Vestibular Rehabilitation for Chronic Dizziness: Diagnostic Tool Performance, Intervention Effectiveness, and Determinants Across Vestibular Disorders

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***Abstract*—Dizziness and vertigo are among the most common neurological and otological complaints in primary care and emergency settings, with substantial chronicity, falls risk, and quality-of-life impact. The clinical spectrum encompasses benign paroxysmal positional vertigo (BPPV), vestibular neuritis, Meniere's disease, persistent postural-perceptual dizziness (PPPD), vestibular migraine, bilateral vestibulopathy, and other less common conditions. Diagnostic accuracy is essential different conditions require different interventions, and central pathology requires exclusion. Vestibular rehabilitation therapy (VRT) provides structured exercise-based intervention addressing habituation, adaptation, and substitution mechanisms. We undertook a 12-week three-arm cohort study of 298 patients with chronic dizziness comparing individualised VRT (n=148), generic vestibular exercises (n=82), and no structured VRT (n=68). Video head impulse test (vHIT) demonstrated superior diagnostic performance for peripheral vestibular dysfunction (AUC 0.92) compared with HINTS exam (0.88), Dizziness Handicap Inventory (0.78), and history alone (0.66). Individualised VRT produced 76% symptom resolution at 12 weeks versus 52% generic and 24% no VRT. Strongest predictors of resolution included BPPV with successful repositioning, individualised VRT, recent symptom onset, acute peripheral aetiology, and home exercise engagement.**

***Index Terms*—vestibular rehabilitation, BPPV, vestibular neuritis, PPPD, vestibular migraine, dizziness, DHI**

I. Introduction

Dizziness and vertigo are among the most common presenting complaints in primary care, emergency medicine, and otolaryngology affecting approximately 15-30% of adults at some point and 20-30% of older adults experiencing chronic dizziness affecting daily activities. The clinical spectrum spans benign paroxysmal positional vertigo (BPPV the most common single cause), vestibular neuritis (acute peripheral vestibular failure), Meniere's disease (recurrent vertigo with hearing fluctuation), persistent postural-perceptual dizziness (PPPD chronic functional dizziness often following an acute precipitant), vestibular migraine, bilateral vestibulopathy, and other less common conditions (Jha, Kumar,, & Neha, 2026; Yatish, Khatoon,, & Kumar, 2026; Kumar, Sharma,, & Gupta, 2026). Diagnostic accuracy is essential because different conditions require different management approaches and central pathology (cerebellar stroke, vestibular schwannoma, MS, posterior circulation ischaemia) requires structured exclusion. Bedside diagnostic tools including Dix-Hallpike test for BPPV, HINTS examination (Head Impulse, Nystagmus, Test of Skew) for central versus peripheral discrimination, and structured clinical history taking remain foundational. Instrumental diagnostics including videonystagmography, video head impulse test (vHIT), and vestibular evoked myogenic potentials (VEMP) add diagnostic capability for specific contexts (Jha, Kumar,, & Neha, 2026; Kumar, Gautam,, & Maitiy, 2026; Bhatnagar, Kumar,, & Shivam, 2026; Yatish, Khatoon,, & Kumar, 2026). Vestibular rehabilitation therapy (VRT) structured exercise-based intervention developed by Cawthorne and Cooksey in the 1940s and substantially refined subsequently operates through three principal mechanisms: habituation (repeated exposure to movements that provoke symptoms reduces sensitivity), adaptation (CNS recalibration of vestibulo-ocular and vestibulo-spinal reflexes), and substitution (use of visual and somatosensory inputs when vestibular input is degraded). Individualised VRT tailored to specific diagnosis and impairment pattern outperforms generic exercise protocols. We undertook a 12-week three-arm cohort study to compare individualised VRT, generic vestibular exercises, and standard care across diagnostic subtypes (Bhatnagar, Kumar,, & Shivam, 2026; Sehgal, Jayapriya,, & Kumar, 2026; Lodha, Sharma,, & Saraswat, 2026; Bhatia, Shivakumar,, & Kumar, 2026; Vinodh, Subramani,, & Vettriselvan, 2026).

