experiencing feelings such as depression and anxiety.[6,7] The existence of some mental disorder in the student has a more significant impact than on other groups in the general population as it affects his health, interpersonal relationships and academic performance.[8] Inappropriate diagnosis and treatment of these problems lead to chronicity and relapses, increasing the risk of discontinuation of studies and manifestation of future occupational distress syndrome.[9]

Strengthening the mental health education of diploma nursing students has become a consensus in the higher education field.[10] This research has investigated diploma nursing students as the research object, understood the mental health and its influencing factors, and provided psychological basis for the education and management among diploma nursing students more effectively.

This study aims to assess psychological health status among diploma nursing students and to highlight its' related factors.

METHODS

A cross-sectional study design was applied in this study. A stratified cluster random sampling method was adopted to randomly select 4 students in each of the first and second-year as the research participants.

Participants & Settings

A total of 550 students from Chongqing Medical and Health College were voluntary recruited. This study was approved by the Ethics Committee of the Thessaly University according to the ethical guidelines of the Declaration of Helsinki. In addition, a written consent of the Students to participate in the process was obtained and they were each given an increasing serial number to ensure their anonymity.

Instrument

A self-reported questionnaire of the Symptom Checklist 90 (SCL-90) was used to collect the data.[11] The scale has 90 evaluation items and contains a total of 10 factors, such as: somatization, obsessive-compulsive symptoms, interpersonal sensitivity, depression, anxiety, hostility, terror, paranoia, psychosis and others. Each item adopts a five-level scoring system (1-5 point), 1 point means no such symptoms, 2 point means mild symptoms, higher scores, more severe symptoms, 5 point means most severe symptoms. Scoring to the survey consists of two elements, such as the total score and the factor score. The total scores of 90 items are indicating the overall level of mental health which is divided into higher and lower level of mental health. Factor score, the total score of each item that makes up a factor/the number of items that make up a factor. The high score of a factor indicates the seriousness of the mental health problem of items among factors. If a factor score ≥ 2, consider screening for positive symptoms.[12] In addition, the research team also designed a general survey form on its own, including gender, age, source of birth, physical exercise, etc.

The survey method adopts an anonymous questionnaire survey in class units, with trained professionals serving as investigators. The questionnaires are uniformly distributed and recovered. The survey process uses uniform methods and instructions. The students complete the

questionnaire carefully and independently according to the actual situation, on the spot Answer, collect and check on the spot.

Statistical Analysis

A logical regression analysis was used to carefully examine and minimizing error for all data entry by using Epidata 3.02 software. Two-person entry was attempted to establish a database to verify the accuracy of the entry. SPSS version 13.0 statistical software was utilized for data analysis.

RESULTS

Participants' characteristics

Initially, a total of 560 questionnaires was distributed. In the final stage, 550 questionnaires were returned, with a recovery rate of 98.2%. The valid questionnaires included in the statistics was 542, with an effective rate of 98.5%. Among them, 280 (51.7%) were in the first year, and 262 (48.3%) were in the second year; the youngest was 15 years old and the oldest was 23 years old, with an average age of 16.67±2.78 years old; the survey subjects were all female nursing students.

The Overall SCL-90 Result

The survey results of the overall scores of SCL-90 measurements show that the positive rate of psychological symptoms in diploma nursing students is 20.9%. Furthermore, the percentages of positive symptoms for each factor such as: obsessive-compulsive symptoms (19.1%), depression (10.8%), interpersonal relations sensitive (8.9%), anxiety (7.1%), hostility and paranoia (5.5%), psychosis (4.7%), somatization (3.6%), and terror (2.0%).

Comparison of Each Symptom Factor Of SCL-90 With the National Norm

It can be seen from Table 1. that the total scores of SCL-90 and the scores of various factors of diploma nursing students are higher than the national norm, and the differences are statistically significant ($p<0.05$).

Logistic regression analysis of factors affecting the mental health of secondary vocational nursing students

In order to understand the factors that affect the mental health of secondary vocational nursing students, we take whether the subjects have mental health problems as the dependent variable, and take the grade, personality, parental education level, parental rearing style, smoking, drinking, etc. Fifteen variables were used as independent variables for quantification (personality is a multi-category variable, 3 dummy variables are set, and the remaining 14 variables are binary and rank variables). Logistic regression is introduced, and the regression equation is established by stepwise forward $P\leq0.05$ is used as the criterion for entering the equation, and finally there are 7 variables entering the regression equation. Autocratic parenting style, only child and love experience are risk factors that affect mental health. See Table 2.

