

# BENSON'S RELAXATION THERAPY TO DECREASE THE LEVEL OF PATIENTS' INSOMNIA WITH CHRONIC KIDNEY DISEASE TO THOSE WHO UNDERGO HEMODIALYSIS

## *Terapi Relaksasi Benson terhadap Penurunan Tingkat Insomnia pada Pasien Penyakit Ginjal Kronik yang Menjalani Hemodialisis*

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### ABSTRAK

**Pendahuluan.** Pasien penyakit ginjal kronik yang menjalani hemodialisis mengalami gangguan tidur sekitar 50–80%. Insomnia disebut memiliki prevalensi paling tinggi pada populasi pasien dialisis. Penelitian ini bertujuan untuk mengetahui efektivitas relaksasi Benson terhadap tingkat insomnia pada pasien penyakit ginjal kronik yang menjalani hemodialisis. **Metode.** Desain penelitian ini adalah quasi eksperimen dengan rancangan *pretest-posttest with control group*. Sampel dalam penelitian ini adalah 42 pasien hemodialisis yang terbagi menjadi kelompok perlakuan (dilakukan relaksasi Benson) dan kelompok kontrol (dilakukan perawatan rutin). Pengambilan sampel dengan *purposive sampling*. Penelitian ini dilakukan di Unit hemodialisis Rumah Sakit Islam Sultan Agung Semarang. Pasien pada kelompok perlakuan dilakukan teknik relaksasi Benson pada saat hemodialisis selama 4 minggu. Pengukuran insomnia dilakukan dengan menggunakan *insomnia severity index* pada kelompok perlakuan sebelum dan sesudah dilakukan relaksasi Benson. Pengukuran juga dilakukan pada kelompok kontrol. **Hasil.** Hasil uji statistik menggunakan *Marginal Homogeneity* terdapat perbedaan tingkat insomnia sebelum dan setelah dilakukan relaksasi Benson pada kelompok perlakuan ( $p = 0,000$ ). Hasil uji statistik dengan *Chi square* didapatkan bahwa relaksasi Benson efektif menurunkan tingkat insomnia pasien penyakit ginjal kronik yang menjalani hemodialisis ( $p = 0,002$ ). **Diskusi.** Teknik relaksasi Benson dapat menjadi salah satu alternatif intervensi keperawatan yang dilakukan untuk mengatasi insomnia.

**Kata kunci:** Relaksasi benson, insomnia, hemodialisis, penyakit ginjal kronik

### ABSTRACT

**Introduction.** Patients with chronic kidney disease who undergo hemodialysis experience sleep disturbances around 50-80%. Insomnia is said to have the highest prevalence in the population of patients' dialysis. This study aimed to determine the effectiveness of Benson's relaxation of the level of patients' insomnia with chronic kidney disease who undergo hemodialysis. **Methods.** The design of this study was quasi-experimental with pretest-posttest design with control group. The sample in this study was 42 hemodialysis patients were divided into treatment groups (conducted Benson's relaxation) and control group (performed routine maintenance). The sampling was purposive sampling. This research was conducted in the hemodialysis unit of Sultan Agung Islamic Hospital Semarang. Patients in the experimental group were treated with Benson's relaxation techniques during hemodialysis for 4 weeks. Insomnia measurement was done by using the insomnia severity index in the experimental group before and after Benson's relaxation. The measurements were also performed in the control group. **Results.** Results of statistical test using Marginal homogeneity showed that there were different levels of insomnia before and after Benson's relaxation in the experimental group ( $p = 0.000$ ). Results of statistical Chi square test showed that the Benson's relaxation was effective in lowering the level of patients' insomnia with chronic kidney who undergo hemodialysis ( $p = 0.002$ ). **Discussion.** Benson's relaxation technique is one of alternative nurse intervention to overcome insomnia.

**Key words:** Benson's Relaxation, insomnia, hemodialysis, chronic kidney disease

### INTRODUCTION

Chronic kidney disease (CKD) is pathophysiological process with diverse etiology, resulting in a progressive decline in kidney function and generally end up with kidney failure. National Kidney Foundation said chronic renal disease is kidney damage with high levels of glomerulus filtration (GFR),

60 ml/min/1.73 m<sup>2</sup> (Black, J.M., & Hawks 2014). If damage leads to reduced glomerulus filtration rate below 15 ml/min/1.73 m<sup>2</sup> and with the condition of uremia, the patients will undergo the end-stage of renal disease and needed hemodialysis as the treatment.

