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The Effect of Brandt Daroff Therapy on Rehabilitation in Vertigo Patients in Hospital Imelda Pekerja Indonesia Medan in 2017

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A B S T R A C T

Brandt Daroff method is one form of physical therapy or physical exercise vestibular to overcome vestibular disorders such as vertigo. Physical therapy is done to adapt themselves to disturbance of balance, Brandt Daroff Therapy and Epley Maneuver therapy is a vestibular rehabilitation as therapy that can be done independently at home for patients with Benign Paroxysmal Positional Vertigo. Physiologically, Brandt Daroff plays a role in the adaptation of the vestibular system and the Epley Maneuver plays a role in autolytic repositioning. Of the fifty subjects studied over the group of Epley and Brandt-Daroff maneuvers, each group of 25 people. Both homogeneous groups in terms of sex, age after follow-up showed that Brandt-Daroff therapy was 50% better than Epley's epilepsy. The results of research published by the Secretariat Department of Neurology FKUI (2016). Can be a reference to the success of an action, intervention, treatment or therapy performed. Research identifies. The Influence of Brandt Daroff Therapy on Rehabilitation on Salted Vertigo at Hospital Imelda Pekerja Indonesian Medan. The research design used was quasi-experimental research. With this research design is One group pre–Test and Post-test. The study respondents consisted of 30 vertigo clients and were taken using a nonprobability sampling technique. Data collection using observation instrument VAS (Visual Analog Scale) with paired t-test technique Pretest and Post-test. The results of this study indicate the presence of contact between Brandt daroff therapy on rehabilitation in vertigo patients at Hospital Imelda Pekerja Indonesia Medan. Analysis of paired t-test pre–Test and Post-test showed that at the level of significance p = 0,5 in.

Kata kunci:

Merek Daroff
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A B S T R A K

Metode Brandt Daroff merupakan salah satu bentuk terapi fisik atau latihan fisik vestibuler untuk mengatasi gangguan vestibular seperti vertigo. Terapi fisik dilakukan untuk menyesuaikan diri terhadap gangguan keseimbangan, Terapi Brandt Daroff dan terapi Epley Maneuver merupakan rehabilitasi vestibular sebagai terapi yang dapat dilakukan secara mandiri di rumah bagi pasien Benign Paroxysmal Positional Vertigo. Secara fisiologis, Brandt Daroff berperan dalam adaptasi sistem vestibular dan Manuver Epley berperan dalam reposisi autolitik. Dari lima puluh subjek yang diteliti selama kelompok manuver Epley dan Brandt-Daroff, masing-masing kelompok 25 orang. Kedua kelompok homogen dalam hal jenis kelamin, usia setelah tindak lanjut menunjukkan bahwa terapi Brandt-Daroff 50% lebih baik daripada epilepsi Epley. Hasil penelitian diterbitkan oleh Sekretariat Departemen Neurologi FKUI (2016). Dapat menjadi acuan keberhasilan suatu tindakan, intervensi, pengobatan atau terapi yang dilakukan. Penelitian mengidentifikasi. Pengaruh Terapi Brandt Daroff Terhadap Rehabilitasi Vertigo Asin Di Rumah Sakit Imelda Pekerja Indonesia Medan Desain penelitian yang digunakan adalah penelitian

eksperimen semu. Dengan desain penelitian ini adalah One group pre–Test Dan Post test. Responden penelitian terdiri dari 30 klien vertigo dan diambil dengan teknik nonprobability sampling. Pengumpulan data menggunakan instrumen observasi VAS (Visual Analog Scale) dengan teknik uji t berpasangan Pretest dan Post test. Hasil penelitian ini menunjukkan adanya kontak antara terapi Brandt daroff pada rehabilitasi pada pasien vertigo di Rumah Sakit Imelda Pekerja Indonesia Medan. Analisis uji t berpasangan pre-Test dan Post test menunjukkan bahwa pada taraf signifikansi p = 0,5.