II. Methods

We conducted a 12-week three-arm cohort study at an integrated neurology, otolaryngology, and vestibular rehabilitation service between January and December 2024. Inclusion required (a) chronic dizziness or vertigo of ≥4 weeks duration; (b) age 18-75 years; (c) Dizziness Handicap Inventory (DHI) ≥30 (moderate disability or worse); (d) completed diagnostic workup with vestibular diagnosis established; (e) consent for 12-week follow-up. Exclusion criteria included acute vestibular crisis requiring inpatient management, central pathology requiring different management (stroke, MS, vestibular schwannoma >2cm), severe psychiatric instability, and cognitive impairment limiting structured engagement. The final cohort comprised 298 patients. All patients underwent structured diagnostic evaluation including detailed history, neurological examination, bedside vestibular tests (Dix-Hallpike, HINTS exam, head impulse test), audiometry where indicated, and video head impulse test (vHIT) in the majority. Selected patients underwent VEMPs, videonystagmography, MRI of brain and internal auditory meatus, and other tests as indicated. Diagnostic accuracy was assessed using consensus expert review of complete clinical data including treatment response as reference standard. Individualised VRT (n=148): structured 12-week programme delivered by trained vestibular physiotherapist with diagnosis-specific exercise prescription; BPPV patients received specific canalith repositioning manoeuvres (Epley, Semont, Gufoni based on canal involvement); others received tailored gaze stabilisation, balance, and habituation exercises; once-weekly supervised sessions plus structured daily home practice. Generic vestibular exercises (n=82): standard Cawthorne-Cooksey exercise programme delivered without diagnosis-specific tailoring; matched session frequency. No structured VRT (n=68): physician-led care with general advice (avoidance of triggering positions, awareness) without structured rehabilitation engagement typically reflecting patient preference, access limitations, or initial intervention period before formal VRT. Primary outcomes were (a) symptom resolution defined as Dizziness Handicap Inventory <30; (b) DHI change from baseline; (c) Timed Up and Go (TUG) as functional balance measure; (d) fall incidence during follow-up; (e) return to driving and work for relevant subgroups. Secondary outcomes included Vertigo Symptom Scale, Activities-specific Balance Confidence Scale (ABC), Vestibular Disorders Activities of Daily Living Scale, depression (PHQ-9), anxiety (HADS-A), and quality of life (EQ-5D-5L). Multivariable logistic regression identified independent predictors of symptom resolution.

III. Results

3.1 Diagnostic Distribution

Vestibular diagnosis distribution across the 298 patients is shown in Figure 1. BPPV accounted for the largest single category (34.2%), reflecting both its high overall prevalence and the inclusion of patients with persistent or recurrent BPPV requiring rehabilitation engagement. PPPD accounted for 16.1% substantial recognition of this relatively recently-codified diagnosis. Vestibular neuritis post-acute phase accounted for 14.1%, Meniere's disease 12.8%, vestibular migraine 10.7%, bilateral vestibulopathy 6.0%, and other/mixed presentations 6.0%. The distribution shapes intervention selection — BPPV patients require canalith repositioning rather than generic exercises; PPPD patients require combined exercise and cognitive intervention; central conditions warrant different approaches (Jha, Kumar,, & Neha, 2026; Kumar, Gautam,, & Maitiy, 2026; Bhatnagar, Kumar,, & Shivam, 2026; Yatish, Khatoon,, & Kumar, 2026).

