

Research Article

Awareness of risk factors of Benign Paroxysmal Positional Vertigo in Teenagers

Snehal A Salvi¹, Pragati Patil^{2*}

¹Final year Student, Krishna College of Physiotherapy, Krishna Vishwa Vidyapeeth, Karad, Maharashtra, India

^{2*}Assistant professor, Department of Neurosciences, Faculty of Physiotherapy, Krishna Vishwa Vidyapeeth, Karad, Satara, Maharashtra, India

Abstract

Aim: To find Awareness of risk factors of Benign Paroxysmal Positional Vertigo in Teenagers.

Materials and Method: A total 246 subjects between age group 13-19 years for study considering inclusion criteria. Outcome assessment measures used is Standardized questionnaire.

Result: In the Teenage population, only 21.1% of participants were found to have knowledge and awareness about risk factors of Benign paroxysmal positional vertigo.

Conclusion: According to the report's findings, a few percent of adolescent populations are aware of and concerned about the risk factors associated with BPPV. Enhanced awareness about the risk factors of BPPV among Teenagers could perhaps accelerate the treatment of vertigo and accelerate the general rehabilitation of affected individuals.

Keywords: Benign paroxysmal positional vertigo, dizziness, risk factors.

***Author for correspondence: Email:** drpragatisalunkhe94@gmail.com

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Introduction

Vestibular dysfunction is generally characterized by vertigo which means it will cause imbalance which leads to gaze and postural instability. Dizziness is common term used for several symptoms like light headedness, vertigo, disorientation, etc. ^[1]The condition which caused by rotary movements of self or surrounding, called as Vertigo. ^[2]

The primary sign and symptom of BPPV is vertigo, or the feeling of spinning, which is brought on by an altered head posture in relation to gravity. Usually, patients experience vertigo when they roll over in bed, get out of bed, tilt their head back to look on shelves, or bend forward to put on their shoes. BPPV symptoms, however, might differ from patient to patient and include nausea, dizziness, and postural instability in addition to nonspecific dizziness. In BPPV, vertigo usually occurs in leaps and is location-dependent. Patients with BPPV have severe vertigo when they get out of bed, not when they

are performing regular daytime activities with an upright posture. ^[3]

Dizziness can occur because of several diseases such as unilateral vestibular dysfunction, BPPV (Benign Paroxysmal Positional Vertigo) BPPV's primary pathological process is the dislocation of otoconia from the macula of the utricle, which is then discharged into the semicircular canal. In the semicircular canal, otoconia float when the head's gravity-assisted position changes, then producing a deceptive sensation of rotation. ^[3]Episodes of vertigo accompanied by head position changes are referred to as BPPV. Of these, 90% of cases have posterior canal BPPV and 8% have lateral canal cases A thorough medical history and the Dixon-Hallpike test are required for the diagnosis of BPPV. It usually goes away on its own in a matter of weeks. It has been demonstrated that Canalith repositioning therapy resolves 95% of cases of BPPV ^[4].

Awareness of risk factors of Benign Paroxysmal Positional Vertigo in Teenagers

Furthermore, certain research has demonstrated that BPPV patients have an increased risk of developing ischemic stroke, fractures, and dementia. [5][6] ultimately leading to a lower standard of living. Therefore, identifying different risk factors for developing BPPV may aid in illness prevention. Patients with BPPV have a higher frequency of hypertension and coronary artery disease, as per an observational research. [7] Risk factors for the development of BPPV included female gender, low vitamin D, osteoporosis, migraines, head trauma, and elevated TC levels. [8] according to this study, DM2 can trigger or contribute to the manifestation of vestibular dysfunction, whose main associated factors are advanced age, female gender, and various comorbidities, as dyslipidaemia, SAH and metabolic syndrome. [9]

Adolescence is a stage of physical and psychological change that occurs between the ages of 12 and 18 and is commonly defined as the time between childhood dependence and adult independence. Since teenagers are thought to exhibit traits from both children and adults, this assumption is frequently made. Few publications, nevertheless, discuss vertigo and light-headedness in adolescents. [10] Vertigo is as frequent in younger children as it is in adolescents, with incidence rates reported to range from 8% to 10%. [11]—Healthcare professionals may find it difficult to detect this symptom in teenagers since vertigo is often present as part of a complex set of symptoms linked to viral infections, central neurological diseases, and cardiovascular illnesses, mixed peripheral-central disorders, or intracranial tumours. Also the approach to BPPV in teenagers poses many challenges physical examination and testing. The accuracy of clinical descriptions, challenges in defining symptoms, patients' lack of information, and miscommunication between parents and teenagers, anxiety during the assessment procedure of health providers. Teenagers' emotional and psychological well-being can be significantly impacted by BPPV, which is why it's important to consult a multidisciplinary team of medical specialists, such as otolaryngologists, neurologists, psychologists to determine the cause of the condition, establish a correct diagnosis, and determine the best course of treatment for the symptoms. [12] Dizziness can occur because of several diseases such as unilateral vestibular dysfunction,