Data from the United State Renal Data System (USRDS, 2008), the prevalence of CKD in the United States increased by

20–25% annually. Nutrition Data Network (2007), the number of patients who suffer from kidney disease in Indonesia has reached one hundred and fifty thousand people and those who require renal replacement therapy are three thousand people (Firmansyah A.M 2010). The survey data of the number of CKD in Indonesia reached 30.7 million people, only 7,000 people who can perform dialysis therapy (Department of Health, 2009).

Hemodialysis is one of the renal replacement therapies which are mostly preferred by people with CKD. In principle, the treatment of hemodialysis is to replace the work of the kidneys that filter and remove metabolic waste and excessive fluid, help to balance certain chemicals in the body and help maintain the blood pressure, so patients will continue to experience various complications either from disease or from treatment, one of the complications which are often experienced by patients with CKD undergoing hemodialysis is a sleep disorder.

Sleep disturbances are experienced by at least 50–80% of patients who undergo hemodialysis. Sleep disturbances which are commonly experienced by patients are Restless Leg Syndrome (RLS), Sleep Apnoea (SA), Excessive Daytime Sleepiness (EDS). Insomnia is called to have the highest prevalence in the population of dialysis patients (Sabbatini M 2015). The incidence of insomnia in various studies varies in number due to differences in diagnosis, population characteristics and research methodology.

Insomnia is a sleep state that lasts less than 5 hours resulted in feeling tired and exhausted continuously throughout the day that lasts at least for 1 week. Insomnia is a state of inability to obtain adequate sleep, both the quality and quantity of the state of short tie sleep (Aziz Alimul 2006). Insomnia which patients with hemodialysis undergo will lead to decreased quality of life that will affect the survival of patients, so we need the right management which is suitable with the influencing factors (M.. Novak, L. Musci, C, C.M. Shapiro 2004).

Insomnia needs to get a proper intervention. The nurse's understanding

towards insomnia is an important part to give effective nursing health care and also needs the involvement of health professionals and the involvement of the patient's family. Benson introduced the relaxation response technique in which is a technique of treatment to relieve pain, insomnia or anxiety. This treatment is part of spiritual treatment. In this technique the treatment is very flexible and can be done with the guidance or mentor, and together or alone (Datak 2008).

This technique is an attempt to focus attention on a focus by calling the repetitive ritual sentences and eliminate disturbing thoughts. Benson's relaxation is a development of the relaxation response developed by Benson (Datak 2008). This relaxation is a combination of relaxation with religious beliefs espoused. In meditation there is also a method of meditation that involves belief factors that is transcendental meditation.

## **METHODS**

This research was a quasi experimental two-group pretest posttest design. This design used a comparison group (control group). In this research, the pre-test and post-test were conducted. The test was carried out by using measurement level of insomnia severity index.

The populations in this study were all patients with chronic kidney disease who undergo hemodialysis who experienced insomnia in Sultan Agung Islamic Hospital Semarang. Sampling (sampling) in this study was conducted with a purposive sampling method. Criteria for inclusion in this study were patients with hemodialysis twice a week, patients who underwent insomnia, experiencing neither cognitive nor psychological impairment, are willing to sign a consent form respondents. The number of samples in this study was 42 of which was divided into 2 groups: 21 for the experimental group and 21 for the control group. Benson's relaxation was performed in the treatment group during hemodialysis. Benson's relaxation was held for about an average of 20 minutes each time in four-week execution. Benson's relaxation was conducted

after the installation of vascular access. For the control group the routine treatment was given

during hemodialysis. The data were analysis with chi square test.

**RESULTS**

**Table 1.** Demographic Data (Age and Length Hemodialysis)

Characteristics of Respondents	Mean	Standart Deviation	Min – Max
<b>Age:</b>			
The experimental group	45.52	14.58	20-6
The control group	48.61	6.84	31-60
<b>Long hemodialysis:</b>			
The experimental group	18.04	12.01	4-44
The control group	7.61	8.89	2-45

**Table 2.** Demographic Data (Gender, Occupation, Education)

Demographic Data	Experimental group		The control group	
	n	%	n	%
<b>Gender:</b>				
Male	8	38.1	11	52.4
Female	13	61.9	10	47.6
<b>Education:</b>				
Primary	16	76.2	14	66.7
Secondary	3	14.3	5	23.8
Tertiary	2	9.5	2	9.5
<b>Occupation:</b>				
Work	5	23.8	6	28.6
Jobless	16	76.2	15	71.4

**Table 3.** The Level of Insomnia in The Experimental Group Before and After Benson's Relaxation (Marginal Homogeneity)

Level of Insomnia	The Experimental Group		P Value
	N	%	
<b>Pre test:</b>			
Not insomnia	0	0	0.000
Mild insomnia	2	9.5	
Moderate insomnia	13	61.9	
Severe insomnia	6	28.6	
<b>Post test:</b>			
Not insomnia	4	19	0.000
Mild insomnia	13	61.9	
Moderate insomnia	4	19	
Severe insomnia	0	0	