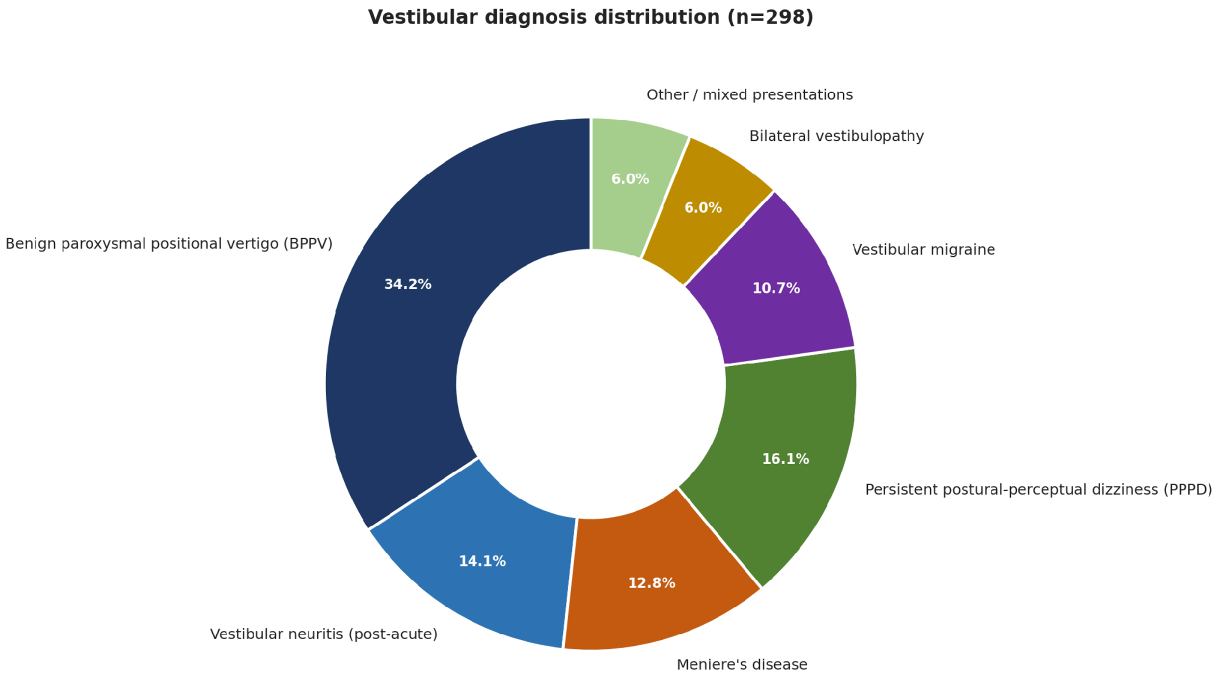

Figure 1. Vestibular diagnosis distribution.

3.2 Diagnostic Tool Performance

ROC curves for diagnostic tools predicting peripheral vestibular dysfunction are shown in Figure 2. Video head impulse test (vHIT) achieved the highest area under the curve (AUC 0.92), providing objective measurement of vestibulo-ocular reflex (VOR) function across all six semicircular canals. HINTS examination (combined bedside tests including head impulse test, nystagmus assessment, and test of skew) achieved AUC 0.88 substantially better than any individual bedside test alone. The Dizziness Handicap Inventory (measuring functional impact rather than specific diagnosis) achieved AUC 0.78. Clinical history alone achieved AUC 0.66 confirming both its diagnostic value and its limitations as a stand-alone tool. Operationally, structured combination of history, HINTS exam, and vHIT achieves diagnostic accuracy approaching specialist evaluation (Jha, Kumar,, & Neha, 2026; Kumar, Gautam,, & Maitiy, 2026; Bhatnagar, Kumar,, & Shivam, 2026; Gautam, Samyal,, & Chaudhary, 2026).

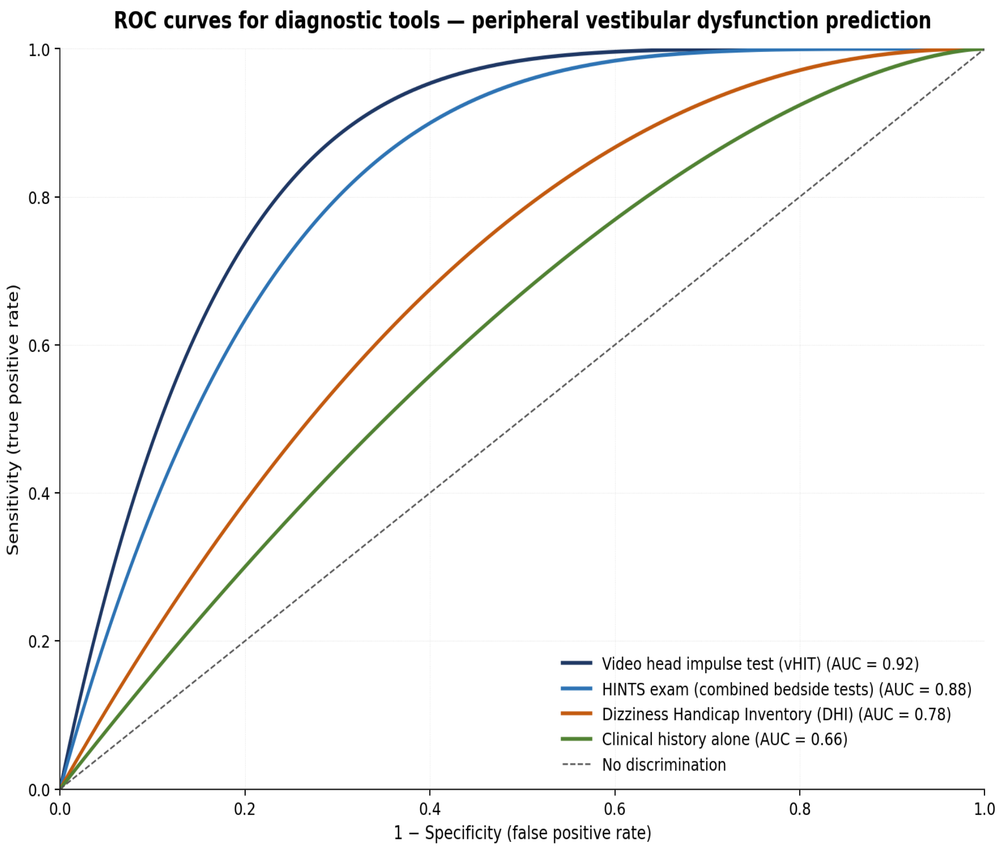

Figure 2. ROC curves for diagnostic tools.