BPPV (Benign Paroxysmal Positional Vertigo) BPPV's primary pathological process is the dislocation of otoconia from the macula of the utricle, which is then discharged into the semicircular canal. In the semicircular canal, otoconia float when the head's gravity-assisted position changes. then producing a deceptive sensation of rotation. [13]

This research was done to look into how much teenagers are aware about risk factors of Benign Paroxysmal Positional vertigo . It is necessary to study the awareness of risk factors of Benign Paroxysmal Positional Vertigo in teenagers can help to diagnose the condition early for timely intervention and management. If the teenagers have awareness for same, they can reduce the risk of getting head trauma, infections, migraine etc. BPPV can significantly affect teenagers' quality of life. Awareness will help the teenagers to identify the symptoms and seek appropriate treatment leading to faster relief from symptoms and will improve all over well-being. Understanding the awareness levels in specific population as in teenagers can help to address specific needs of teenagers

Material and Method:

In this research, about 248 teenagers between age group 15 to 26 years. Before beginning of the study. The approval of Ethics committee was obtained from Krishna institute of medical sciences ethics committee. Before beginning of the study ,participants were given detailed information and consent of participants were taken .

This was a study of assessing the knowledge and awareness of risk factors of benign paroxysmal positional vertigo in teenagers. The study was conducted in Karad. Certification was taken from protocol committee.(Protocol Number 179/2023-2024) Then permission was taken from authorities and ethical committee. Participants was selected according to inclusion and exclusion criteria. Informed consent was taken and data was collected. A Standardized questionnaire was circulated among the participants for data collection. [16] Based onollected data the statistical analysis done using Microsoft excel. There are participants participated between age group 15-26. people with non-vestibular cause of dizziness were excluded for study.

