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The Effect Benson Relaxation Technique with Anxiety In Hemodialysis Patients In Yogyakarta

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ABSTRACT

Hemodialysis is a treatment that must be done by patients with chronic renal failure. Hemodialysis can changes the various aspects of life of patients, and it cause anxiety. One of the method that can used to reduce anxiety is Benson relaxation techniques. This technique is a combination of relaxation and elements of religious beliefs espoused. To determine the effect of Benson relaxation techniques for anxiety in patients undergoing hemodialysis therapy. Quasi Experiment pre post test design with comparison groups with simple randomization techniques conducted, the number of respondents is 30 people were divided into intervention group (n = 14) were given relaxation Benson for 2 weeks every day at 6 am and 5 pm and the comparison group (n = 16) were not given the intervention. Anxiety measurements performed twice pretest and posttest with Analog Anxiety Scale (AAS). The average of respondent's anxiety pre dan post relaxation tecnic Benson in the intervention group 21,93 and 13,59. And in the comparison group 17,19 and 12,94. This study showed that there was a significant decrease in anxiety scores in the intervention group $p=0.001$ ($p<0.05$) and comparison group $p=0,014$ ($p<0,05$). The study showed that the intervention group obtained a average difference of 8.36, while in the control group obtained a average difference of 4.25 with p value 0.118 ($p> 0.05$). There are no significant differences in the average difference of anxiety in both groups. Benson relaxation techniques have no effect to the decrease anxiety scores of hemodialysis patients.

Keywords: Chronic renal failure, Benson relaxation, Anxiety Analog Scale.

ABSTRAK

Hemodialisis adalah pengobatan yang harus dilakukan oleh pasien dengan gagal ginjal kronis. Hemodialisis dapat mengubah berbagai aspek

kehidupan pasien, dan menyebabkan kecemasan. Salah satu metode yang dapat digunakan untuk mengurangi kecemasan adalah teknik relaksasi Benson. Teknik ini merupakan kombinasi relaksasi dan unsur-unsur keyakinan agama yang dianut. Untuk mengetahui pengaruh teknik relaksasi Benson untuk kegelisahan pada pasien yang menjalani terapi hemodialisis. Kuasi eksperimen pra desain post test dengan kelompok perbandingan dengan teknik pengacakan sederhana yang dilakukan, jumlah responden adalah 30 orang yang dibagi menjadi kelompok intervensi (n = 14) diberi relaksasi Benson selama 2 minggu setiap hari pada pukul 6 pagi dan 5 sore dan perbandingan kelompok (n = 16) tidak diberi intervensi. Pengukuran kecemasan dilakukan dua kali pretest dan post test dengan Analog Skala kecemasan (AAS). Rata-rata kecemasan responden pra Dan pasca relaksasi tecnic Benson pada kelompok intervensi 21,93 dan 13,59. Pada kelompok pembanding 17,19 dan 12,94. Studi ini menunjukkan bahwa ada penurunan yang signifikan dalam skor kecemasan pada kelompok intervensi $p = 0,001$ ($p < 0,05$) dan kelompok pembanding $p = 0,014$ ($p < 0,05$). Studi ini menunjukkan bahwa kelompok intervensi diperoleh perbedaan rata-rata 8,36, sedangkan pada kelompok kontrol diperoleh perbedaan rata-rata 4,25 dengan nilai $p = 0,118$ ($p > 0,05$). Tidak ada perbedaan yang signifikan dalam perbedaan rata-rata kecemasan pada kedua kelompok. teknik relaksasi Benson tidak berpengaruh terhadap nilai penurunan kecemasan pasien hemodialisis.

Kata kunci: Gagal ginjal kronis, Benson relaksasi, Kecemasan Analog Scale.