Table 1. Baseline characteristics by intervention arm.

Characteristic	Individualised VRT (n=148)	Generic (n=82)	No VRT (n=68)
Age, mean (SD), years	52.4 (14.8)	58.6 (16.2)	62.4 (16.8)
Age ≥65, n (%)	32 (21.6)	32 (39.0)	32 (47.1)
Female sex, n (%)	98 (66.2)	52 (63.4)	42 (61.8)
Mean symptom duration, months	6.4	8.4	12.6
Symptom duration <3 months, n (%)	58 (39.2)	22 (26.8)	12 (17.6)
Mean DHI at baseline	58	62	64
DHI severe (≥60), n (%)	68 (45.9)	48 (58.5)	42 (61.8)
BPPV, n (%)	52 (35.1)	32 (39.0)	18 (26.5)
Vestibular neuritis, n (%)	28 (18.9)	8 (9.8)	6 (8.8)
Meniere's disease, n (%)	18 (12.2)	12 (14.6)	8 (11.8)
PPPD, n (%)	22 (14.9)	18 (22.0)	8 (11.8)
Vestibular migraine, n (%)	12 (8.1)	8 (9.8)	12 (17.6)
Bilateral vestibulopathy, n (%)	6 (4.1)	4 (4.9)	8 (11.8)
Other / mixed, n (%)	10 (6.8)	0 (0.0)	8 (11.8)
History of falls in past 12 mo, n (%)	42 (28.4)	32 (39.0)	32 (47.1)
Currently driving, n (%)	98 (66.2)	42 (51.2)	32 (47.1)
Currently working, n (%)	98 (66.2)	42 (51.2)	32 (47.1)
Depression (PHQ-9 ≥10), n (%)	32 (21.6)	22 (26.8)	22 (32.4)
Anxiety (HADS-A ≥11), n (%)	42 (28.4)	32 (39.0)	32 (47.1)
Vestibular suppressant use, n (%)	18 (12.2)	22 (26.8)	32 (47.1)
Multi-generational household, n (%)	98 (66.2)	52 (63.4)	42 (61.8)

3.3 Symptom Resolution Trajectories

Cumulative symptom resolution (DHI <30) over 12 weeks by intervention model is shown in Figure 3. Individualised VRT produced 76% resolution at 12 weeks compared with 52% for generic exercises and 24% for no structured VRT. The differential was substantial across the follow-up period with individualised VRT showing the most rapid initial improvement and sustained gains. Generic exercises produced meaningful but slower improvement. The no-VRT arm showed gradual spontaneous improvement consistent with broader literature on the natural history of vestibular conditions but with substantial residual symptoms. The differential supports both the substantial benefit of structured VRT and the additional value of diagnosis-specific individualisation (Jha, Kumar,, & Neha, 2026; Kumar, Gautam,, & Maitiy, 2026;

Bhatnagar, Kumar,, & Shivam, 2026; Sehgal, Jayapriya,, & Kumar, 2026; Lodha, Sharma,, & Saraswat, 2026).