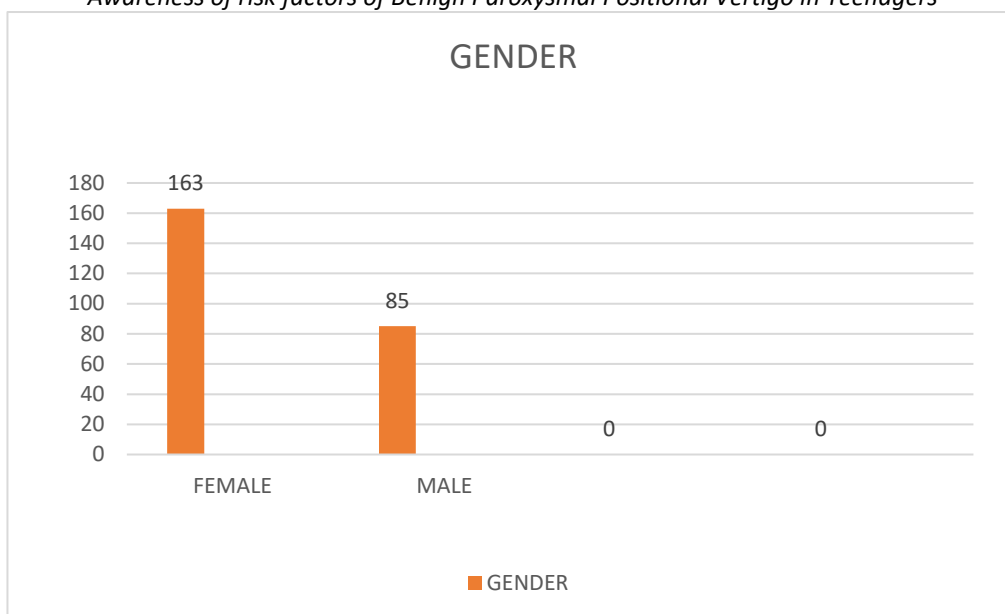
RESULT

1) Gender

Number Of Males And Female Participants In The Group

SR. NO.	PERCENTAGE	COUNT
1. FEMALE	65.7 %	163
2.MALE	34.3 %	85

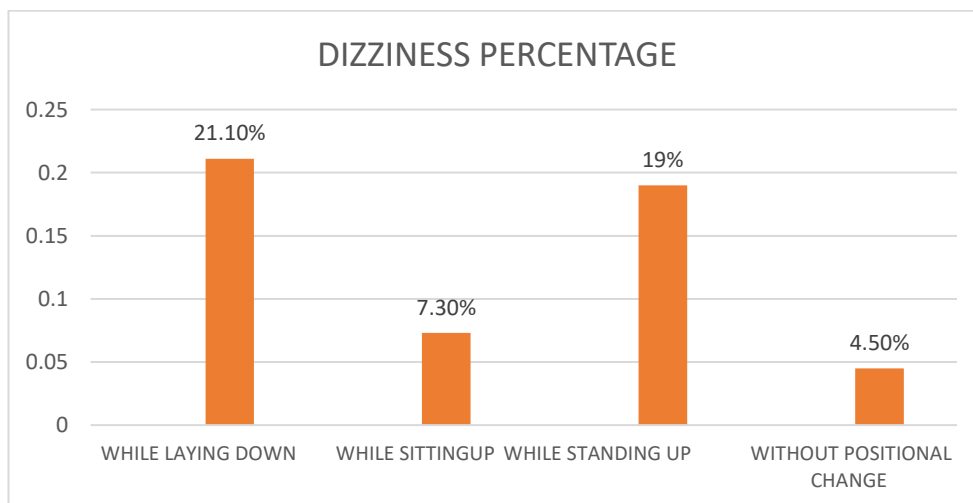
Awareness of risk factors of Benign Paroxysmal Positional Vertigo in Teenagers



INTERPRITATION: In this study, there are 163 (65.7%) female participants and 85 (34.3%) male participants.

2) Dizziness experienced by individuals:

DIZZINESS	NO OF INDIVIDUALS	PERCENTAGE
WHILE LAYING DOWN	52	21.1%
WHILE SITTINGUP	18	7.30%
WHILE STANDING UP	47	19%
POSITIONAL CHANGE	11	4.50%

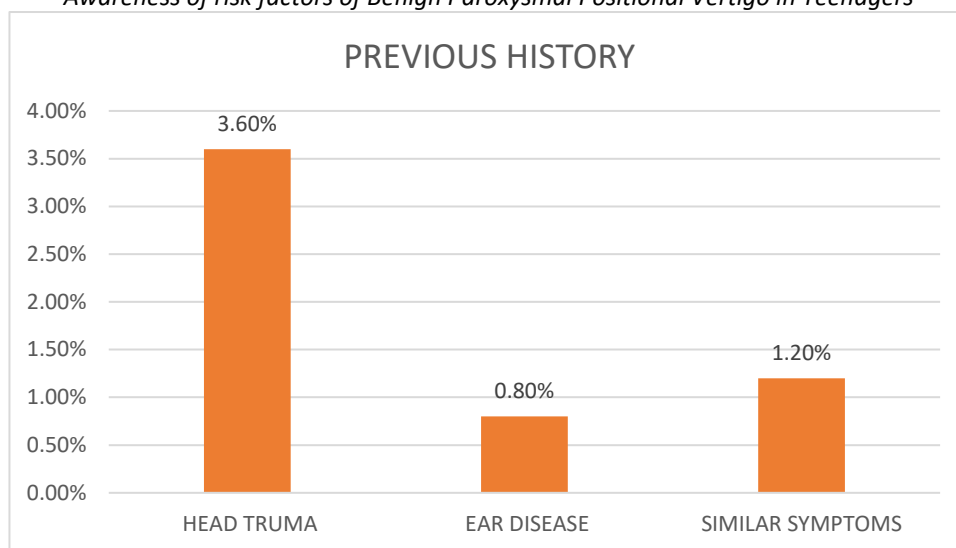


INTERPRETATION: While laying down or turning over in bed 52(21.1%) participants gets dizzy and while sitting 18 (7.30%) participants gets dizzy .while standing up 47 (19%) participants gets dizzy .and without any positional change 11(4.50%) participants gets dizzy.