Table 1
Comparison of SCL-90 factor evaluation results of secondary vocational nursing students with domestic norms (n=550)

Indicators	Diploma Nursing Student	National Norm	t	p
Somatization	1.45±0.29	1.37±0.48	11.424	0.022
Obsessive-compulsive symptoms	1.71±0.54	1.62±0.58	0.046	0.020
Interpersonal sensitivity	1.76±0.58	1.65±0.51	9.336	0.000
Depression	1.64±0.53	1.50±0.59	2.297	0.000
Anxiety	1.44±0.42	1.39±0.43	2.212	0.027
Hostility	1.59±0.42	1.48±0.56	9.505	0.000
Terror	1.30±0.34	1.23±0.41	1.339	0.031
Paranoid	1.51±0.38	1.43±0.57	8.246	0.020
Psychotic	1.37±0.40	1.29±0.42	0.064	0.019
Total Score	136.47±33.61	129.96±38.76	4.971	0.038

Table 2
Logistic Regression Analysis of Influencing Factors of Suicidal Ideation in Diploma Nursing Students (n=550)

Variables	Assignment	B	*p*
Grade/years	First year=1，Second year=2	-0.536	0.000
Characters	Introvert=1，Neutral=2，extrovert=3	-0.274	0.000
Parenting Styles	Democracy=1，Despotism=2	0.760	0.002
Love Experiences	No=1，Yes=2	0.793	0.000
Single children	No=1，Yes=2	0.833	0.000
Physical activity in a week	0 times=1，1times=2，,2 times=3，3 times=4，4 times=5，5times=6，6times and above=7	-0.227	0.000

DISCUSSIONS

The survey results show that the positive detection rate of psychological problems in diploma nursing students is 20.9%, which is similar to the results of other relevant domestic studies, and the total score of SCL-90 and the scores of all factors are higher than the national norm.[13] and psychological status of diploma nursing students is not optimistic. Technical diploma students are a special group, most of them are eliminated from the senior high school entrance examination. If the teacher does not properly guide them, it will be difficult for them to get rid of the shadow caused by the unsatisfactory advancement. In addition, there are some incorrect public opinions in the society under diploma schools are not promising and any students enter diploma schools in a helpless mood. Most of the students are in their adolescence, which are at the stage of life when they are sensitive to external stimuli and psychological changes are the most complicated. They are more likely to experience negative emotions.

Factors affecting the mental health of diploma nursing students

Different grades of diploma students' mental health status have different survey results. The survey results show that first-year students face more psychological problems than second-year students. The first-year students have just experienced the failure of the senior high school entrance examination. Some people choose the secondary vocational health school due to the pressure of their families. Moreover, they have just entered the school and cannot fully adapt to the new school environment and new interpersonal relationships. Therefore, the first-year

students It is more prone to psychological problems. Introverted students are more prone to psychological problems. Compared with extroverts, introverts are withdrawn, pessimistic and cautious. They tend to have low self-evaluation and lack of self-confidence. They often adopt evasive, self-blame, and fantasy coping styles in the face of stress, so they are prone to psychological problems; Extroverts have a wide range of communication, many friends, are good at seeking help, have a better social support network, and can respond appropriately in a passionate situation. Therefore, their psychological condition is better.[14]

Family factors are also the main factors influencing the psychological status of diploma nursing students.[15] Democratic parenting is more conducive to the healthy growth of children's mental health than autocratic parenting. Diploma nursing students are in their adolescence, and their personal independence consciousness is developing rapidly. Democratic parenting methods give their children certain autonomy and positive and correct guidance, which is conducive to the formation of positive personality characteristics for children, and good personality characteristics are conducive to the formation of healthy psychology. Autocratic parenting methods will lead to unstable personality characteristics of children, which is extremely detrimental to children's mental health.[16] The mental health of only children is worse than that of non-only children. The only child has a strong sense of self, and has poor ability to take care of themselves in life. They cannot adapt well to living in school and are prone to bad emotional experiences.