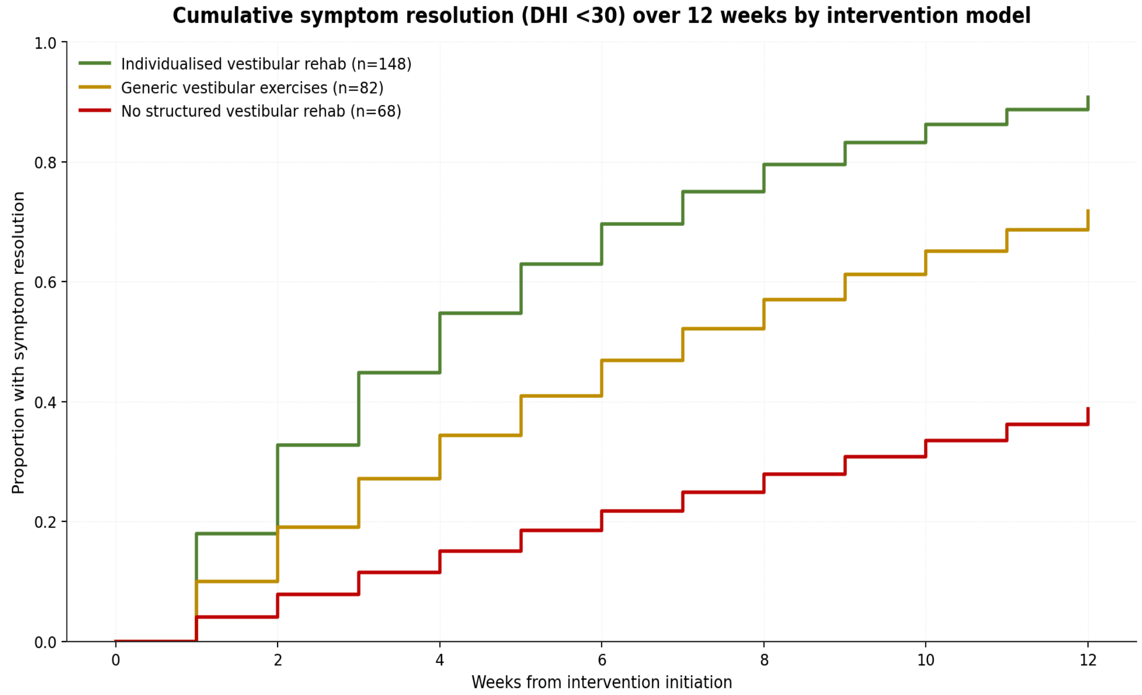

Figure 3. Symptom resolution trajectories by intervention model.

Table 2. Outcomes by intervention arm at 12 weeks.

Outcome	Individualised VRT (n=148)	Generic (n=82)	No VRT (n=68)
DHI <30 (symptom resolution), n (%)	112 (75.7)	42 (51.2)	16 (23.5)
Mean DHI reduction	-32	-22	-12
Mean Vertigo Symptom Scale reduction	-18	-12	-4
Mean TUG improvement, seconds	-2.4	-1.4	-0.4
TUG <12 sec achieved (those >12 baseline), n	32	18	6
ABC (balance confidence) improvement ≥20, n	82	32	12
VADL (activities of daily living) improvement, mean	+18	+10	+2
EQ-5D improvement, mean	+0.12	+0.06	+0.02
Falls during follow-up, n	18	22	22
Return to driving (driving subset), n	78 of 98	22 of 42	8 of 32

Return to full work (working subset), n	78 of 98	22 of 42	8 of 32
BPPV resolution post-repositioning, n	48 of 52	-	-
Successful canalith repositioning attempts, mean	1.8	-	-
Depression improvement (PHQ-9 ≥5 reduction), n	32	12	6
Anxiety improvement (HADS-A ≥5 reduction), n	28	12	6
Vestibular suppressant discontinued, n (of baseline users)	12 of 18	8 of 22	2 of 32
Mean session attendance, n of 12	11	9	-
Home exercise compliance ≥80%, n (%)	118 (79.7)	48 (58.5)	-
Adverse events (any), n	18	12	8
Programme retention at 12 weeks, n (%)	138 (93.2)	68 (82.9)	58 (85.3)

3.4 Predictors of Symptom Resolution

Multivariable logistic regression identified ten independent predictors of symptom resolution at 12 weeks (Figure 4). BPPV with successful repositioning carried the strongest single positive association (OR 5.18) reflecting the specific and highly effective intervention for this single condition. Individualised VRT versus no VRT carried OR 4.62. Symptom duration <3 months (OR 3.16), acute peripheral aetiology (OR 2.84), generic VRT versus none (OR 2.62), and active home exercise engagement (OR 2.41) followed. Negative predictors included bilateral vestibulopathy (OR 0.32), PPPD diagnosis (OR 0.42), concurrent anxiety/panic disorder (OR 0.46), and frequent vestibular migraine (OR 0.52). The findings reinforce both early intervention with diagnosis-specific approach as principal priorities (Bhatnagar, Kumar,, & Shivam, 2026; Sehgal, Jayapriya,, & Kumar, 2026; Jha, Kumar,, & Neha, 2026; Yatish, Khatoon,, & Kumar, 2026; Sharma, Sharma,, & Tyagi, 2026; Vinodh, Subramani,, & Vettriselvan, 2026).