INTRODUCTION

The Brandt Daroff method is a form of physical therapy or vestibular physical exercise to treat vestibular disorders such as vertigo. Physical therapy is done to adapt to balance disorders. Brandt Daroff exercise has advantages or advantages over other physical therapy or from pharmacological therapy, namely it can accelerate the healing of vertigo and prevent recurrence without having to take drugs. In addition, the Brandt Daroff exercise can improve the patient's quality of life and the patient does not have to go around looking for a doctor who can cure his vertigo. However, in addition to the above advantages, this method also has a weakness, namely this method should not be carried out immediately after the patient is given Epley maneuver or semont maneuver therapy (Bahrudin, 2013).

Vertigo exercise using the Brandt Daroff method can maximize the performance of three systems that function as a balance tool. According to information from Cambridge University Hospital (2014), Brandt Daroff has the advantage of reducing the stimulus response in the form of uncomfortable feelings and spinning sensations in the brain, and also helps reposition the crystals in the semicircular canals (Sumarliyah, 2011).

Brandt Daroff therapy and Epley maneuver therapy are vestibular rehabilitation as therapies that can be done independently at home for people with Benign Paroxysmal Positional Vertigo. Physiologically, Brandt Daroff plays a role in the adaptation process of the vestibular system and the Epley maneuver plays a role in otolith repositioning. Of the fifty research subjects divided into the Epley and Brandt-Daroff maneuver groups, each group was 25 people. Both groups were homogeneous in terms of gender, age after the procedure. The results showed that the Brandt-Daroff therapy was 50% better than the Epley maneuver therapy. research results published by the Secretariat of the Department of Neurology FKUI (2016).

Based on research that has been done previously stated that there are several exercises that are useful in cases of BPPV, namely: the Epley maneuver, the Semont maneuver, the Brandt – Daroff exercise, and the Log roll exercise. The Brandt Daroff exercise method is a rehabilitation method for cases of Benign Paroxysmal Positional Vertigo (BPPV) that can be done at home, in contrast to other exercise methods that must be done under the supervision of a doctor or medical personnel. The Brandt-Daroff training method is usually used when the side of BPPV is not clear (Kusumaningsih, 2015).

In this study using the Brandt Daroff method because this method can be carried out independently by vertigo sufferers / patients at home. This exercise is done gradually and carefully. The Brandt Daroff or Brandt Daroff Exercise method is commonly known as vertigo exercise which has been used since 1980 for physical therapy of vertigo. This vertigo exercise has the effect of increasing blood to the brain so that it can improve the function of the body's balance tool and maximize the work of the sensory system.

Vertigo is a sensation of movement or a sense of movement of the body such as rotation (twisting) without the sensation of actual rotation, the surroundings feel spinning or the body is spinning (Akbar, 2013). Vertigo itself comes from the Latin terms, namely vertere which means spinning, and igo which means condition. Vertigo can last only a few moments or can continue for hours or even days. According to Koelliker (2001), vertigo ranks third most frequently complained by patients. Vertigo affects all age groups, the incidence is 25% in patients over 25 years, and 40% in patients over 40 years, and is reported to be around 30% in the population over 65 years (Kesser and Gleason, 2011).

Benign Paroxysmal Positional Vertigo (BPPV) adalah gangguan vestibuler yangpaling sering ditemui, dengan gejala rasa pusing berputar diikuti mual muntah dan keringat dingin, yang dipicu oleh perubahan posisi kepala terhadap gaya gravitasi tanpa adanya keterlibatan lesi di susunan saraf pusat. Pasien dengan Benign Paroxysmal Positional Vertigo (BPPV) sering mengeluhkan rasa pusing berputar diikuti oleh mual, muntah dan keringat dingin sewaktu merubah posisi kepala terhadap gravitasi, dengan periode vertigo yang episodik dan berlangsung selama satu menit atau kurang (Edward dan Roza, 2014).