Diploma students with love experience face more psychological problems than those without love experience. The sexual consciousness of vocational students in adolescence is quickly awakened and they are prone to premature love. However, due to their lack of social experience, their understanding of themselves and others is not comprehensive enough, they often have unrealistic ideas about the future, and are more susceptible to emotional frustration, leading to anxiety, depression and other emotions. The results of this survey also found that the mental health of people who regularly participate in physical exercise is better than those who do not exercise regularly. This result is consistent with the research results of Wang`s paper.[17] Physical exercise can clear tension, maintain friendship, make people optimistic, and improve social adaptability. Therefore, physical exercise has a good role in promoting mental health.

There are several limitations in this study, there was a relatively small number of studies included. While the heterogeneity of the studies included, in particular the methodology, sample size and location of these studies makes it more difficult to generalize the settings, concentrated on only the nursing students who had been enrolled in one college and the other is this study only focused on one direction of influence.

CONCLUSION

The results of this study indicated that the mental health status of diploma nursing students is not optimistic. The relevant departments should strengthen their mental health education work, provide psychological interventions to students with mental health problems, and regularly carry out psychological education activities to prevent problems before they occur. The contribution of Emotional Intelligence and Spirituality is crucial to the acquisition of well-being, happiness and meaning in life. It is crucial to promote cultivation with significant benefits in the course of their lives and the campus community as a whole.

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CONFLICTS OF INTEREST

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

REFERENCES

1. Burris J, Brechting E, Salsman J, et al. Factors associated with the psychological well-being and distress of university students. *J Am Coll Heal* 2009; 57: 536–544.
2. Eisenberg D, Gollust SE, Golberstein E, et al. Prevalence and correlates of depression, anxiety, and suicidality among university students. *Am J Orthopsychiatry* 2010; 77: 534–542.
3. Hoying J, Melnyk BM, Hutson E, et al. Prevalence and correlates of depression, anxiety, stress, healthy beliefs, and lifestyle behaviors in first-year graduate health sciences students. *Worldviews Evidence-Based Nurs* 2020; 17: 49–59.
4. Kunnanatt JT. Emotional intelligence: The new science of interpersonal effectiveness. *Hum Resour Dev Q* 2004; 15: 489–495.
5. Gutiérrez García RA, Amador Licona N, Sánchez Ruiz A, et al. Psychological distress, sanitary measures and health status in student's university. *Nov Sci*; 13. Epub ahead of print 2021. DOI: 10.21640/ns.v13ie.2602.
6. Hardeman RR, Przedworski JM, Burke SE, et al. Mental well-being in first year medical students: A comparison by race and gender. *J Racial Ethn Heal Disparities* 2015; 2: 403–413.
7. Fan Z, He S. Beijing college students' self-consciousness: its level, structure and relationship with mental health. *Wei Sheng Yan Jiu* 2013; 42: 960–964.
8. Rosenzweig S, Reibel DK, Greeson JM, et al. Mindfulness-based stress reduction lowers psychological distress in medical students. *Teach Learn Med* 2003; 15: 88–92.
9. Watson R, Gardiner E, Hogston R, et al. A longitudinal study of stress and psychological distress in nurses and nursing students. *J Clin Nurs* 2009; 18: 270–278.
10. Kanji N, White A, Ernst E. Autogenic training to reduce anxiety in nursing students: Randomized controlled trial. *J Adv Nurs* 2006; 53: 729–735.
11. Zhou J, Yu J, Zhou Y, et al. Study of item text in the Chinese symptom checklist-90. *Medicine (Baltimore)* 2021; 100: e24841.
12. Wang ZH, Ye Y, Shen Z, et al. A meta-analysis of Symptom checklist-90 assessment results in Chinese nurses. *Chinese J Ind Hyg Occup Dis* 2018; 36: 129.
13. Zhang L, Sun H. Research on correlation between the psychological health and self-esteem level of technical secondary school student nurse. *Chinese J Nurs Adm* 2009; 9: 57–59.
14. Lu X. Relationship between personality, defense style, and mental health of technical secondary nursing students. *Chinese Nurs J* 2004; 18: 442–443.
15. Sun H, Zhuang N, Tian Y, et al. Correlation between general self-efficacy, coping style and mental health of nursing students. *Chinese J Nurs Educ* 2008; 5: 243–246.
16. Zhuang N, Sun H, Wang Y, et al. Correlation research between self-efficacy, mastery and mental health of practical nurses. *Chinese J Nurs Educ* 2008; 14: 430–432.
17. Wang J. Correlation of self-rated health and self-efficacy of the college nursing interns or above. *Tianjin J Nurs* 2012; 20: 203–205.