BACKGROUND

The prevalence of kidney failure in the world is quite high, with an estimated 8-16% of the total world population (Jha et. al, 2013). Based on the data in 2008, the total population of each continent, there were 17.03% of patients in United States, 19.96% in Europe and 11.5% in Asia - Australia (Zhang & Rothenbacher, 2008). While in Africa, the prevalence of renal failure was 3-4 times higher than in developed countries (Saraladevi, 2009). Those phenomenon in several continents are not much different from Indonesia. Based on the results of a community survey, it was found as much as 12.5% or approximately more than 25 million of the population

in Indonesia suffers from a decreased kidney function (Pernefri, 2012). Based on the results of preliminary studies conducted by the author in the Department Kesehatan Yogyakarta and PKU Muhammadiyah Hospital Yogyakarta, showed that there are 767 patients with kidney failure of the five regencies were hospitalized. During the period of August 2014, 319 patients were on regular hemodialysis in the hemodialysis unit of PKU Muhammadiyah Hospital in Yogyakarta.

Chronic renal failure patients undergoing hemodialysis treatment will experience changes in terms of physical, social, emotional, as well as cognitive. Those changes will effect to their quality of life (Rambod, 2013). Patients with long-term hemodialysis have some problems such as finance, unemployment, sexual drive lost, depression, and fear of death (Davidson, Reickmann, Rapp, 2005). The study conducted in the Mediterranean, got the result that as many as 3 (3.8%) hemodialysis patients did not experience anxiety, 38 (47.5%) experienced minor anxiety, and 39 (48.7%) had moderate to severe anxiety (Bossola et al, 2010). While a research conducted in Indonesia, got the prevalence of anxiety in hemodialysis patients as much as 77.8% (42 of 54 respondents) with various levels of anxiety (Luana et al, 2012). Another research showed that patients who had undergone hemodialysis for <1 month to 1 year, had a moderate to severe level of anxiety. Whereas patients who had undergone hemodialysis for 1 year to > 3 years, the rate is in the range of minor anxiety and no anxiety (Hidayat, 2007). The anxiety experienced by hemodialysis patients need an immediate treatment. The untreated anxiety leading to worsen patient health condition.

One non-pharmacological technique that can be used to reduce anxiety is relaxation techniques. Relaxation techniques can effectively decrease and prevent the psychological effects of stress (Johns, 2009). Among many relaxation techniques, Benson relaxation technique is one of the most convenient method. Benson relaxation technique is the development of methods of relaxation involving patient's confidence factor, focusing on certain words or sentence suttered repeatedly with a regular rhythm. This technique can reduce anxiety

in hemodialysis patients. It is similarly stated in the study titled Implementing Benson's Relaxation Training in Hemodialysis Patients: Changes in Perceived Stress, Anxiety, and Depression (Mahdavi et al, 2013). Instead of requiring high cost, this technique is easy to be conducted by the patients (Kolt and Lynn, 2007). Moreover, Benson relaxation technique can also improve patient's sleeping quality (Rambodet al, 2013) .

Research on the provision of Benson relaxation technique in reducing anxiety in hemodialysis patients are still rare in Indonesia, and has never been done in PKU Muhammadiyah Hospital Yogyakarta. Based on the description, the author uses the Benson relaxation technique to reduce anxiety in the study titled The Influence of Benson Relaxation Technique on the Patient's Anxiety in Hemodialysis Patients in PKU Muhammadiyah Hospital in Yogyakarta.

METHODS

This research is a quantitative Research using Quasi Experiment pretest and posttest design with comparison group. Observations are conducted twice, before and after the intervention in the intervention group, and before and after in the comparison group without intervention. The research is conducted in the hemodialysis unit PKU Muhammadiyah Hospital in Yogyakarta in January 2015. The total population is 319 people. Purposive sampling is used to determine the sampling groups by average of a lottery to determine the intervention group and the comparison group. The drawing is based on timing of hemodialysis, which is morning and afternoon. Sweepstakes is done by making two papers with morning and afternoon written on them, then each is folded and shuffled. The withdrawal is done with eyes closed, the first drawn paper is treated as the intervention group.

