



Knowledge and Attitude of Medical Practitioners about the Role of Vestibular Physiotherapy

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ABSTRACT

Introduction: Vestibular rehabilitation was first developed as a treatment for vestibular disorders but has also been used as a treatment for other causes of dizziness. Most patients with vestibular disorder initially visit a physician before being referred to a physiotherapist. There is a need to investigate the knowledge and attitudes of medical practitioners in India regarding the role and application of vestibular physiotherapy in clinical practice.

Methods: A cross-sectional survey was conducted for medical practitioners using a closed-ended questionnaire. The questionnaire consisted of ten questions aimed at evaluating participants' knowledge, attitudes, and referral practices regarding vestibular rehabilitation.

Results: Out of the 402 responses received through online and offline forms, 283 medical practitioners reported treating patients with vestibular symptoms. Among those who were aware of the role of physiotherapists in vestibular rehabilitation, 61.4% recognized their involvement in treating peripheral vestibular disorders, while 38.6% acknowledged their role in rehabilitating central vestibular disorders. Interestingly, only 24.87% of medical practitioners referred vestibular cases to physiotherapists.

Conclusion: There is a need to increase awareness among practitioners about the physiotherapist's role in vestibular rehabilitation. Addressing this gap in understanding could lead to improved patient care and outcomes in managing vestibular disorders.

Key Words: Vestibular rehabilitation, Vestibular physiotherapy, Knowledge, Referral, Physiotherapy, Vestibular symptoms, Vestibular disorders

INTRODUCTION

In practice, vestibular symptoms such as vertigo and dizziness are common. Annually, vertigo affects approximately 5% of the population. The frequency, incidence, and severity of vertigo typically increases with age. Additionally, four out of five individuals with vertigo report a decline in their daily activities, which can lead to disability and, ultimately, financial burden.¹

Vestibular Rehabilitation (VR) is the treatment of dizziness and balance disorder and follows the process of Central neuroplasticity that includes substitution, adaptation, and habituation, which enable vestibular compensation; it is reported to be effective in vestibular disorders. In the last few years, there has been compelling evidence about the effectiveness of vestibular rehabilitation in the treatment of vestibular hypofunction, benign paroxysmal positional vertigo (BPPV),

persistent postural-perceptual dizziness (PPPD), vestibular migraine, Meniere's disease, vestibular neurectomy, labyrinthectomy, and dizziness associated with multiple sclerosis (MS) and vestibular involvement in traumatic brain injury Herdman et al.⁵

Vestibular exercises are both function and treatment specific. Adaptation and habituation are only for the function practiced.³

There are various maneuvers practiced in vestibular rehabilitation. Canalith repositioning, liberatory, Brandt-Daroff exercises Unilateral vestibular Adaptation, substitution hypofunction (habituation) Motion sensitivity, Habituation, Bilateral vestibular loss Substitution, adaptation Central vestibular Habituation are maneuvers included in vestibular rehabilitation. VR was depicted to be beneficial for many vestibular disorders.²

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Vestibular exercises aim to lessen symptoms, enhance postural stability, and lessen blurred vision during head movement. The basis for the mediation is long-term alterations in the vestibular system neurons' reaction to error signals (retinal drift).⁶

Physiotherapists around the world use a variety of treatments to treat vertigo, and balance disorders in patients with vestibular disease. Over the past few years, convincing evidence has been obtained for the effectiveness of vestibular rehabilitation in the treatment of vestibular hypofunction, benign paroxysmal positional vertigo (BPPV), VM, persistent postural perceptual dizziness (PD), and many other causes.⁸

Despite the growth in evidence-based physiotherapy and the increased need for physiotherapy services, physiotherapy still faces some challenges, such as the recognition of physiotherapy as a crucial service within the healthcare system. It has been reported that a physician who is not well informed regarding the important value and role of physiotherapy will delay or make unsuitable referrals to physiotherapists.¹⁰

Furthermore, a recent study conducted by Al-Eisa et al. found that 75% of physicians did not refer any patients or rarely referred patients to physiotherapy clinics in SA. It is possible that this will have affected the extent of utilization of physiotherapy services. Indeed, rehabilitative services such as physiotherapy should be provided to patients as early as possible to provide optimal care for all patients.⁶ Therefore, this study aims to investigate the knowledge and attitude of medical practitioners regarding the role of vestibular physiotherapy in patients with vestibular symptoms.