3) Previous history:

PREVIOUS HISTORY OF	NO OF INDIVIDUALS	PERCENTAGE
HEAD TRAUMA	9	3.60%
EAR DISEASE	2	0.80%
SIMILAR SYMPTOMS	3	1.20%

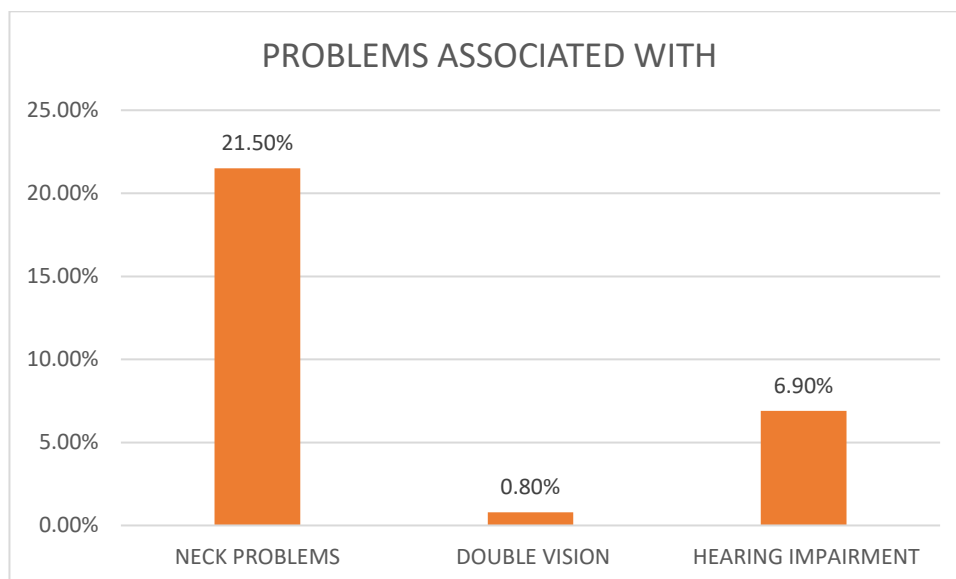
Awareness of risk factors of Benign Paroxysmal Positional Vertigo in Teenagers



INTERPRETATION: There are 9(3.60%) participants with previous history of head trauma and 2(0.80%) participants with previous history of ear disease and 3(1.20%) participants with similar symptoms

4) Problems associated with different body parts:

PROBLEMS OF	NO OF INDIVIDUALS	PERCENTAGE		
NECK	53	21.5%		
EYE- DOUBLE VISION	2	0.80%		
EAR- HEARING PROBLEM	17	6.90%		



INTERPRETATION: There are 53 (21.5%) participants with neck problems and 2(0.80%) participants with double vision and 17 (6.90%) participants with hearing problem .

Discussion:

Vertigo is known to occur in 8% to 10% of younger children and teenagers. It is just as common in the adult population, resulting in a decline in Quality of life, limitations on social and household activities, and an increased risk of falls.[11]

In young people, BPPV is a reasonably prevalent cause of dizziness. BPPV was diagnosed in 19.8% of patients seen for

dizziness. Patient age ranged 5 to 19 years. The most prevalent comorbidities were concussion (38.2%) and migraine disorders (30.0%). Average time to diagnosis from symptom onset was 178.2 ± 190.8 days. The posterior canal was most frequently affected (72.7%), followed by the lateral canal (33.6%) and superior canal (19.1%), and 36.4% (40) of patients had multiple canals affected. Above finding from research done by Brodsky, Jacob R., et al.^[14] BPPV was observed in one-third of

the paediatric concussion patients, which is a very common occurrence. BPPV is frequently not identified

This is the study aimed to find out the knowledge and awareness about risk factors of Benign Paroxysmal Positional Vertigo in Teenagers. For this we concluded results from responses of standardized questionnaire with hundred per cent response. We conducted survey from 17 questions among 248 participants. According to the results among 248 participants 85 were males and 163 among females with percentage rate of 34.3 % and 65.7% respectively. The study found that 21.1% of subjects experienced dizziness upon shifting positions.

Having a better understanding of these risk factors can help with BPPV management and prevention. Although certain factors such as age and heredity are unavoidable, treating modifiable risk factors including osteoporosis and vitamin D deficiency, preventing head accidents, and keeping excellent ear health can all help lower the chance of developing BPPV.

Conclusion:

This study was found out that about 21.1% of participants are aware about Benign Paroxysmal Positional Vertigo. Enhanced awareness about the risk factors of BPPV among Teenagers could perhaps accelerate the treatment of vertigo and accelerate the general rehabilitation of affected individuals

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