**Table 4.** Differences in The Level of Insomnia in The Experimental Group and Control Group Before and After Benson’s Relaxation (Chi Square Test)

Level of Insomnia	Experimental group		Control Group		P value
	n	%	n	%	
<b>Pre test:</b>					0,002
Not insomnia	0	0	0	0	
Mild insomnia	2	9.5	3	14.3	
Moderate insomnia	13	61.9	15	71.4	
Severe insomnia	6	28.6	3	14.3	
<b>Post test :</b>					
Not insomnia	4	19	0	0	
Mild insomnia	13	61.9	5	23.8	
Moderate insomnia	4	19	14	66.7	
Severe insomnia	0	0	2	9.5	

Results of statistical test using Marginal homogeneity shows that there are different levels of insomnia before and after Benson’s relaxation in the experimental group ( $p = 0.000$ ). Results of statistical Chi square test shows that the Benson’s relaxation is effective in lowering the level of patients’ insomnia with chronic kidney who undergo hemodialysis ( $p = 0.002$ ). Thus, it can be concluded that there are significant differences in the level of insomnia between the experimental group and the control group.

**DISCUSSION**

Insomnia in patients with chronic kidney disease who undergo hemodialysis occur due to restless leg syndrome, periodic limb movement, sleep apnea, metabolic factors including uremia, anemia, hypercalemia, bone pain and itching, anxiety, depression and disorders of circadian rhythm (Hanly 2013). This study shows that Benson’s relaxation which is conducted can lower the level of insomnia. This is in line with studies conducted by Rambod. M, Mohammadi. P.N, Pasyar N, Raffi F (2013). that Benson’s relaxation can improve the quality of sleep in patients with hemodialysis. Benson’s relaxation was give to the experimental group as an effort to focus attention on a focus by calling repeatedly - a repeated ritual sentence and eliminate disturbing thoughts. In this study, patients use ritual phrase “Ya Allah” repeatedly with the resignation to Allah SWT. Each respondent

commit by themselves. This relaxation technique is approximately done for about 20 minutes.

Benson Relaxation is a relaxation response method development which involves a person’s beliefs factor that can create an internal environment that can help a person achieve their health higher. Relaxation will activate the parasympathetic nerves and stimulates the body’s decline in activity. Relaxation effect can suppress the production of stress hormones and cortisol (Datak 2008). This relaxation technique also reduces dysfunction during the day, improve daily energy, improve the body function, reduce pain, anxiety and reduce the use of sleeping pills and tranquilizers (Rambod. M, Mohammadi. P.N, Pasyar N, Raffi F 2013).

Benson’s Relaxation subjectively is also felt by a respondent who states “this exercise helps me to sleep easily. At night when it is time to sleep, I do this relaxation techniques, and while pronouncing pronunciation” Ya Allah “without my realization I immediately sleep. Other respondents also expressed subjectively “Thank God, this way is sufficient to help me sleep, apart from that I also feel calmer while saying the phrase” Ya Allah “.

The results achieved in the experimental group showed a decrease in the level of insomnia. Benson’s Relaxation will activate the parasympathetic nerves and stimulates the body’s decline in activity. Beside the relaxation enable patients to suppress the production

of stress hormones and cortisol that will give them peace. This relaxation technique can also be used for stress management, reduce psychological stress, reduce the high stimulation which affects the sleep and improve the health (Rambod, 2012).

Benson's relaxation technique has not been widely applied in hemodialysis units because many nurses who do not know this relaxation technique. The nurse holds a strategic role in providing nursing health care to patients with chronic kidney disease who undergo hemodialysis. Hemodialysis nurses play roles in meeting the basic needs of patients, especially the needs of restful sleep. Hemodialysis nurse play roles in providing health education about relaxation techniques, teaching and motivating to perform this technique. In fact, the duties and responsibilities of nurses is quite heavy from preparing the machine, performing the installation of vascular access and connecting to the machine and monitoring patients during hemodialysis, recording nursing care documentation and sometimes performing administrative tasks. Benson's relaxation techniques is one intervention that is simple and easy to do for about 20 minutes making it possible to be done by nurses to help meet the needs of restful sleep.

## CONCLUSION

The Benson's relaxation is effective in lowering the level of patients' insomnia with chronic kidney who undergo hemodialysis.

## RECOMMENDATION

Benson's relaxation technique is one of alternative nurse intervention to overcome insomnia. Benson's relaxation technique is

effective and easy to do. Need do research with true experiment design to control all the factors that affects the incidence of insomnia with large number of samples.

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