MATERIALS AND METHODOLOGY

A cross-sectional questionnaire-based study was conducted, targeting medical practitioners across various specialties. A total of 402 medical practitioners were recruited for the study, with the sample size calculated using the formula for cross-sectional studies. Sample size was calculated using formula for cross sectional study using the following parameters; $N = \frac{[Z]^2 \cdot (P(1-P))}{d^2}$, where P your guess of population = 0.21, Z Value associated with confidence=1.96, D Absolute precision=0.04 and n minimum sample size= 399.

A closed ended questionnaire was formulated, and content validated from experts. Medical practitioners from various clinical setups were approached and requested to fill the questionnaire.

The questionnaire encompassed sections on demographics, job profile, as well as questions pertaining to knowledge, attitude, and referral practices. Upon receiving responses, data analysis was conducted using descriptive methods in MS Excel, yielding the study results.

RESULTS

A total of 402 medical practitioners participated in the study.

Details of the specialty, year of experience and workplace of medical practitioners are given in Table 1, Table 2 and Table 3 respectively.

Two hundred eighty-three medical practitioners reported managing and treating patients with vestibular disorders (70.4%) and a plurality of them reported managing and treating five to ten patients per month (41.3%).

In the present study, 176 practitioners said that physiotherapists were trained to provide vestibular rehabilitation, out of which, 43.28% were general physicians followed by neurologists (12.18%) and family physicians (11.19%).

Medical practitioners who reported the role of physiotherapists in vestibular rehabilitation few were knowing that physiotherapists deal with peripheral vestibular disorders (61.45%) and the remaining reported physiotherapists are involved in the rehabilitation of central vestibular disorders (38.55%) as shown in Table 4.

When the referral attitude of medical practitioners regarding the topic was assessed, only 24.87% of them referred vestibular cases to physiotherapists and the majority of them were general physician, they were further divided into MBBS (23.3%), BAMS (31.5%), BHMS (28.6%) followed by neurologist (28.6%) and ENT specialists (44.8%) respectively (Table 5). Referral tendency was seen more in ENT specialists (44.8%).

The findings reveal varied perceptions regarding the role of physiotherapists in managing vestibular disorders. A substantial majority, 173 respondents (43.0%), indicated that they believe physiotherapists have no role in this area. Meanwhile, 125 practitioners (31.1%) thought that physiotherapists are involved solely in the assessment of vestibular disorders. A smaller group, 11 respondents (2.7%), saw physiotherapists as contributing only to treatment. Notably, 93 respondents (23.2%) recognized the involvement of physiotherapists in both the assessment and treatment of disorders. (Graph 1)

DISCUSSION

The current study provides findings regarding knowledge of vestibular rehabilitation among medical practitioners and their attitude towards it. In this study, 402 medical practitioners participated; out of those 283 medical practitioners reported managing patients with vestibular disorders. A significantly lower number of medical practitioners referred patients with vestibular disorders to physiotherapists. Most medical practitioners reported no role of the physiotherapist in vestibular rehabilitation.

Study was divided into knowledge and attitude components with a set number of questions. Out of 402 medical practitioners, 365 were treating patients with vestibular disorders. Majority of them had 5-10 patients per month. Among 402 participants, only 176 reported that physiotherapists are trained to provide vestibular rehabilitation a relatively smaller number of medical practitioners reported that physiotherapists have role only in treatment of patient with vestibular rehabilitation.

Recent studies report that the recovery of a patient with vestibular dysfunction is slow and incomplete without physical therapy intervention particularly in patients with associated balance and dizziness symptoms.¹ Exercises that progressively challenge balance are reported to be effective for patients with vestibular disorders. The physical therapy techniques benefit many different vestibular conditions such as patients with non-compensatory peripheral vestibular disorders³, BPPV, stable or mixed central lesion⁶, multifactorial balance abnormalities⁷, post-ablation surgeries⁴ (acoustic neuroma resection, labyrinthectomy).

