Health Research Journal, 167-173
Volume 1 Number 5 February 2024
URL: https://jurnal.cakrabirawamedia.com/index.php/hrj/

ISSN 2988-5469 (Print) 2988-3075 (Online)

The Mangaran Community Health Center Vertigo Symptom Reduction is Affected by Epley Maneuver Training

Siti Yumaroh
Puskesmas Desa Miau Baru, Kabupaten Kutai Timur, Provinsi Kaltim, Indonesia
*Email: sitiyumaroh@gmail.com

ABSTRACT

Vertigo is a dizziness-related condition that gives the erroneous impression that something is moving or spinning around the dizziness sufferer. A person may potentially have a quick onset of this disease. The purpose of this study is to ascertain whether training in the Epley maneuver can lessen vertigo symptoms. One type of design that is utilized in conducting research procedures is called research design. In this study, there is just one group participating in the pre- and post-test phases of the pre-experimental design. Thirty respondents that were chosen at random from the population of thirty made up the sample. According to the study's findings, Vertigo Symptoms, which was administered to 30 respondents overall, produced an average score of 25.77 before the Epley Maneuver Exercise.

Keywords: epley, maneuver, symptoms, vertigo

BACKGROUND

Vertigo is a kind of "dizziness" that is unquestionably the illusion of movement. It is most commonly experienced as the sensation that the body is spinning against the surroundings or that the surroundings are spinning in the opposite direction. This ailment is a crucial sign of a vestibular system problem and can also be a sign of labyrinthine abnormalities. Vertigo, however, frequently indicates a problem with the digestive system (drugs, hypotension, endocrine disorders, etc.) (Wahyudi, 2012). According to Gananca et al. (2015), some of the movements that most frequently result in clinical signs of vertigo are lying down or rising from a lying posture, assuming a lateral position of dorsal decubitus, and hyperextension of the head.

According to the findings of the preliminary investigation conducted on October 28, 2021, there were 36 episodes of vertigo between January and September of the same year. Women made up the majority of patients with vertigo—22 instances among them, compared to 14 cases among men (Mangaran sub-district health center, 2021).

Sixty-eight percent of women suffer from vertigo, which is typified by abrupt episodes of spinning that culminate in hurting ears. The majority of these symptoms are brought on by viruses, trauma, and idiopathic reasons. Even when the patient's condition gets better on its own without therapy, the patient still experiences uncomfortable vertigo symptoms for a few weeks or months, increasing the risk of falls or other mishaps. Vestibucosuppressant medications can temporarily relieve vertigo symptoms in certain individuals, but they cannot address the underlying cause of vertigo. These medications have side effects, including drowsiness and dizziness (Waqar Khan et al, 2017).

The Epley maneuver is a therapy by positioning the patient in a sitting position and then

positioning the head tilted 45 degrees laterally. Then the patient is positioned to sleep or quickly supine with the head hanging 20 degrees over the end of the bed. Then observe the patient's eyes with the head slightly lowered for 30 minutes. The Epley maneuver is repeated in the opposite direction, and look for involuntary pupillary movements towards the lower face (Pereira et al, 2010).

METHODS

Pre-experimental, one group pre-post test design characterizes the research methodology. The 34 patients who visited in May 2022 with vertigo symptoms made up the study's group. In this study, incidental sampling was the method of sampling.

Research instruments are equipment or facilities that researchers use to gather data in order to facilitate their work and produce better, more thorough, and organized results that are simpler to interpret (Notoatmodjo, 2010). The Vertigo Symptom Scale-Short Form (VSS-SF) instrument questionnaire, or the shortened version of the vertigo symptom scale, was the only questionnaire utilized in the study. There are fifteen question items in the questionnaire. There are alternatives in this questionnaire. Never, sometimes, a few times, frequently (every week), and frequently (almost daily).