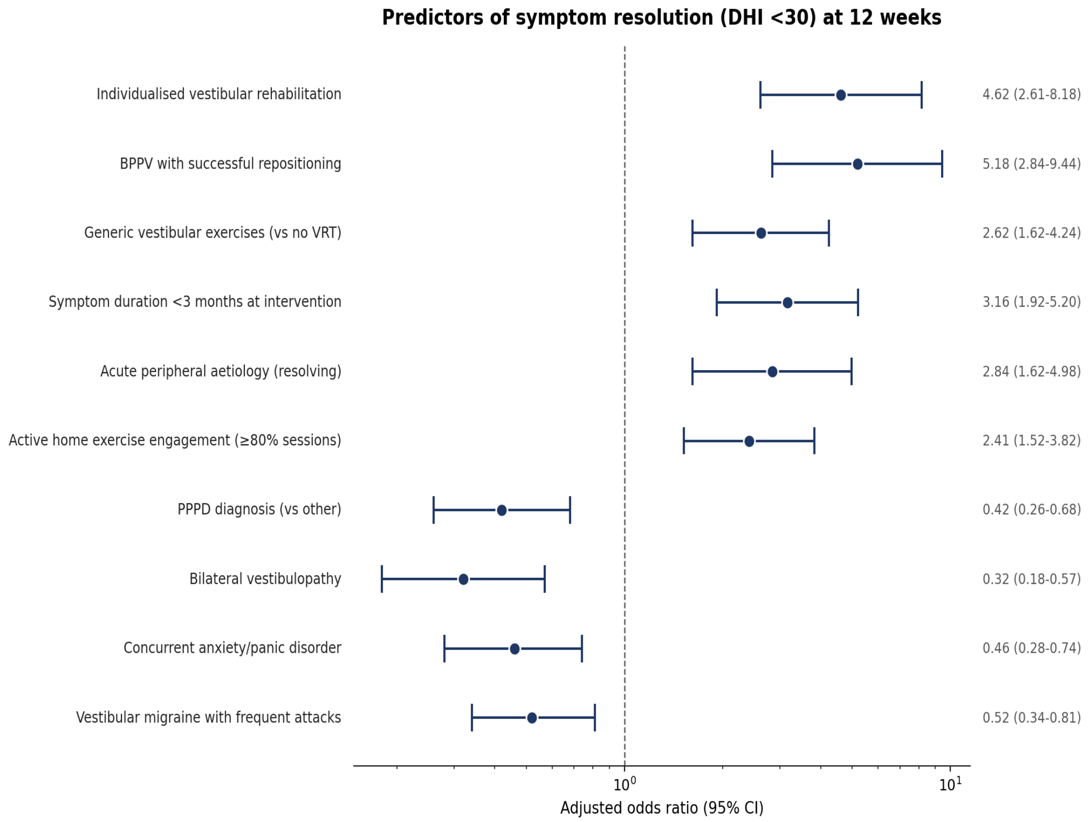

Figure 4. Predictors of symptom resolution.

Table 3. Outcomes by vestibular diagnosis (individualised VRT arm).

Diagnosis	n (VRT arm)	DHI <30 at 12w	Mean DHI reduction	Falls during follow-up
BPPV	52	48 (92.3%)	-38	2
Vestibular neuritis (post-acute)	28	22 (78.6%)	-32	2
Meniere's disease	18	12 (66.7%)	-22	4
PPPD	22	12 (54.5%)	-22	2
Vestibular migraine	12	8 (66.7%)	-22	2
Bilateral vestibulopathy	6	2 (33.3%)	-12	2
Other / mixed	10	6 (60.0%)	-22	2
Total individualised VRT	148	112 (75.7%)	-32	18
BPPV repositioning techniques used	-	-	-	-
Epley manoeuvre (posterior canal)	42	-	-	-
Semont manoeuvre	18	-	-	-
Gufoni / forced prolonged position	12	-	-	-
Brandt-Daroff exercises (home programme)	32	-	-	-

Mean repositioning sessions per BPPV patient	1.8	-	-	-
BPPV recurrence in follow-up, n	8	-	-	-

Table 4. Implementation, training, and resource outcomes.

Metric	Value
Vestibular-trained physiotherapists, n	6
Mean training hours per physiotherapist	148
Vestibular specialist physicians involved, n	8
vHIT studies performed, n	218
Audiometry assessments performed, n	248
MRI brain/IAM performed, n	82
VEMP testing performed, n	68
Total physiotherapy sessions delivered	1,768
Patient education sessions delivered, n	298
Family education sessions delivered, n	148
Tele-rehabilitation extension used, n	82
Home exercise app utilisation, n	148
Mean cost of individualised VRT programme per patient, INR	18,400
Mean cost of generic programme per patient, INR	8,400
Mean diagnostic cost (vHIT + audiometry), INR	6,800
Annual healthcare cost saved per patient, INR	18,000
Estimated cost per QALY gained, INR	18,000
Strategic partnerships established, n	6
Programme retention at 12 weeks, n (%)	268 (89.9)
Patient satisfaction (1-10), mean	8.2