Our study found that 61.4% of medical practitioners were aware that physiotherapists treat peripheral vestibular disorders and patients with vestibular disorders are managed mainly by general physicians and ENT specialists. 93.1% of ENT Specialists managed patients with vestibular disorder and 86.5% of general physician managed patients with vestibular symptoms.

General physicians were divided into MBBS, BAMS, BHMS doctors and 89.8% of MBBS doctors reported managing patients with vestibular symptoms.

A study conducted among ENT specialists reported the need to change the current diagnosis and treatment method of a patient with vertigo and dizziness.¹³ A study conducted among 282 patients with peripheral vestibular disease reported an average of late medical consultation after months or years from the onset of symptoms⁵. A study conducted in the US reported low referral to physiotherapists for vestibular rehabilitation.

In our study, we found that only approximately one-fourth of medical practitioners referred cases to a physiotherapist and out of them ENT specialists have given highest referral, which is 44.8%.

Retrospective analysis of medical records revealed a consistent rise in physiotherapy (PT) referrals for vestibular disorders, increasing from 6.2% in 2006 to 12.9% in 2015. Additionally, a cohort study involving 2,374 patients with vertigo and dizziness found that 61% of the patients used medication, while 41.3% utilized physiotherapy services⁷. The result of this study also clearly supports that there is an urgent need to inform practicing medical practitioners about the role of physiotherapists in vestibular rehabilitation.

Majority of medical practitioners involved in the management of patients with vestibular disorders were not aware about the physical therapist being trained in vestibular rehabilitation. The practitioners may benefit not only from further education into benefits of physical therapy for their patients, but also behavior change theories and approaches, so that they can better promote the physical therapy services to their patients.⁴

These approaches include education, training, and enablement.⁶ These interventions foster improved communication with other disciplines and enhance the management of vestibular patients by providing holistic and comprehensive care.⁹ A review article reported interactive and multifaceted continuous medical education programs and clinical decision support systems are beneficial in improving knowledge, utilization of resources, and enhancing patient outcome.¹⁴

Grading in the Basic Level Curriculum does not differentiate between clinical backgrounds. This implies that it is designed for any health professional wishing to become proficient in VestMed, regardless of clinical background. The Expert Level Curriculum currently only proposes grading for neurology, otorhinolaryngology, audiovestibular medicine and physiotherapy. Expansion to other physician specialties and non-physician health professions is expected to follow in the future.¹⁵

Medical practitioners often lack sufficient knowledge in vestibular rehabilitation due to its absence in standard medical curriculum. Consequently, there is a pressing need to address this gap through interdisciplinary conferences and awareness campaigns.¹¹ Vestibular rehabilitation involves exercises and therapies aimed at improving balance and reducing dizziness, often crucial for patients with vestibular dysfunction. By organizing interdisciplinary conferences, healthcare professionals from various fields can exchange expertise and insights, enhancing their understanding of vestibular rehabilitation techniques and their applications. Additionally, awareness camps targeting doctors can educate them about the importance of early intervention and proper management of vestibular disorders, ultimately improving patient outcomes and quality of care. Collaborative efforts in raising awareness and fostering knowledge exchange are vital steps toward addressing the deficiency in vestibular rehabilitation education within the medical community.¹²

CONCLUSION

Study concluded that there is limited knowledge about the specific role of physiotherapist in assessing and treating patients.

There is a need to increase the awareness among practitioners about the physiotherapist's role in vestibular rehabilitation.

Addressing this gap in understanding could lead to improved patient care and outcomes in the management of vestibular disorders. Hence, education and awareness among medical practitioners about the role of physiotherapists in vestibular rehabilitation can improve patient care and outcomes of management of vestibular disorders.