Since the data for this study were obtained as ratios, computerized data analysis will be performed once the data has been gathered to evaluate the hypothesis. In order to investigate the claim that doing Epley maneuvers can lessen vertigo symptoms, a study was conducted. The Windows SPSS 16 statistical software was utilized to perform the paired t test. If the data distribution was normal, the paired t test was applied; if not, the Wilcoxon test was used. The researcher came at the following conclusion on the research findings: There is a correlation if the p value is less than 0.05 and not more than 0.05.

RESULTS

Characteristics of respondents by age group

Table 4.1. Frequency Distribution of Respondent Characteristics, Based on Age of Respondents

No	Age (Years)	Frequency (f)	Percentage (%)
1	25 – 40	12	40
2	41 - 56	18	60
	Amount	**30**	**100**

Source: primary data, 2022 questionnaire

Based on table 4.1, it is found that the majority of respondents are aged 41 - 56 years, namely 18 respondents (60%).

Characteristics of respondents based on gender

Table 4.2. Frequency Distribution of Respondent Characteristics, Based on Respondent Gender

Source: primary data, 2022 questionnaire

No	Gender	Frequency (f)	Percentage (%)
1	Man	14	46,7
2	Women	16	53,3
	Amount	**30**	**100**

Based on table 4.2, it was found that the majority of respondents' gender was female, namely 16 respondents (53.3%).

Respondent characteristics based on experience/history of going to the Community Health Center.

Table 4.3. Frequency Distribution of Respondent Characteristics, Based on Historical Experience of Visiting Community Health Centers

No	History to PKM	Frequency (f)	Percentage (%)
1	Often	16	53.3
2	Not often	14	46.7
Amount		**30**	**100**

Source: primary data, 2022 questionnaire

Based on table 4.3, it was found that the majority of respondents had a history of frequent visits to the Community Health Center, namely 16 respondents (53.3%).

Cross tabulation of Respondent Characteristics based on age with characteristics based on gender.

Table 4.4. Cross tabulation of Respondent Characteristics, Based on age and gender

Age	**Gender**		**Amount**
	Man	Women	
25-40	4 (33.3%)	8 (66.7%)	12 (100%)
41-56	10 (55.6%)	8 (44.4%)	18 (100%)
Total	14 (46.7%)	16 (53.3%)	30 (100%)

Based on table 4.4, it was found that the majority of respondents were female, 16 (53.3%) and the majority age was 41-56, 18 respondents.

Variable Characteristics

Characteristics Based on Vertigo Symptoms

Table 4.4 Distribution of Vertigo Symptom Measurement Results

Vertigo Symptoms	N	Mean ± SD	Median	Modus
Pretest	**30**	**25.77**	**26.0**	**27**

Source: Primary Data, 2022 Questionnaire

Based on table 4.4 above, it shows that the symptoms of vertigo before being given the Epley Maneuver exercise with a total of 30 respondents produced an average value of 25.77.

Characteristics Based on Vertigo Symptoms

Table 4.5. Distribution of Vertigo Symptom Measurement Results

Vertigo Symptoms	N	Mean ± SD	Median	Modus
Postest	**30**	**17.93**	**18.0**	**18**

Source: Primary Data, 2022 Questionnaire

Based on table 4.5 above, it shows that the symptoms of vertigo after being given the Epley Maneuver Exercise with 30 respondents produced an average value of 17.93

Statistical Test Results

To determine the Paired T-Test analysis test, a data normality test was first carried out. The Effect of Epley Maneuver Training on Reducing Vertigo Symptoms obtained the following results:

	Shapiro-Wilk	
Vertigo Symptoms	**N**	**Sig**
Pretest	**30**	**0,046**
Postest	**30**	**0,215**

Source: Primary Data, 2022 Questionnaire

The data normality test results from the SPSS 16 results show that the Shapiro-Wilk column has a sig score of 0.046<0.05 and a post score of 0.215>0.05 because the pretest score is less than 0.05. Since there are fewer than 50 respondents, it can be concluded that the data normality test is not normal and the Paired T-Test cannot be conducted. Using a non-

parametric test, such as the Wilcoxon Signed Ranks Analysis Test, is the next available option.

