

The clinical experiences and opinions of healthcare professionals regarding the audio-vestibular consequences of individuals with traumatic brain injury

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Introduction

It is estimated that 64-74 million people worldwide die or become disabled annually due to Traumatic Brain Injury (TBI).¹ TBI can cause a wide range of physical, cognitive, emotional, behavioural, and sensory symptoms, such as attention deficits, memory problems, depression, stress disorder, headaches, sleep disorders, hearing problems, speech perception difficulties in noise, balance disorders, tinnitus and hyperacusis.

Patients struggling with many problems after TBI may not easily notice the auditory and vestibular impairments. However, healthcare professionals (HCPs) who care for them should understand their auditory and vestibular conditions and be able to guide patients for necessary referrals to the ENT (ear nose throat) specialists and/or audiology department.



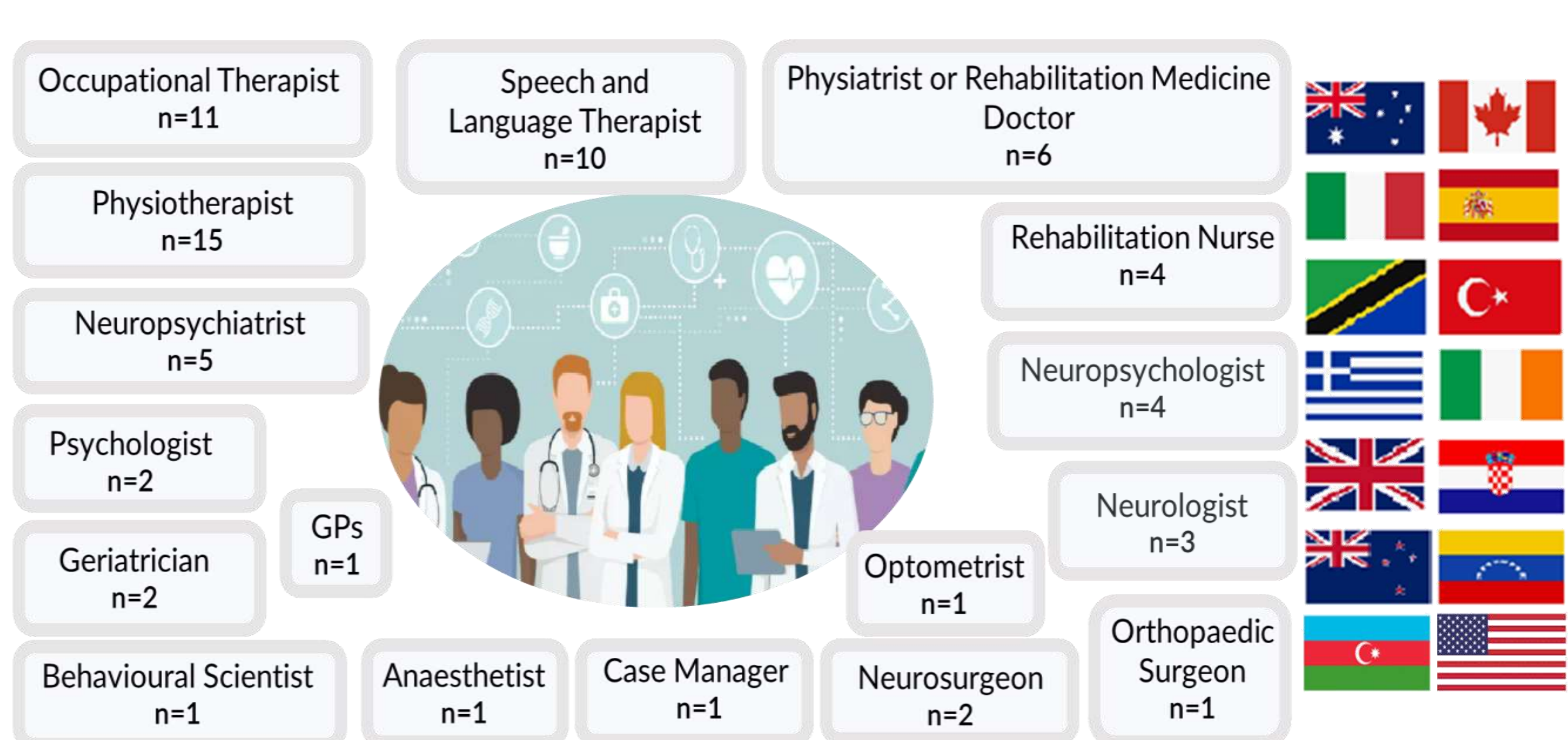
Aim: To gain an understanding of the current practice of HCPs dealing with individuals with TBI, who have audio-vestibular signs and symptoms, and to explore the experiences and opinions of HCPs (except for the ENT and audiologist) regarding audio-vestibular impairments after TBI.