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Role Contributor	Contributor 1	Contributor 2	Contributor 3	Contributor 4
Concepts	✓	✓		
Design	✓	✓		
Definition of intellectual content	✓	✓		
Literature search	✓	✓		
Clinical Studies	✓			
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Data acquisition	✓			
Data analysis	✓	✓		
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Manuscript preparation	✓	✓		
Manuscript editing	✓	✓		
Manuscript review	✓	✓	✓	✓
Guarantor	✓	✓	✓	✓

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Table 1: Specialty of medical practitioners

Specialty as medical practitioner	Number	Percentage
General physician	174	43.28%
Neurologist	49	12.18%
Family physician	45	11.19%
General surgeon	42	10.44%
Ent specialist	29	7.21%
Dentist	26	6.46%
Psychiatrist	20	4.97%
Gynecologist	8	1.99%
Cardiologist	5	1.25%
Pediatricians	2	0.50%
Ophthalmologist	1	0.25%
Oncologist	1	0.25%

Table 2: Years of experience

Years of experience	Participation number	Participation percentage
1-3	116	28.9%
4-8	145	36%
9-15	99	24.6%
Above 15	42	10.4%

Table 3: Work place

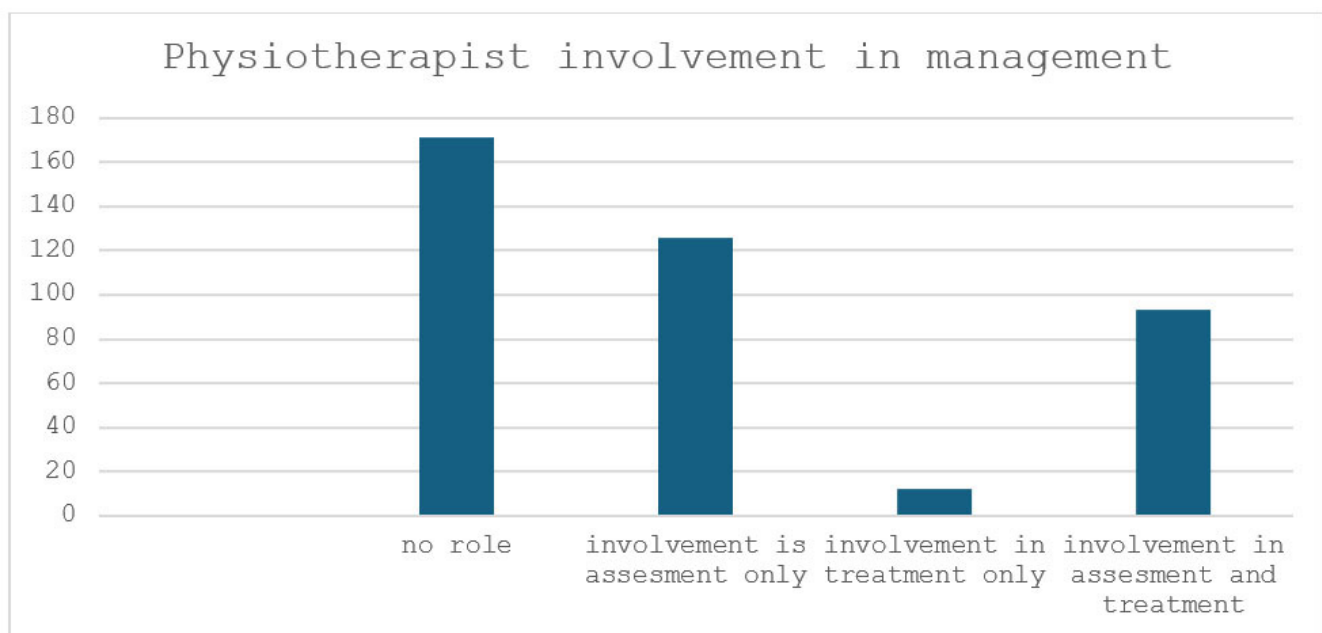
Work place	Number	Percentage
Government hospital	153	38%
Private hospital	124	30.9%
Clinic	125	31.1%

Table 4: Vestibular disorder treated by physiotherapists

Vestibular Disorder	Number	Percentage
Central	69	38.55%
Peripheral	110	61.45%

Table 5: Specialty wise referral number

Specialty	Total Number	Referral number	Percentage
Neurologist	49	14	28.6%
ENT Specialist	29	13	44.8%
Family physician	45	12	26.7%
BAMS	108	34	31.5%
MBBS	43	10	23.3%
BHMS	23	1	28.6%
General surgeon	42	12	4.4%
Dentist	26	1	4%
Gynecologist	8	1	12.5%
Psychiatrist	20	2	1%

**Graph 1:** Involvement of physiotherapist in management.