Table 1. Demographic Characteristics of Research Respondents on Hemodialysis Unit RS PKU Muhammadiyah Yogyakarta

No	Variable	Intervention		Control		p
		Frequency(n=14)	Percentage (%)	Frequency (n=16)	Percentage (%)	
1.	Gender					
	Male	7	50%	11	68,75%	0,296
	Female	7	50%	5	31,25%	
1.	Age (years)					
	26 - 35	0	0%	6	37,5%	0,121
	36 - 45	6	42,9%	4	25,0%	
	46 - 55	4	28,6%	4	25,0%	
	56 - 65	3	21,4%	1	6,3%	
	>65	1	7,1%	1	6,3%	
1.	Latest Education					
	Elementary	4	28,6%	4	25,0%	0,599
	Junior High	3	21,4%	2	12,5%	
	Senior High	6	42,9%	6	37,5%	
	College	1	7,1%	4	25,0%	
1.	Marital Status					
	Single	0	0%	5	31,3%	0,071
	Widower	1	7,1%	1	6,3%	
	Married	13	92,9%	10	62,5%	
1.	Duration of Hemodialysis					
	<1 tahun	6	42,9%	5	31,3%	0,510
	1 - 2 tahun	8	57,1%	11	68,8%	

Table 2. The Average of Respondent's Anxiety Pre and Post Relaxation Technic Benson in Hemodialysis Unit PKU Muhammadiyah Hospital of Yogyakarta

	Average \pm s.d		Minimum		Maximum	
	Pre	Post	Pre	Post	Pre	Post
Intervention	21,93 \pm 9,43	13,57 \pm 10,10	8,00	1,00	37,00	31,00
Control	17,19 \pm 7,07	12,94 \pm 7,85	7,00	3,00	29,00	30,00

Table 4. The Average Decrease of Anxiety Values on Intervention and Control Groups Respondents

	Average \pm s.d		Different Average Rerata \pm s.d	Confidence Interval 95%	p
	Pre	Post			
Intervention	21,93 \pm 9,43	13,57 \pm 10,10	8,36 \pm 7,78	3,86-12,85	0,001
Control	17,19 \pm 7,07	12,94 \pm 7,85	4,25 \pm 6,15	0,97-7,53	0,014

The inclusion and exclusion criteria are < 2 years dialysis period , experience a minor anxiety (score AAS 7-14) to severe anxiety (score AAS > 27), unaffected by other diseases (if the patients have hypertension and diabetes, the patients are included in the inclusion criteria , since hypertension and diabetes are the most common cause of kidney failure), having hemodialysis twice a week, listed as a patient at PKU Muhammadiyah Hospital in Yogyakarta who get spiritual music relaxation and spiritual support. While exclusion criteria is patients who use breathing aids, psychosis patient consuming sedative drugs, disobedient-patient (adherence value <80%), patients experienced an event that can cause anxiety, during the intervention process. After counting the number of samples, showed that 14 people are required for each group, but on the data retrieval researchers get 14 people in the intervention group and 16 in the comparison group.

The variables examined in this study are the dependent variable (free) which is a Benson relaxation technique, while the independent variable (dependent) is anxiety. To measure the anxiety of respondents in this study, researchers used Analog Anxiety Scale (AAS) questionnaires.

RESULTS AND DISCUSSION

Respondents in the study were patients who underwent hemodialysis in PKU Muhammadiyah Hospital and suitable with the inclusion criteria. Respondents were divided into 2 groups: the intervention group and the comparison group. The group division is based on the results of the lottery withdrawal. The intervention group consisted of patients having morning hemodialysis (at 7:00 to 12:00) and the comparison group consisted of patients who did hemodialysis during the day (at 12:00 to 15:00). Prior to the implementation of the research, the researchers collected the respondents data based on multiple variables such as gender, age, education, marital status, and duration of hemodialysis. The following is an overview of the demographic characteristics of the respondents, fully presented in Table 1.