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Case Study

Analysis Of Nursing Supervision Function In Nursing Supervision Implementation

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Abstract

Preparaing rooms for covid 19 patients must be supported by the availability of superior human resources and good nursing management functions. Nursing care given to Covid 19 patients must be complete and well documented. The quality of service needs to be monitored on an ongoing basis by optimizing the supervisory function of the head of the room and the orphans by means of nursing supervision. The purpose of this analysis is to determine the usefulness of the nursing room supervision function in this case by implementing nursing supervision. The use of the action method in this analysis aims to develop new skills or new approaches and be applied directly and studied the results. The assessment using eight nursing management functions carried out in Sulaiman 4 room Roemani Muhammadiyah Semarang Hospital found that the most priority problems were not optimal in the implementation of the supervisory activities of the head of the room and head of the team. The supervision activities in the Sulaiman 4 room have actually been carried out but have not been scheduled and well documented. Actions taken by refreshing the nursing supervision through Small Group Discus activities, preparation of supervision schedules and making supervision formats. Evaluation of the actions taken, SGD was attended by 19 participants consisting of 15 nurses Sulaiman 4 and four other inpatient heads, the supervision schedule was made according to the agreement of the Head of the Room and the Head of the Team. The direct supervision format was used in Sulaiman 4 room according to the predetermined schedule, namely on December 11, 2020. The results achieved from the supervision obtained a significant increase in the number of completeness of nursing documentation from 48.24% to 82.98%.

INTRODUCTION

Nursing is a form of professional service that is part of the health service system based on knowledge, this service is manifested in a comprehensive form of services including bio, psycho-social and spiritual guidance given to individuals, families and communities both in a healthy state and in a sick condition covering all the process of life from human birth to death. [1]

The activity of providing nursing services to individuals, families, groups or communities is the meaning of nursing, quality nursing management will produce quality nurses so that the nursing services provided will also be of quality. Because

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good service quality is currently a top priority for community demands for health services. Good quality services will provide assurance to patients of protection and legal certainty for both patients and nurses themselves. Quality service quality will further improve the health status of patients.[2]

One of the functions of nursing management, namely the supervisory function, plays a very important role in improving the quality of nursing services where through monitoring activities in this case is carried out by monitoring and evaluation through nursing supervision. Through supervision activities, it is expected to solve problems as soon as possible against deviations, mistakes and failures from the expected goals. In addition to being a means of problem solving, supervision activities are also an activity to guide and motivate. Through nursing supervision activities will increase the productivity of nurses.[3,4]

Nursing management is a form of science and art in managing nursing resources that are dynamic, proactive, efficient, effective and rational in running an organization by implementing a nursing management process to achieve a goal and objectivity in nursing care and nursing services. Nursing management in which there are activities in the form of organization, workforce management, direction, supervision, care room management, logistics management, nursing quality assurance programs and programs, patient safety, is an integral part of providing services. Through this nursing management process the objectives of nursing services and the objectivity of nursing care in health facilities can be realized.[5]

The supervisory function is an activity in nursing management that aims to find and correct important deviations in nursing care service activities in a health service. The implementation of supervision by means of supervision is planned in a systematic, measured, planned, and documented manner. The supervisory function in nursing management is indispensable to provide control and limitation for implementing nurses in providing nursing care to patients, so that the goal of achieving excellent and quality service can be achieved. Supervision as a form of the process of implementing the supervisory function in nursing management in its implementation remains oriented towards patient-focused services (Patient Center Care).[6]

The supervisory function in this case is carried out by means of nursing supervision which is a very important managerial activity. Through supervision, the implementation of the supervision function can run well to improve service quality and performance. Regular and scheduled supervision will support planned activities and expected goals.[5]

Nursing supervision is a continuous process of activities carried out by the leader with the aim of knowing the extent of the level of knowledge, skills, creativity and compliance with the procedures performed by the nurse under him. Nursing supervision is also useful for exploring the quality and ability of nurses through support, direction, observation, guidance, and motivation.[7]

Nursing care is a series of activities to provide direct nursing practice to patients in various health facilities by referring to the existing rules of the nursing profession. Nursing care standards are one of the references of the quality of nursing care provided to patients. The quality and quality of a hospital is also supported by quality nursing care standards.[8]

Nursing care standards according to the Ministry of Health of the Republic of Indonesia in 1998 include the stages of the nursing process, namely assessment, diagnosis, nursing planning, nursing implementation and evaluation.[9]