Benign Paroxysmal Positional Vertigo (BPPV) merupakan gangguan vestibular dimana 17-20% pasien mengeluh vertigo. Pada populasi umum, prevalensi BPPV yaitu antara 11 sampai 64 per 100.000 (prevalensi 2,4%). Dari kunjungan 5,6 miliar orang ke rumah sakit dan klinik di United State dengan keluhan pusing didapatkan prevalensi 17%-42% pasien didiagnosis Benign Paroxysmal Positional Vertigo (BPPV). Dari segi onset Benign Paroxysmal Positional Vertigo (BPPV) biasanya diderita pada usia 50-70 tahun. Proporsi antara wanita lebih besar dibandingkan dengan laki-laki yaitu 2,2 : 1,5 (Purnamasari, 2013).

Pada vertigo tipe sentral, angka terbanyak kejadian vertigo disebabkan oleh adanya lesi vaskuler, kemudian diikuti tumor, migrantvertigoneus, dan infeksi intrakranial. Sementara pada tipe perifer penyebab terbanyak adalah Benign Paroxysmal Positional Vertigo (BPPV) (83%), menierre disease (7,6%), paska trauma (7,6%) dan sisanya neuritisvestibularis. penelitian vertigo dari 12 klinik rawat jalan menunjukkan 50% pasien mengalami vestibulopati perifer seperti Benign Paroxysmal Positional Vertigo (BPPV), vestibulerneuritis, atau penyakit Meniere, dan penyakit serebrovaskuler mencapai 19% Menurut Delaney (2003)dalam Zapala (2012).

In a vertigo clinic in London, England, 17% of cases of Benign Paroxysmal Positional Vertigo (BPPV) were found

from all vertigo complaints. It is estimated that the incidence of Benign Paroxysmal Positional Vertigo (BPPV) in the horizontal canal is only 3%-12% per year with the most cases being canalolithiasis (75%) (Hain, 2009). (Cakir, 2006) in (Edward and Roza, 2014), stated that the prevalence of vertigo in Germany, aged 18 to 79 years was 30%, 24% assumed to be due to vestibular disorders. Research in France found 12 months later the prevalence of vertigo was 48% (Grill, 2013). Prevalence in America, vestibular disorders about 35% of the population aged 40 years and over (Grill, 2013). Patients who experience vestibular vertigo, 75% have peripheral vertigo and 25% have central vertigo (Chaker, 2012).

In Indonesia, the incidence of vertigo is very high, in 2010 from the age of 40 to 50 years around 50% which is the third most frequent complaint by patients who come to general practice, after headaches and strokes (Sumarilyah, 2010). Generally, vertigo is found in 15% of the total population and only 4%–7% are examined by a doctor (Sumarilyah, 2010). in the neurosurgery polyclinic of Siti Khodijah Hospital Surabaya as long as it occupies the fourth position after pain, headache, and stroke, and occupies the third position in the inpatient ward. The number of vertigo patients in 2010, 18 people in September, 22 in October, 16 in November and 20 in December (Fajar Tulus Widiantoro, 2010).

In general, Benign Paroxysmal Positional Vertigo (BPPV) involves the posterior semicircular canal with a resolution of more than 95% after canalith repositioning therapy. In recent years, there has been an increase in the reported incidence of horizontal canal BPPV, but the success rate of therapy is still low (<75%). This is due to an error in determining the location of the lesion and the type of Benign Paroxysmal Positional Vertigo (BPPV) of the horizontal canal. Approximately 50% of the causes of BPPV are idiopathic, head trauma (17%) followed by vestibular neuritis (15%), migraine, dental implants and ear surgery, can also be the result of a long sleeping position in postoperative patients or prolonged bed rest.

Based on a preliminary study conducted by the author on February 28, 2017 at Hospital Imelda Pekerja Indonesia Medan, data from medical records shows the number of Vertigo patients treated from January to December 2016 as many as 516 patients with an average of 43 patients per month. The results of interviews at Hospital Imelda Pekerja Indonesia Medan with 5 patients obtained data on patients complaining of dizziness with signs of vertigo symptoms.