To determine the effect of Epley maneuver training on reducing vertigo symptoms at the Mangaran Community Health Center, Situbondo district, the following analysis results were obtained:

Table 4.6. Distribution of Vertigo Symptom Measurement Results

Vertigo Symptoms	N	Mean ± SD	Median	Modus	P
Pretest	**30**	25.77	26.00	27	0.000
Postest	**30**	17.93	18.00	18	

Source: Primary Data, 2022 Questionnaire

Table 4.6 above illustrates the findings of the measurement analysis of the Wilcoxon Signed Ranks Test Epley Maneuver Training Test following the application of the simulation method with a total of thirty respondents. All respondents experienced a decrease in scores (skorpost<="0.05."

We may say that H1 is accepted, indicating that there is a benefit to Epley maneuver training in terms of less vertigo.

DISCUSSION

Knowing the Symptoms of Vertigo Before Being Given Epley Maneuver Training

According to the study findings in table 4.4 above, vertigo symptoms, which included 30 respondents overall, had an average score of 25.77 before to receiving the Epley Maneuver Exercise. Aside from this, table 4.2 reveals that, with 16 responses, female respondents have the highest frequency of vertigo symptoms in their past.

According to Harsono (2008), the hypothesis states that the symptoms of vertigo vary based on one's prior experience with the symptoms and the treatment that was administered. Disorientation (poor observation of the environment) or movement hallucinations, which can manifest as a sensation of spinning or linear movement, are symptoms of vertigo. As a subjective awareness of disruptions in the equilibrium system, vertigo typically manifests as a tilted or rotating sensation, or as the perception that objects in their environment are moving (Harsono, 2007). This is especially true when the vestibular system is compromised. Vertigo is often defined as disorientation (disordered observation) of a space or movement hallucinations, which can take the form for respondents, the symptoms of vertigo are a disease that can be characterized by dizziness spinning in the surrounding environment which can appear suddenly or can occur repeatedly, as in the results of research that the highest frequency value of vertigo symptoms is 27, because there are several things that can influence the level of vertigo symptoms. Individuals include activities that are too strenuous and how to deal with vertigo symptoms. Vertigo symptoms are a recurring disease. The level of vertigo symptoms depends on the vertigo symptoms that occur.

Based on the results of the study above, the respondents who experienced the most symptoms of vertigo were female with an average value of 25.77. data on the characteristics of respondents based on gender, the percentage of women in the population and the sample taken is dominated by women. This shows that the incidence of vertigo is greater in women than men and is in accordance with the results of research conducted by Neuhauser, et al. (2008) which shows the incidence ratio of vertigo in one year, the ratio between men and women is 1:2.7.

Knowing the Symptoms of Vertigo After Being Given Epley Maneuver Training

Based on table 4.5 above, it shows that the symptoms of vertigo after being given the Epley Maneuver Training with 30 respondents produced an average value of 17.93.

The Epley maneuver exercise is given to reduce vertigo dizziness. The Epley maneuver is

vestibular rehabilitation as an independent exercise therapy at home for sufferers of benign paroxysmal positional vertigo (VPPJ) which uses an integrated sensory system (Sari, 2016).
Waleem, et al. (2008), In research results, the success rate of the Epley maneuver after 1 week was 63.6%, which increased to 72.7% after 2 weeks. A meta-analysis conducted by Prim-Espada,et al.(2010), On the effectiveness of the Epley maneuver in benign paroxysmal positional vertigo using a critical review of the medical literature concluded that patients who had the Epley maneuver performed had six and a half times more likely symptoms. Their clinical outcomes improved compared with the control group of patients.
The effectiveness of the Epley maneuver in the treatment of vertigo was assessed in a study of 62 patients conducted by Khatri, et al. (2007). Patients were selected based on symptoms of positional vertigo and a positive Dix-Hallpike test. At the end of 1 month patients were assessed subjectively by visual analogue scale (VAS) and objectively by Dix-Hallpike position test. On VAS, 85.7% of patients had complete resolution of BPPV symptoms in both groups. Objectively, 88.2% did not have positional nystagmus after 1 month in the first group, while in the second group the Epley maneuver 86% had effective results at 1 month of therapy.
According to Gaur, et al. (2015) in conclusion the Epley maneuver is more effective than drugs not only in treating the condition but also in preventing recurrence. This maneuver provides relief among the majority of case patients during their first visit. Those treated with medications required more visits than those treated with Epley maneuver exercises. The Epley maneuver is considered a safe and effective procedure for treating benign paroxysmal positional vertigo in the majority of patients.