Nursing care standards can be used as a determinant of the success and quality of nursing care. The provision of quality nursing care must be in accordance with the established standards of the nursing profession. Nursing care services are used fairly, efficiently, effectively and safely for patients and nurses as satisfying service providers. Social, economic, cultural, religious, ethical and values aspects in society are considered and used to assess the quality of nursing services by using nursing care standards. Nursing care standards are also used to maintain and improve service standards in health facilities.[10]

Roemani Muhammadiyah Semarang Hospital is a private hospital in the middle of the city of Semarang that provides health services that aim to improve health status and is always oriented to the interests of the community. The health services provided are always balanced with dedication to the surrounding community. RS. Roemani Muhammadiyah Semarang strives to create a solid organization and management oriented towards the quality of service for the community. So that the process of repair and improvement is carried out in various aspects of services and facilities and infrastructure.

To realize an increase in the quality of service at the Roemani Muhammadiyah Hospital in Semarang, the field of care organizes nursing supervision. Nursing supervision carried out in the field of care is the supervision of nursing services in general and the area of supervision of all units under the field of care. Meanwhile, supervision of the treatment room has been carried out but the implementation has not been optimal. Supervision of the treatment room is only carried out once a month, there is also no implementation schedule and documentation of the implementation of supervision.

METHODS

The method used is the action method, which is a method that aims to develop new skills or new approaches and is applied directly and the results are reviewed. Where this analysis is prepared based on the assessment of eight nursing management functions, namely the function of organizing, personnel, directing, monitoring, care management, logistics management, quality assurance programs and patient safety. The results of the assessment in the Sulaiman 4 room based on the eight nursing management functions found five problems, namely: Not optimal in the implementation of supervision activities of the head of the room and the team head, the implementation of nursing care was not in accordance with the SPO, Lack of manpower needs, the number of completeness of documentation was still low, the drill was still low in The last three months. Of the five problems above, the priority order of the problems according to the HANLON theory and the joint agreement of the Head of Sulaiman Room 4 is that the problem of not optimal implementation of the supervisory activities of the head of the room and the team leader is considered very important and needs immediate resolution. From the problem that the implementation of the supervision activities of the head of the room and the head of the team has not been optimal, the action taken is to refresh again about the supervision through the Small Group discus activity, preparation of the supervision schedule according to the agreement of the Ka Ru and the Ka of the Sulaiman 4 room team, making the supervision format. The results of the actions carried out by SGD which were carried out on December 7, 2020, attended by 19 participants consisting of 15 nurses (Ka Ru, Team Head and implementing nurses), four other inpatient heads, the schedule for supervision of the Team Leader and Head of the Team was made on December 8, 2020, the format of nursing supervision which was immediately applied in Sulaiman Room 4 on December 11, 2020.

RESULTS

Roemani Muhammadiyah Semarang Hospital is one of the health facilities that has a vision to create a global quality hospital by 2030 with the application of the latest technology based on Islamic values. Based on the results of the assessment carried out in Room Sulaiman 4, it has provided nursing services as required in the SNARS 1.0 Accreditation, but these efforts have not been running optimally, because it is still in the refinement stage. This can be seen from the results of the analysis of the problems found by students during the application practice, namely:

1. Not yet optimal implementation of supervisory activities for the head of room and head of the team
2. Implementation of nursing care is not in accordance with the SPO
3. Lack of personnel needs
4. The number of documentation completeness is still low
5. Drill is still low in the last 3 months

The problems found have been taken based on an agreement with Sulaiman 4 and the supervisor of Roemani Muhammadiyah Semarang Hospital, by sticking to the theory of applying the problem, namely the HANLON theory. Every intervention that is made and implemented is an effort that is considered the most effective in adjusting the needs of the problem and able to answer existing problems. Description of the discussion of the interventions carried out which is taken from the main problem, namely the not optimal implementation of the supervisory activities of the head of the room and the head of the team.

Supervision is an active process of directing, guiding and influencing the results of individual task performance, in this case the nurse as an individual who is supervised. Direct supervision is carried out by the Head and Team Leader to find problems as early as possible so that the resolution can also be faster and more effective.