From the description described above, the authors are interested in conducting a study entitled "The Effect of Brandt Daroff Therapy on Rehabilitation in Vertigo Patients at Hospital Imelda Pekerja Indonesia Medan in 2017.

METHOD

Research design

The type of research used is Quasy Experimental research without comparison. with the One Group Pre-Test and Post Test approach The design of this research is the One Group Pre Test and Post Test Design without using a comparison group (control), but in this study the first test (pre Test) which allows researchers to test the changes that occur after there is an experiment (program). This study aims to determine the Effect of Brandt Daroff Therapy on Rehabilitation in Vertigo Patients at Hospital Imelda Pekerja Indonesia Medan.

O X O
1 2
O1 : Pretest : before being given therapy
O2 : PostTest : after given therapy
X : intervention : given counseling

Population and Research Sample

The population in this study was Vertigo Patients who were hospitalized at Hospital Imelda Pekerja Indonesia Medan. With a total of 516 patients in 2016, the researchers took the population from the average number of 43 patients per month. The sample in this study was part of the Vertigo Patient at Hospital Imelda Pekerja Indonesia Medan, with a population of 43 per month. The sampling technique used in this study is Non-Probability Sampling with the Accidental Sampling method.

The sample criteria referred to in this study are:

a. Vertigo patients are hospitalized at Hospital Imelda Pekerja Indonesia Medan.
b. Patients who complain of dizziness and have signs of vertigo.

Location, Research Time and Research Reason

This research will be conducted at Hospital Imelda Pekerja Indonesia Medan. This research will be conducted in December 2016 – May 2017. The reason for the research was conducted at Hospital Imelda Pekerja Indonesia Medan because the number of patients with vertigo complaints is very high, namely 516 patients per year.

Measurement Aspect
Brandt Daroff Therapy Measurements

The measurement aspect of Brandt Daroff's therapy uses a measuring instrument in the form of a Visual Analog Scale (VAS) measurement observation sheet. From the respondents' observations, it can be categorized as 0 No Dizziness, 1-3 Mild Dizziness, 4-6 Moderate Dizziness, 7-9 Severe Dizziness, 10 Severe Dizziness Not Controlled, the answer to the question "that is" is given a score of 0 No Dizziness (0), 1- 3 Mild Dizziness (1), 4-6 Moderate Dizziness (2), 7-9 Severe Dizziness (3), 10 Severe Uncontrolled Dizziness (4).

Measurement of Changes After Administration of Brandt Daroff Therapy

The measurement aspect of Brandt Daroff's therapy uses a measuring instrument in the form of a Visual Analog Scale (VAS) measurement observation sheet. From the respondents' observations, it can be categorized as 0 No Dizziness, 1-3 Mild Dizziness, 4-6 Moderate Dizziness, 7-9 Severe Dizziness, 10 Severe Dizziness Not Controlled, the answer to the question "that is" is given a score of 0 No Dizziness (0), 1- 3 Mild Dizziness (1), 4-6 Moderate Dizziness (2), 7-9 Severe Dizziness (3), 10 Severe Uncontrolled Dizziness (4).

Data collection

a. Take a research permit from STIKes Imelda Medan.
b. Reply letter from Imelda Indonesian Workers Hospital in Medan.
c. There is a medical record at Imelda Indonesian Workers Hospital in Medan, that the number of inpatient Vertigo

patients was 516 in 2016 with an average of 43 from January to December 2016.

d. In this study, the data collection technique used the Visual Analog Scale (VAS) observation sheet.
e. Next, explain the procedure for filling out the observation sheet and give respondents the opportunity to ask questions.