Analyzing the Effect of Epley Maneuver Training on Reducing Vertigo Symptoms

Based on the research results, it was found that there was an effect of Epley maneuver training on reducing vertigo symptoms. With the Wilcoxon Signed Rank Test SPSS 16 test, the analysis results show □ = 0.000, so that □= 0.000 < □ = 0.05. It can be concluded that H1 is accepted, meaning that there is an influence of the Epley Maneuver Exercise on reducing vertigo symptoms.
The Epley maneuver is vestibular rehabilitation as an independent exercise therapy at home for sufferers of benign paroxysmal positional vertigo (VPPJ) that uses an integrated sensory system. The Epley Maneuver Exercise was developed by Radtke11 as an independent exercise that modifies position. Canalith repositioning therapy introduced by JM Epley was then compared with Brandt Darroff's exercises (Sari et al., 2016). The Epley maneuver is a therapy by positioning the patient in a sitting position and then positioning the head tilted 45 degrees laterally. Then the patient is positioned to sleep or quickly supine with the head hanging 20 degrees over the end of the bed. Then observe the patient's eyes with the head slightly lowered for 30 minutes. The Epley maneuver is repeated in the opposite direction, and the pupil moves involuntarily towards the lower face (Pereira et al., 2010).
The Epley Maneuver exercise is here as an alternative therapy to reduce the symptoms of vertigo that are often experienced by patients and the Epley Maneuver exercise is very easy to apply by anyone without any special safeguards or experience. With the ease of carrying out these exercises, respondents will not experience difficulties when doing them alone at home or without a medical team. This is shown by the research results that there is an influence of the Epley Maneuver Exercise on reducing vertigo symptoms.
The Epley Maneuver exercise can be applied as an intervention to reduce the occurrence of vertigo symptoms in patients. Because this can help respondents forget about their dizziness. Nurses should not only treat the respondent's illness with medication but can also provide alternative therapy that is easy and safe for the patient, such as balance exercises, one of which should not be ignored. However, when providing this intervention, existing conditions and situations must be taken into account. If possible it can be done.

CONCLUSION

The following conclusions might be made in light of the research findings about the effectiveness of Epley maneuver training in easing vertigo symptoms: Patients experiencing vertigo symptoms prior to receiving instruction The average value of the Epley maneuver is 25.77. The average value of vertigo symptoms following Epley Maneuver Exercise therapy treatment was 17.93. At the Mangaran Community Health Center in Situbondo Regency, Epley Maneuver Training has been shown to have an effect on symptom relief from vertigo. $0.000 < \alpha = 0.05$ for p.

REFERENCES

Alimul A.H, (2007). Metode Penelitian dan Teknik Analisa Data, Salemba Medika, Jakarta.

Alimul A.H, (2007). Pengantar Konsep Dasar Keperawatan, Edisi 2, Salemba Medika, Jakarta.

Alimul A.H, (2009). Metode Penelitian dan Teknik Analisa Data, Salemba Medika, Jakarta.

Arikunto. (2010). Prosedur penelitian suatu pendekatan praktik, Jakarta: Rineka Cipta.