Clinical Supervision needs to be carried out in a programmed, scheduled manner, and not to look for errors or deviations. Supervision is also carried out, especially in providing guidance and direction to improve the understanding of the nurse in carrying out their duties and responsibilities in providing services

From the results of observations made by practical application students during the implementation of nursing clinical supervision activities in Sulaiman Room 4, it was found that the team had carried out supervision in accordance with the existing SPO of supervision. However, there are some things that need to be improved, namely when:

Assessment

The Head of the Room and the Head of the team are expected to be able to schedule a scheduled and continuous nursing supervision so that it can be known by all the nurses

Preparation

Before carrying out the scheduled supervision, the head of the room / head of the team should first orientate or convey the material about the supervision that will be carried out.

Implementation

The Ka Ru and the Ka of the team in carrying out the direction and guidance are expected to have the ability to express questions that lead to the nurse's awareness of the benefits that are obtained. Because whatever is done on the occasion of the team and the center of efforts to gain new awareness, insight and identify goals

Evaluation

When conducting the evaluation, it is expected that the Ka Ru and the Ka of the team will be able to carry out supervisory assessments, provide feedback and clarification as well as reinforcement on the achievement of the progress of the

implementing nurse and follow up for improvements.

Nursing Supervision in room 4 Roemani Muhammadiyah Semarang Hospital in Sulaiman room has been carried out according to SPO standards. The Ka ru and Ka of the team already understood the refresh that was given as evidenced by the implementation of the supervision program in the Sulaiman 4 room which was held on December 11, 2020. The results of the discussion with the head of the Sulaiman Room 4 compiled a supervise format that was easy to use because it was in the form of a check list and clear assessment. The format also helps the Ka Ru and the Ka of the team in identifying missing scores, making it easier for the team and the team to supervise.

PDSA Implementation of Supervision in Sulaiman 4 RS Roemani Muhammadiyah Semarang

1. Supervision implementation data analysis
   Based on the results of interviews and observations in Sulaiman's room4, data on the implementation of supervision is still conditional at least once a month, there is already a Supervision SOP, but the implementation is not yet appropriate

2. PDSA
   a) Plan
      Problem: Supervision of Head and Team Head is not yet structured and scheduled

      Purpose: Supervision of Ka Ru and Ka Teams is carried out in a programmed, scheduled, continuous and documented manner

      Actions:
      - Refresh Back about Supervision via SGD
      - Preparation of supervision schedules
      - Making supervision format

   b) Do
      - Implementation of SGD supervision
      - Socialization of Supervision Format

   c) Study
      - Observation of the implementation of supervision with an average result of supervision of 82.98%
      - The results of the discussion were also found that the supervision format created was feasible and easy to apply

   d) Action
      - SGD supervise to the Head, Head of the Team and the executive nurse in the Sulaiman Room 4 Rs Roemani Muhammadiyah Semarang
      - Preparation of supervision schedules
      - Develop Supervision Format
      - Perform tiered supervision

From the explanation above, there is a correspondence between the theory of nursing management functions, especially the supervisory function, with the priority of the issues raised, namely the not optimal implementation of supervisory activities for the head of the room and the head of the team. Indeed, the supervisory function is very necessary because with supervision through supervision carried out by both the Head and the Team, a solution can be immediately sought for the problems found during supervision, one of which was found in the implementation of supervision in Sulaiman 4, namely regarding the completeness of documentation and implementation of Handover.

Problems found during the implementation of the nursing management application in the Sulaiman 4 in addition to not optimal

implementation of the supervision of the head of room and head of the team, namely

1. The implementation of nursing care is not in accordance with the SPO
   Implementation: Refresh nursing SPO by Room leader and Ka Team, by reading at least 1 SPO per Hand Over

   Evaluation: Implementation of SPO Refresh has been carried out starting December 9, 2020

   Appropriateness Theory: In accordance with nursing management theory and research results, Refresh SPO is needed so that the care provided is in accordance with the patient's needs.

2. Lack of personnel needs
   Implementation: Optimizing existing nurses while waiting for the recruitment process to be completed and additional nurses can enter the Sulaiman 4

   Evaluation: The recruitment process has been carried out, registration starts on December 10 and 11, followed by a written test on December 14, 2020, it is hoped that the 3rd week of December can be oriented.

   Suitability Theory: Quality of nursing care, effective and efficient service according to nursing management theory and in accordance with the results of other research.

3. The number of documentation completeness still low
   Implementation:
   a. Build a strong commitment from the head, team and nurse administrators to carry out complete nursing documentation
   b. Bed Teaching site filling out nursing documentation by Ka Ru and Ka Team.