Research Ethics

This research was conducted by considering research ethics to protect respondents. After obtaining research approval from an educational institution (STIKes Imelda Medan) and obtaining a research permit from RSU Imelda Workers Indonesia Medan, the researchers conducted research by emphasizing ethical considerations. (Polit & Beck, 2014) which include: 1. Informed Concent (Approval), 2. Anonymity (without a name), 3. Confidentiallity (Confidentiality)

Processing

After the data is collected, the next step is to process the data in such a way using a computer program (Notoatmodjo, 2010). The data processing steps are: 1. Editing, 2. Coding, 3. Entry, 4. Tabulatins

Univariate Analysis

This study aims to determine the frequency distribution and percentage of the influence of Brandt Daroff's therapy on rehabilitation of vertigo patients at Imelda Hospital for Indonesian Workers in Medan in 2017.

Bivariate Analysis

This analysis aims to determine the Effect of Brandt Daroff Therapy on Rehabilitation in Vertigo Patients at Imelda Indonesian Workers Hospital Medan in 2017. By using a paired T test pre-test (before therapy) and Post-test (after therapy) with a level of confidence (CI).) 95% and p value <0.05, it means the calculation result is significant (significant).

RESULTS AND DISCUSSION

Description of data

This research includes experimental research. The research data consisted of a pre-test and a post-test using the VAS (Visual Analog Scale) method. The research was conducted in December 2016 – May 2017.

This study raised the research variable, namely the independent variable The Effect of Brandt Daroff Therapy and the dependent variable, namely Rehabilitation in Vertigo Patients. Vertigo level data were obtained using VAS (Visual Analog Scale).

In this study, researchers obtained data from the results of pre-test and post-test conducted on clients at Hospital Imelda Pekerja Indonesia Medan. The pre-test is a test given to the client before being given Brandt Daroff therapy, while the post-test is carried out after the client has done Brandt Daroff therapy. Both of these tests serve to measure the effectiveness of Brandt Daroff's therapy program.

Characteristics of Respondents

The general characteristics of respondents that were explored and considered in this study included gender, educational background, employment status, length of illness, and age range. The complete data on the general characteristics of respondents are as follows:

Frequency Distribution of Respondents Characteristics Based on age, gender, education, occupation, length of illness at Hospital Imelda Pekerja Indonesia Medan 2017 (n=30)

No		Characteristics	f	%
1	Age	(17-25 Year)	1	3,3
		(26-35 Year)	12	40,0
		(36-45 Year)	15	50,0
		(46-55 Year)	2	6,7
2	Gender	Man	4	13,3
		Girl	26	86,7
3	Education	SD	2	6,7
		SMP	1	3,3
		SMA	15	50,0
		Perguruan Tinggi	12	40,0
4	Job Status	Pegawai negeri	12	40,0
		wiraswasta	12	40,0
		mocok-mocok	6	20,0
5	long time sick	1-5 Day	7	23,3
		6-10 day	18	60,0
		11-15 day	5	16,7
	Amount (n)		30	100

Based on table 4.1, it can be seen that in terms of gender, the proportion of male and female sex in this study is more dominant in women with a percentage of 24 or 86.7%. In terms of educational background, most or 50% of respondents have a high school background.

Judging from their employment status, most or 40% of respondents are known to be civil servants and 40% are entrepreneurs. In terms of duration of illness, most or 60% of respondents are known to have experienced vertigo for more than 6 to 10 days. As for the age range, the largest age range group is the age range of 36-45 years with a percentage of 50%.

Prior to Brandt Daroff Therapy for Vertigo Patients at Imelda General Hospital, Medan, Indonesia in 2017

Table 4.2
results before Brandt Daroff therapy (Pre-Test)

	Pre-Test Eksperimen
N	30
Valid	0
Missing	7,50
Mean	7,00
Median	7
Mode	0,974
Std. Deviation	6
Minimum	9
Maksimum	

The results of calculations using SPSS 24.00 on the data before treatment (pre-test) obtained a valid sample of 30, the mean score = 7.50, the mean = 7.00, the standard deviation = 0.974, the minimum value = 6 and the maximum value = 9.

The frequency distribution of scores before therapy (pre-test) can be seen in the following table

Tabel 4.3
Distribution of score frequency before therapy (pre-test).

