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Determining the Effect of Vestibular and Auditory Exercises on Postural Control and Coordination Among Individuals with Benign Paroxysmal Positional Vertigo: A Three-arm Single-blinded Study Protocol

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Introduction: Benign Paroxysmal Positional Vertigo (BPPV) is a vestibular disorder marked by short episodes of vertigo that occur in response to particular head movements. This phenomenon is caused by the displacement of otoconia within the semicircular canals. BPPV notably affects postural stability and coordination, leading to a diminished quality of life and a heightened risk of falls.

Need for this study: While the individual benefits of vestibular rehabilitation has been increasingly acknowledged for patients with BPPV, there remains limited evidence on the combined effect of vestibular and auditory exercises in the patients.

Aim: To assess the effects of vestibular and auditory exercises on postural control and coordination in individuals with BPPV.

Materials and Methods: A total of 36 participants will be recruited and subsequently assigned at random into three equal groups, each consisting of 12 participants. Group 1 will undergo active auditory exercises, group 2 will participate in vestibular exercises, and group 3 will undertake a combination of both auditory and vestibular exercises. Outcome measures such as Mini BESTest, Timed Up and Go Test (TUG), Dizziness Handicap Inventory (DHI), Tandem Walking, and the 6-Minute Walk Test, will be utilized to evaluate the participants for pre and post assessment. The intervention will be conducted four days a week for the duration of four weeks.

Keywords: Benign paroxysmal positional vertigo, Dizziness, Head movements, Postural balance, Quality of life.