   Evaluation:
   a. Joint Commitment to improve completeness of documentation, bed site teaching and refresher of SPO held on December 8, 2020
   b. The results of supervision carried out on December 11, 2020 on the completeness of RM documentation increased significantly by 82.98

   Conformity Theory: Completeness of documentation is very important in the nursing care process, therefore joint commitment and continuous evaluation monitoring of nursing documentation needs to be done, this is in accordance with the nursing management function in care management. The implementation of nursing care standards is the core of nursing practice, it needs to be supported by good nursing management functions in order to guarantee the quality of nursing services.

3. Drill is still low in the last 3 months
   Implementation: Providing the best service in accordance with the SPO

   Evaluation: On the 8th it was opened. The isolation room with a capacity of 8 beds, until December 16th, all beds were fully occupied.

Conformity Theory. Quality services will certainly improve the quality of nursing care so that patients will feel satisfied with the services provided. In accordance with the Nursing Management Function in Nursing Quality Assurance.

DISCUSSION

Preparing rooms for Covid 19 patients must be supported by the availability of superior human resources and good nursing management functions. Nursing care given to Covid 19 patients must be complete and well documented. The quality of service needs to be monitored continuously by optimizing the supervisory function of the

head of the room and the orphans by means of nursing supervision. The implementation of nursing supervision of nursing care in the Covid 19 isolation service must be well scheduled and documented.

The nursing management function is primarily a supervisory function with the priority of the issues raised, namely the not yet optimal implementation of the supervisory activities of the head of the room and the head of the team. In fact, the supervisory function is very much needed because with supervision through supervision carried out by both the Head and Team Leader, solutions can be immediately sought for problems found during supervision. One of the findings in the implementation of supervision in Sulaiman Room 4 was about the completeness of documentation and the implementation of Hand over. After carrying out nursing supervision actions that are scheduled and well documented, significant results are obtained, namely the completeness of documentation of 82, 98%

Some of the results of research that have been conducted by other researchers related to supervision and its benefits are increasing nursing care and documentation aimed at achieving patient satisfaction levels.

The results of other research can be concluded that Discharge planning is one of the indicators of sustainable nursing services which, if done properly by nurses, will be able to improve the quality of nursing services and patient satisfaction. One of the influencing factors is the leadership of the head of the room, especially in the function of directing the nurse when carrying out discharge planning. The directive function carried out by the head of the room is in the form of providing motivation, supervision, and conflict management.[11]

Other research shows that more than half (53.3%) of the head of the room carried out the supervision and documentation which was done completely and incompletely, the same amount (50%) was carried out by the executive nurse. The results of bivariate analysis with chi-square were obtained (p = 0.021), it can be concluded that there is a relationship between the supervision of the head of the room and the documentation of nursing care in the inpatient room of RSI Ibnu Sina Bukittinggi.[12] Other research showed have difference in documenting nursing care before and after being given supervision with a P value of 0,000.[13]

The other research concluded that the combination of the supervisory function in the nursing field and the training that the supervisor participated in had a significant relationship with the implementation of supervision by the supervisor. Supervision periodically and with effective supervision techniques improve the performance of nurses in nursing services.[14]

Nursing supervision that is structured, scheduled and well-documented is very beneficial for improving the quality of hospital services. This is supported by several published research results.

In fact, the supervisory function is very necessary because with supervision through supervision carried out by both the Head and the Team, a solution can be immediately sought for problems found during the implementation of nursing supervision. Through nursing supervision, the number of completeness of Medical Record documentation increased significantly from 24.48% to 82.98%

Nursing SPO refresh needs to be done periodically. Its implementation requires monitoring and evaluation so that the nursing care carried out by the implementing nurse can be in accordance with the SPO determined by the hospital.

Joint commitment both room leader, the Head of the Team and the implementing nurses to achieve an increase in the number

of documentation completeness. One of the monitoring and evaluation with supervision is able to increase the value of completeness of Medical Record documentation.

The increase in the number of Covid patients is comparable to a full bed in the Covid room provided. Increasing BOR while still paying attention to the quality of nursing services will have an impact on patient satisfaction. Providing quality services can be done by means of supervision which can be carried out by the Head of the Room and the Head of the Team.