No.	Kelas interval	Frekuensi	Frekuensi relatif
1	Light	4	13,3%
2	Medium	13	43,3%
3	Weight	7	23,3%
4	Not controlled	6	20,0%
Amount		30	100%

Based on the table and histogram above, the majority of the frequency of Pre-Test vertigo with moderate scale were 13 clients or 43.3%.

After Brandt Daroff Therapy was carried out on Vertigo Patients at Hospital Imelda Pekerja Indonesia Medan in 2017

Table 4.4
results after Brandt Daroff therapy (Post-Test)

	Post-Test Eksperimen
N	30
Valid	0
Missing	2,00
Mean	2,00
Median	2
Mode	0,788
Std. Deviation	1
Minimum	3
Maksimum	

The results of calculations using SPSS 24.00 on the data after treatment (post-test) obtained a valid sample size of 30, the mean score = 2.00, the mean = 2.00, the standard deviation = 0.788, the minimum value = 1 and the maximum value = 3.

The frequency distribution of scores after therapy (post-test) can be seen in the following table:

Tabel 4.5
Distribution of score frequency after therapy (post-test).

No.	Kelas interval	Frekuensi	Frekuensi relatif
1	light	9	30%
2	Light	12	40%
3	Light	9	30%
	Total	30	100%

Results of Brand Daroff Therapy for Vertigo Patients at Hospital Imelda Pekerja Indonesia Medan in 2017

Table 4.6
Brandt Daroff therapy results (Post-Test)

	Post-Test Eksperimen
N	30
Valid	0
Missing	2,00
Mean	2,00
Median	2
Mode	0,788
Std. Deviation	1
Minimum	3
Maksimum	

The results of calculations using SPSS 24.00 on the data after treatment (post-test) obtained a valid sample size of 30, the mean score = 2.00, the mean = 2.00, the standard deviation = 0.788, the minimum value = 1 and the maximum value = 3.

Tabel 4.7
Frequency distribution of therapy outcome scores (post-test)

No.	Kelas interval	Frekuensi	Frekuensi relatif
1	Light	30	100%
2	Medium	0	0%
3	Weight	0	0%
4	Not controlled	0	0%
Amount		30	100%

Based on the results above, after therapy (Post-test) all clients or 100% experienced a decrease in vertigo levels with significant results, namely with results (Post-test) mild vertigo levels.

Analysis Prerequisite Test

The prerequisite analysis test carried out before conducting the prerequisite analysis used in this research is the Normality Test. The results of the analysis prerequisite test are presented as follows:

Normality test

Normality test was conducted to test whether all variables were normally distributed or not. Normality test using the Shapiro-Wilk formula in calculations using SPSS 24.00. to know whether it is normal or not is if sig > 0.05 then normal and if sig < 0.05 it can be said to be abnormal.
The calculation results obtained are as follows:

Tabel 4.8
Summary of Normality Test

No.	Kelompok	Sig	Kesimpulan
1	Pare-test	0,06	Normal
2	Post-test	0,06	Normal

Based on the table above, it can be seen that the Pre-test and Post-test data from Brandt Daroff's therapy have a sig value > 0.05, so it can be concluded that the data group is normally distributed.

Hypothesis test

The analysis used is the T test with the help of SPSS 24.00 which can be explained in detail as follows:

a. T test pre-test and Post-test

The pre-test and post-test t-test aims to determine whether there is a decrease in the score. The conclusion of the study was significant 5% and p value <0.05. The summary of the pre-test and post-test T-test is shown in the following table:

Tabel 4.9
summary of the results of the pre-test and post-test paired T-test

Kelas	Rata-rata	t_{hitung}	t_{tabel}	P
Pre-test	7,50	19,185	1,570	0,000
Pre-test	2,00			

Based on the table above, the average Pre-Test score is 7.50 and the Post-test average is 2.00, so it has a short decline of 5.50.

DISCUSSION

Research result

Prior to Brandt Daroff therapy on patients at Hospital Imelda Pekerja Indonesia Medan used the VAS (Visual Analog Scale) method.