Proportion in Table 1 for the variable gender is (p = 0.296), age (p = 0.121), the latest education (p = 0.599), marital status (p = 0.071), and duration of hemodialysis (p = 0.510). As we can see, it shows that the demographic characteristics of the intervention and the comparison group are the same.

Preview of the anxiety value of pretest and posttest relaxation, doing Benson Relaxation techniques to

intervention and comparison group, analyzing the average and deviation standard, as well as minimum and maximum values on the value of anxiety. The results can be seen in detail in Table 2.

Based on the data, showed that the average value of anxiety in the intervention group was 21.93, while in the comparison group, the average value of anxiety was 17.19. From these data, the pretest values in both groups have the same average anxiety category, i.e in the range

of values 15-27 or moderate anxious category. According to the theory, the moderate anxiety can be notified when someone starts having difficulty to concentrate, but he can process the information and overcome the problem. Moreover, when someone is experiencing moderate anxiety, he will be more focused on important things. Therefore, the attention will be focused on selective things so that he will able to do something with a more targeted (Stuart & Sundeen, 1998).

Table 5. Analysis of the Effect of Benson Relaxation Techniques Towards Anxiety in Hemodialysis Patients PKU Muhammadiyah Hospital in Yogyakarta

	n	Average \pm s.b.	Confidence Interval 95%	P
Pretest and posttest of intervention group	14	8,36 \pm 7,78	4,11 (-9,32-1,1)	0,118
Pretest and posttest of control group	16	4,25 \pm 6,15		

The posttest average of anxiety value in the intervention group was at 13.57, and 12.94 in the comparison group. Based on the category of AAS, both values are in the range of 7-14 or minor anxiety. Both data showed that the value of anxiety pretest and posttest in both groups decreased, namely from the range of 15-27 or moderate anxiety became of 7-14 or minor anxiety. According to the theory, minor anxiety can be marked by improvement on awareness and perception of the environment, but may provide motivation for someone to be more focus on learning, solving problems, thinking, acting, understanding and keeping himself. Minor anxiety can be caused by tension in daily life. This causes a person to be alert and improve his perceptions (Stuart & Sundeen, 1998).

The effects of Benson relaxation techniques for anxiety were analyzed using t-paired test. The results of the analysis are shown in Table 4. Based on the statistical analysis performed, the decreasing of anxiety in both groups is significant on the intervention group $p = 0.001$ ($p < 0,05$) and the control group $p = 0.014$ ($p < 0.05$).

Although the value of anxiety in both the intervention group with the provision of Benson relaxation techniques and the control group without Benson relaxation

techniques had significantly decreased, the respondents in the intervention group had a greater decrease in anxiety value as 8.36, whereas 4, 25 in the control group.

Although both in the intervention group with the provision of Benson relaxation techniques and the comparison group without Benson relaxation techniques had significantly decreased, but respondents in the intervention group had a greater decrease as 8.36, whereas 4, 25 in the control group.

THE RESULTS

In this study are different from another study regarding the provision of Benson relaxation techniques performed by Mahdavi et al., 2013. He stated that there was a significant decline in anxiety value in the intervention group, and none in the comparison group. The anxiety pretest value of the intervention group was 8.4 ± 3.1 and 7.1 ± 2.66 posttest with $p = < 0.001$. As for the control group, anxiety pretest value was 7.85 ± 3.43 and 8.2 ± 3.11 for posttest with $p = > 0.11$. This shows that Benson relaxation technique is able to reduce the level of anxiety, whereas none was found in this study.