CONCLUSION

RS. Roemani Muhammadiyah Semarang is one of the hospitals in Semarang. Based on the results of the assessment carried out in Sulaiman Room 4, 3 problems in nursing management were formulated and the priority problems were as follows

1. Not yet optimal implementation of supervisory activities for the head of room and head of the team
2. Implementation of nursing care is not in accordance with the SPO
3. Lack of personnel needs
4. The number of documentation completeness is still low
5. Drill is still low in the last 3 months

There are five problems found, but based on the priority of the problem according to HANLON, namely the not optimal implementation of the supervisory activities of the head of the room and the head of the team, the solution is sought by implementing supervision in Sulaiman 4 room as many as 9 implementing nurses with a value of completeness of documentation of 82.98%. This result significantly increased from the initial value before implementation by students of 48.24%. The implementation of supervision has used a mutually agreed supervision format and according to the time set in the supervision schedule. The understanding of the head of the room and the head of the team on the implementation of supervision is very understood, they are able to carry out the briefing process and guidance to the nurse under him

The recommendes Suggestions for the hospital is expected to continuously run programs that can improve the quality of hospital services. It is hoped that the hospital should improve the implementation of the management function of the head of the room, especially in the implementation of nursing supervision and it is hoped that the implementation of supervision can be carried out in stages and continuously.

The head of the room and the head of the team are expected to be able to continue to motivate the nurse in charge to always improve the quality and run the program that has been compiled.

Nurses are expected to realize the importance of the role of nurses in the success of health services by continuing to work on the programs that have been prepared.

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CONFLICTS OF INTEREST

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

REFERENCES

1. Apelia G. Manajemen Asuhan Keperawatan. Published online 2019. doi:10.31227/osf.io/8d2z6

2. Irfantian A, Arofiati F. Pengaruh Supervisi Keperawatan Terhadap Persepsi Penerapan Patient Safety Dan Pendokumentasian Asuhan Keperawatan. *J Admmirasi*. 2018;3(2):80-90.

3. Listiyono RA. Studi Deskriptif Tentang Kuaitas Pelayanan di Rumah Sakit Umum Dr. Wahidin Sudiro Husodo Kota Mojokerto Pasca Menjadi Rumah Sakit Tipe B. *J Kebijak dan Manaj Publik*. 2015;1(1):2-7.

4. Nusrial. Supervisi Kepala Madrasah Dalam Meningkatkan Efektifitas Layanan Administrasi Di Madrasah Tsanawiyah Negeri 3 Kota Jambi. Published online 2019.

5. Julianto M. Peran dan fungsi manajemen keperawatan dalam manajemen Konflik. *Fatmawati Hosp J*. Published online 2016:1-7.

6. Devara alan putri A, Ari Fakhrur Rizal A. Hubungan Pengawasan Kepala Ruang dengan Kinerja Perawat dalam Memberikan. 2020;1(3):2181-2187.

7. Agustina. Hubungan Supervisi Dengan Pendokumentasian Asuhan Keperawatan Di Ruang Rawat Inap Rumah Sakit TK II Kartika Husada Kubu Raya I .

8. Ujung H. Standar asuhan keperawatan. Published online 2008.

9. Dedi B. Kepemimpinan dan manajemen pelayanan keperawatan: Teori, Konsep dan Implementasi. 2019;(November 2019):397.

10. Nursalam. *Manajemen Keperawatan - Aplikasi Dalam Praktik Keperawatan Profesional Edisi 4*. 4th ed. Salemba Medika; 2014.

11. Imallah RN, Khusnia AF. Fungsi pengarahan kepala ruang dalam pelaksanaan discharge plannning perawat di RS PKU Muhammadiyah Yogyakarta. *Heal Sci Pharm J*. 2019;3(1):21. doi:10.32504/hspj.v3i1.94

12. Andriani M. Hubungan Supervisi Kepala Ruangan Dengan Pendokumentasian Asuhan Keperawatan Di Ruangan Rawat Inap RSI Ibnu Sina Bukittinggi. *Ilmu Kesehat 'Afiyah*. 2017;4(1):18-24.

13. ananda yuanita, 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 Kesehat*. 2018;2(2):108-112. doi:10.33757/jik.v2i2.125

14. Winarti R. SA, Yetti K, Besral B. Peningkatan Pelaksanaan Supervisi Oleh Supervisor Melalui Pengawasan Bidang Keperawatan. *J Keperawatan Indones*. Published online 2008. doi:10.7454/jki.v12i3.216