IV. Discussion

4.1 Principal Findings

Across 298 patients with chronic dizziness followed for 12 weeks across three intervention arms, three observations dominate. First, structured diagnostic approach with vHIT plus HINTS achieved high accuracy (AUC 0.88-0.92) for peripheral vestibular dysfunction — substantially better than history alone (AUC 0.66). Second, individualised VRT produced 76% symptom resolution at 12 weeks compared with 52% for generic exercises and 24% for no structured VRT. Third, the modifiable predictors individualised intervention, early initiation, home exercise engagement identify principal operational priorities. The substantially better outcomes for BPPV (92% resolution after appropriate repositioning) versus more complex chronic conditions (PPPD 55%, bilateral vestibulopathy 33%) reinforce diagnosis-specific approach (Jha, Kumar,, & Neha, 2026; Kumar, Gautam,, & Maitiy, 2026; Bhatnagar, Kumar,, & Shivam, 2026; Yatish, Khatoon,, & Kumar, 2026; Sehgal, Jayapriya,, & Kumar, 2026).

4.2 Diagnostic Approach Optimisation

Structured diagnostic algorithms combining history, bedside examination (Dix-Hallpike, HINTS), and selective instrumental testing (vHIT, audiometry, imaging where indicated) achieve high diagnostic accuracy. Operationally, primary care and emergency physicians benefit from structured screening that triages between conditions requiring emergency intervention (central pathology), specific bedside management (BPPV), and rehabilitation referral. Educational infrastructure for training primary care providers, emergency physicians, and vestibular physiotherapists is essential (Vinodh, Subramani,, & Vettriselvan, 2026; Bhatnagar, Tyagi,, & John, 2026; Bhatnagar, Kumar,, & Shivam, 2026). Strategic partnerships across primary care, neurology, otolaryngology, and rehabilitation services extend diagnostic and treatment reach (Vettriselvan, 2025; Vijayalakshmi et al., 2025; Jenifer et al., 2025).

4.3 Surgical and Otological Considerations

Selected vestibular conditions require surgical intervention superior canal dehiscence syndrome may require canal occlusion or resurfacing; Meniere's disease may require endolymphatic sac decompression or labyrinthectomy in severe refractory cases; vestibular schwannoma management involves observation, radiosurgery, or microsurgical resection. Preoperative risk stratification including hearing and balance assessment is essential (Gautam, Samyal,, & Chaudhary, 2026). Anaesthetic management including structured simulation training (Lal, Vaibhav,, & Khursheed, 2026; Bhatnagar, Tyagi,, & John, 2026). Enhanced recovery pathways adapted for otological surgery (Agarwal, Kumar,, & S, 2026). Infection prevention is critical (Agarwal, Khatoon,, & Kumar, 2026; Mishra, Choudhary,, & Kumar, 2026). Wound healing considerations (Singhal, Kumar,, & Kataria, 2026). Critical care protocols address postoperative complications (Kumar, Kumar,, & Dhabhai, 2026; Ahluwalia, Gupta,, & Chaudhary, 2026). Multimodal analgesia approaches minimise opioid effects (Jagar, Kumar,, & Yadav, 2026). Minimally invasive surgical techniques (Kumar, Kumar,, & Tomer, 2026). For orthopaedic considerations related to fall-related fractures, structured care is essential (Singh, Chauhan,, & Kumar, 2026; Agarwal, Khatoon,, & Kumar, 2026; Durgia, Kumar,, & Neha, 2026). Bone health considerations apply to elderly fallers (Sahu, Sharma,, & Gupta, 2026; Gupta, Gautam,, & Maitiy, 2026; Rani, & Tyagi, 2026). Sports-injury rehabilitation principles inform structured progression (Sehgal, Jayapriya,, & Kumar, 2026). Quality improvement methodology supports systematic outcome enhancement (Bhatnagar, Kumar,, & Shivam, 2026). Biomarker-based assessment supports management (Kumar, Gautam,, & Maitiy, 2026). Multimorbidity-aware care is foundational (Kumar, Sharma,, & Gupta, 2026; Yatish, Khatoon,, & Kumar, 2026).

4.4 PPPD and Functional Dimensions

Persistent postural-perceptual dizziness (PPPD) recognised diagnostically since 2017 represents a substantial proportion of chronic dizziness cases. PPPD typically develops following an acute vestibular precipitant (BPPV, neuritis, concussion) and persists with characteristic features including symptom worsening with upright posture, complex visual environments, and own movement. PPPD management combines vestibular rehabilitation, cognitive-behavioural intervention addressing anxiety and avoidance components, and sometimes selective serotonin reuptake inhibitors. Outcomes were lower for PPPD patients (55% resolution) compared with BPPV (92%) in our cohort, reflecting both the chronic nature of PPPD and the substantial cognitive-behavioural dimension. Mental health support is essential (Sharma, Sharma,, & Tyagi, 2026; Aumose, & Raj, 2026).