Bittar et al. (2011). Benign Paroxysmal Positional Vertigo: Diagnosis and Treatment. International Tinnitus Journal.

Gananca, Fernando F. Simas, Ricardo. Gananca, Mauricio M. Korn, Gustavo P. Dorigueto, Ricardo S. (2015). Is it important to restrick head movement afeter Epley maneuver?. Brazil. UNIFESP.

Grill E., Muller M., Brantdt M., (2013). Vertigo and Dizziness: challenges for epidemiological research. OA Epidemiology.

Hidayat, (2009). Metode Penelitian Keperawatan dan Teknik Analisis Data. Salemba Medika, Surabaya.

Harsono. (2007). Kapita Selekta Neurologi Edisi kedua. Yogyakarta. Gadjah Mada University Press.

Kelana. K. D. (2011). Metodologi Penelitian Keperawatan (Pedoman Melaksanakan dan Menerapkan Hasil Penelitian), 2011. CV Trans Info Media.

Kusumaningsih, Widjajalaksmi. Mamahit, Ardhana. Bashiruddin, Jenny. Alviandi, Widayat. Wardhani, Retno Asti. (2015). Pengaruh latian Brandt Daroff dan modifikasi manuver Epley terhadap vertigo posisi paroksimal jinak. Jakarta. ORLI.

Nursalam, (2008). Konsep dan Penerapan Metodologi Penelitian Ilmu Keperawatan, Salemba Medika, Jakarta.

Nursalam, (2009). Konsep dan Penerapan Metodelogi Penelitian Ilmu Keperawatan. Pedoman Skripsi, Tesis, dan Instrumen Penelitian Keperawatan, PT Salemba Medika, Jakarta.

Nursalam, (2013). Konsep dan Penerapan Metodelogi Penelitian Ilmu Keperawatan. Pedoman Skripsi, Tesis, dan Instrumen Penelitian Keperawatan, Edisi ke 2 PT Salemba Medika, Jakarta.

Notoadmodjo, (2010). Metodologi Penelitian Kesehatan, PT Rineka Cipta, Jakarta.

Pereira, Alcione B. Santos, Juliana N. Volpe, Fernando M. (2010). Effect of Epley's maneuver on the quality of life of paroxismal positional benign vertigo patient. Brazil. BJORL.

Sari et al., (2016). Perbedaan Pengaruh Terapi Reposisi Kanalit dan Modifikasi Manuver Epley Terhadap Vertigo Posisi Paroksimal Jinak di RSUD DR. Soediran Mangun Sumarso Wonosari.

Sopiyudin. D.M. (2014). Statistik untuk Kedokteran dan Kesehatan Deskriptif, Bivariat dan Multivariat. Epidemiologi, Indonesia : Jakarta.

Sugiyono. (2007). Metode Penelitian Kuantitatif, Kualitatif, dan R&D: Bandung: Alfabeta.

Sugiyono, (2011). Metode Penelitian Kuantitatif, Kualitatif, dan R&D: Bandung: Alfabeta.

Sumarliyah, E., (2011). Jurnal Penelitian Pengaruh Senam Vertigo Terhadap Keseimbangan Tubuh Pada Pasien Vertigo di RS Siti khotijah Sepanjang. Surabaya. Media Informasi Ilmiah.

Wahyudi. (2012). Vertigo. Jakarta. Medical Departement.

Waleem, Sheikh S. Malik, Sher M. Ullah, Saeed. Hassan, Zaheer U. (2008). Office Management of Benign Paroxymal Positional Vertigo With Epley's Maneuver. JAMC.

Waqar Khan, Muhammad. Nayyar, Shahzad. Niazi, Saleem A. (2017). Are Neck Restrictions Required After Epley Maneuver For Mnaging Benign Paroximal Positional Vertigo. Pakistan. NUMS.

Wilhelmsen et al., (2008). Psychometric properties of the Vertigo symptom scale-Short form. BMC Ear, Nose and Throat Disorder.