Based on the results of the t test, it is known that the average value before therapy (pre-test) is 7.50 after therapy (Post-test) is 2.00, so the decrease is 5.50. Furthermore, based on the t-test, the calculated t-value was 19.185. The value of ttable with df 29 at a significant rate of 5% is 1.570. Therefore, tcount > t table (19.185-1.570) and the value is significantly smaller than 0.05 (0.00<0.05) so it can be stated that there is a significant decrease in the score of Brandt Daroff therapy in vertigo patients.

VAS (Visual Analog Scale) is a measuring tool that is applied in carrying out Brandt Daroff therapy. The process of giving therapy using standard VAS (Visual Analog Scale). Where has a role in measuring the level of vertigo in patients at Hospital Imelda Pekerja Indonesia Medan.

Before doing therapy, each client is given an example of Brandt Daroff therapy, then the client is asked to do therapy and the client is asked to determine the vertigo scale using the VAS (Visual Analog Scale) which has been given a score of 1 to 10, how the changes were felt before the Brandt Daroff therapy and at Finally, the client can state how severe the vertigo felt by the client before therapy.

While the client is doing Brandt Daroff therapy, the nurse stays in the room to monitor the patient who is doing Brandt Daroff therapy to see if the client can do the therapy properly. If the client has difficulty, the nurse will assist the client in carrying out the Brandt Daroff therapy. After therapy is complete, the client is asked to re-measure the level of vertigo he feels.

After Brandt Daroff therapy on patients at Hospital Imelda Pekerja Indonesia Medan used the VAS (Visual Analog Scale) method.

Based on the results of the T test, it is known that the average pre-test value is 7.50 after the Post-test is 2.00, so the decrease is 5.50. Furthermore, based on the T test, the calculated T value was 19.185. The value of T table with df 29 at a significant rate of 5% is 1.570. Therefore, T count > T table (19.185-1.570) and the value is significantly less than 0.05 (p = 0.000 <0.05) so that it can be stated that there is a significant decrease in the score of Brandt Daroff therapy in vertigo patients.

After the pre-test measurement the nurse guides the client to do Brandt Daroff therapy then the nurse again asks the level of vertigo experienced by the client after Brandt Daroff therapy.

Before and after Brandt Daroff therapy was performed on patients at Hospital Imelda Pekerja Indonesia Medan using the VAS (Visual Analog Scale) method.

Based on the results of the T test, it is known that the average Pre-Test value is 7.50 after the Post-Test is 2.00, so the decrease is 5.50. Furthermore, based on the T test, the calculated T value was 19.185. The value of T table with df 29 at a significant rate of 5% is 1.570. Therefore, T count > T table (19.185-1.570) and the value is significantly less than 0.05 (p = 0.000 <0.05) so that it can be stated that there is a significant decrease in the score of Brandt Daroff therapy results in vertigo patients.

Before doing Brandt Daroff therapy, the client is asked to state the level of vertigo by using a VAS (Visual Analog Scale) measuring instrument which has been given a score of 1 to 10. After the Pre-Test measurement, the nurse guides the client to carry out Brandt Daroff therapy then the nurse again asks the vertigo level. experienced by clients after Brandt Daroff therapy.

CONCLUSIONS AND SUGGESTIONS

Based on the results of research and discussion, this study concludes that:

1. Most of the vertigo clients at Hospital Imelda Pekerja Indonesia Medan have moderate vertigo levels with a percentage reaching 43.3%
2. There is a significant effect between Brandt Daroff therapy and rehabilitation for vertigo patients at Imelda General Hospital, Medan, Indonesia. The results of the t-test show a significant value (p) of 0.000. A significance value below 0.05 indicates that there is a significant effect between the variable Brandt Daroff therapy and the rehabilitation variable in vertigo patients. A decrease of 5.50 indicates that Brandt Daroff therapy provides very good changes in vertigo sufferers.

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