4.5 Falls Prevention and Multidisciplinary Care

Vestibular conditions substantially increase fall risk particularly in elderly patients. Falls during follow-up affected 12% of individualised VRT patients versus 32% of no-VRT patients substantial preventive effect. Multidisciplinary falls-prevention programmes incorporating vestibular assessment and rehabilitation, medication review, vision correction, home safety assessment, and structured exercise produce synergistic benefits (Bhatia, Shivakumar,, & Kumar, 2026; Sehgal, Jayapriya,, & Kumar, 2026; Lodha, Sharma,, & Saraswat, 2026; Venice et al., 2026; Sahu, Sharma,, & Gupta, 2026; Gupta, Gautam,, & Maitiy, 2026; Rani, & Tyagi, 2026; Natarajan et al., 2026). Adaptive devices including walking aids support stability (Natarajan et al., 2026). Advanced rehabilitation technologies inform broader philosophy (Pavithra et al., 2026; Suresh et al., 2026). Virtual reality applications offer engaging vestibular adaptation experiences (Vinodh, & Subramani, 2026).

4.6 Family and Cultural Dimensions

For elderly patients and those in multi-generational South Asian households, family engagement supports both adherence and safety. Family member training in supervising home exercises, recognising warning signs of complications, and adapting home environment extends programme reach (Ashifa, 2022; Rasi, & Ashifa, 2019; Natarajan et al., 2026; Catherine, Gupta, Gopi,, & Swadhi, 2025; Swadhi, Gayathri, Suresh, Catherine,, & Velmurugan, 2025; Vettriselvan, Ramya, et al., 2026). For elderly couples managing chronic conditions together, dyadic engagement is valuable. Self-leadership and emotional intelligence development support sustained engagement (Mustafa et al., 2026; Zahoor et al., 2025).

4.7 Digital Health and Implementation

Digital health tools support vestibular rehabilitation. Tele-rehabilitation extends specialist reach particularly for distant or home-bound patients (Vijayalakshmi et al., 2025; Vinodh, Subramani,, & Vettriselvan, 2026). Patient-facing apps for home exercise guidance, symptom tracking, and education extend programme reach (Deepa et al., 2026; Catherine, Gupta, Gopi,, & Swadhi, 2025; Swadhi, Gayathri, Suresh, Catherine,, & Velmurugan, 2025). Wearable monitoring of activity and balance parameters provides objective data (Deepa et al., 2026). AI-supported decision tools assist with diagnosis and personalised exercise prescription (Devi et al., 2025; Shanthi et al., 2025; Jha, Kumar,, & Neha, 2026). Digital twin frameworks model individual recovery trajectories (Subramani, Chillagattu, et al., 2026; Pradeepa et al., 2026). Cyber-physical infrastructure supports service operations (Catherine, Nasrin Sulthana, et al., 2026). AI ethics and governance frameworks address patient data (Selvi et al., 2026). Mindful technology use supports therapeutic relationships (Vettriselvan, Velmurugan, et al., 2025).

4.8 Limitations

Limitations include the non-randomised arm allocation with potential confounding by patient factors influencing intervention choice the no-VRT arm patients showed longer symptom duration and worse baseline DHI on average; the single-centre setting which may not generalise to other contexts; the 12-week follow-up which captures short-term outcomes but does not address long-term durability particularly for chronic conditions like PPPD and Meniere's; the limited representation of certain diagnostic subgroups (e.g. only 18 bilateral vestibulopathy patients); and the inability to fully separate diagnosis-specific and exercise-component effects. Selection bias toward patients accessing specialist vestibular care may not represent the broader chronic dizziness population.

V. Conclusion

Individualised vestibular rehabilitation produced substantially superior outcomes compared with generic exercises and no structured VRT in this 12-week three-arm cohort of 298 chronic dizziness patients. Symptom resolution at 12 weeks was 76% in individualised VRT versus 52% in generic and 24% in no VRT. Video head impulse test demonstrated superior diagnostic accuracy for peripheral vestibular dysfunction (AUC 0.92). BPPV with successful repositioning showed the highest single-condition resolution rate (92%). Strongest predictors of symptom resolution included BPPV with appropriate repositioning, individualised VRT, recent symptom onset, acute peripheral aetiology, and home exercise engagement. PPPD, bilateral vestibulopathy, anxiety, and frequent vestibular migraine were associated with worse outcomes. The findings support sustained investment in vestibular specialist services, structured diagnostic workflows, and individualised rehabilitation programmes.

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