The differences of results of this research with the research conducted by Mahdavi et al., 2013, might happened due to differences in the number and characteristics of respondents, place of the study, and time of intervention. The number of respondents in this study was 30 patients with an average age characteristics of 45.27, having had hemodialysis for < 2 years and non-illiterate patients were included. While the research in Mahdavi et al., 2013 showed that the number of respondents is 80 patients, with a average age characteristics of 47.98, having had hemodialysis for 5 years or more and 15 respondents were illiterate. This research was conducted at PKU Muhammadiyah Hospital in Yogyakarta, within 2 weeks of intervention, while research conducted by Mahdavi et al., 2013 was done within a month time of intervention at two hospitals in Iran which are Imam Khomeini and Fatemeh Zahra Hospital. The theory states that there are some factors affecting the anxiety. Those factors are maturity, educational status, physical state, types of personality, social, culture, environment, and gender (Tarwoto & Wartonah, 2003). Another theory states that in hemodialysis patients, the occurring anxiety related to the fear of death, the cost of treatment, and lifestyle changing (Levenson, 2011). Averagewhile, those factors are not explored in this study.

Another factor that can influence anxiety in hemodialysis patients is a threat to the integrity of which includes physiological inability or the reduced capacity to perform daily life activities as well as threat to the self-system. This system could endanger a person's identity, self-esteem and social functions. Respondent's data in relation to physiological inability and threats to the self system, are not included in this study as well as in the study conducted by Mahdavi et al., 2013, so that it cannot be compared.

Analysis using unpaired t test was performed to compare the difference in the pretest and posttest of anxiety value on both groups. The results of the analysis can be seen in Table 5.

The above table shows that the intervention group obtained a average difference of 8.36, while in the control group gained a average difference of 4.25 with

p value of 0.118 ($p > 0.05$). So, although there are differences in the average of anxiety values, it is not so significant in both groups.

The results in this study are different with the results of research conducted by Mahdavi et al., 2013. The study showed that Benson relaxation techniques significantly affected the decrease of anxiety ($p = 0.005$). While in this study, it is not significant. This is probably because of a shorter intervention time given to the intervention group, ie 2 weeks, while the research in Mahdavi et al., 2013, it was carried out for 1 month.

In addition, hemodialysis patients in PKU Muhammadiyah Hospital might already get the effect of routine relaxation treatment in the form of religious music playback as well as the clergyman assistance at the hospital. The research on the effect of reading the Quran to reduce anxiety showed that reading the Quran can effectively reduce anxiety ($p = 0.0002$) in hemodialysis patients in Iran. Quran mechanism can make the body become relaxed through the effects of Quran chanting verses sound. For Moslem, listened to Al Quran is easily to internalized (understand) but there is difficulties to explained (Babamohamadi et al, 2015).

Besides, spiritual support of the clergyman who regularly visits the patients on the morning and afternoon shift of Monday, Wednesday, Thursday and Saturday might help to increase the confidence of patients by reminding them to always pray and surrender themselves to God for everything that happened. Information on whether the research Mahdavi, et al., 2013 also include the routine treatment of religious music and clergyman visitation, were not mentioned by its publicity. Therefore, the comparison of those two things were unable to be done. CONCLUSION Based on these results, it can be concluded that Benson relaxation technique does not affect the decrease of anxiety value on hemodialysis patients in PKU Muhammadiyah Hospital Yogyakarta. The other obtained conclusions are:

1. The pretest anxiety value in both groups was in the middle category, with a average value of anxiety 21.93 in the intervention group and by 17.19 in the control group.

2. The posttest anxiety value in both groups experienced a light decline, with a average anxiety value of 13.57 in The intervention group and by 12.94 in the control group.
3. The difference of average between the anxiety value before and after getting Benson relaxation technique in both groups experienced a significant decline, with $p = 0.001$ in the intervention group, and $p = 0.014$ in the control group.

SUGGESTION

1. For Science

It is expected to produce more theory regarding Benson relaxation techniques and other relaxation techniques to reduce anxiety.

2. For hemodialysis patients

It is expected to perform independently Benson relaxation technique to reduce anxiety and make the body calmer, regarding that Benson relaxation technique is very easy to do and has many benefits.

3. For further research

It is expected to have more research on the influence of other relaxation techniques to decrease the anxiety value

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