Methods

- An online survey consisting of 16 closed and open-text questions was created in English and Turkish in order to capture the experiences of HCPs who care for patients with TBI worldwide.
- HCPs who were either ENT/audiologist were excluded from the survey.
- This cross-sectional survey was conducted from May 2022 to December 2022.

Results

- 70 HCPs have completed the survey.
- Participants were from a range of occupations that care for TBI patients working in 14 different countries, with the majority from the UK:



- More than half of the HCPs had more than 10 years of experience.

Results

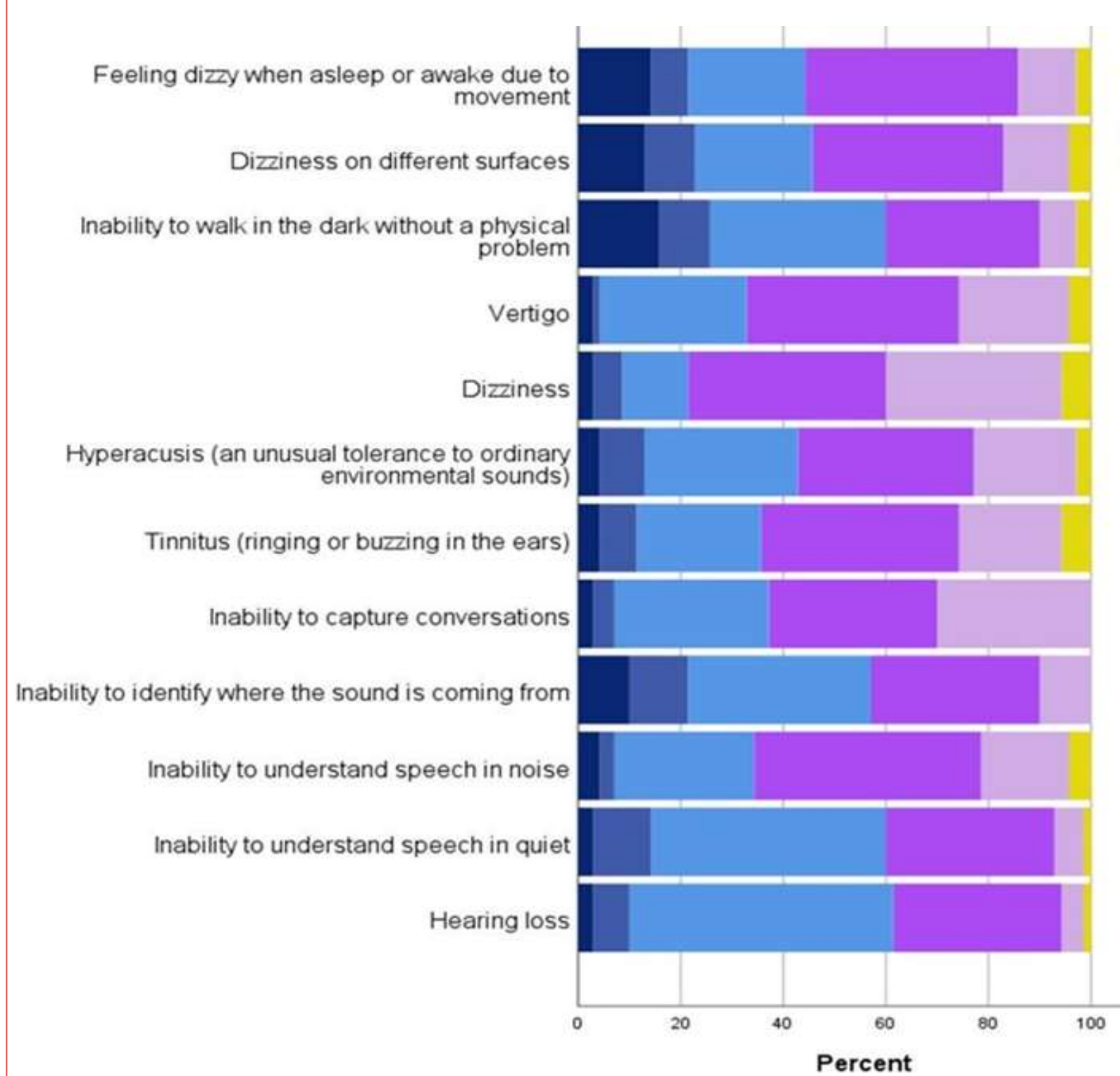


Figure 1. The frequency of audio-vestibular symptoms described by patients to HCPs

➤ HCPs reported that generally, “some” to “all” of their patients had auditory and balance problems including dizziness (79%), inability to understand speech in noise (66%), and tinnitus (64%) (Figure 1).

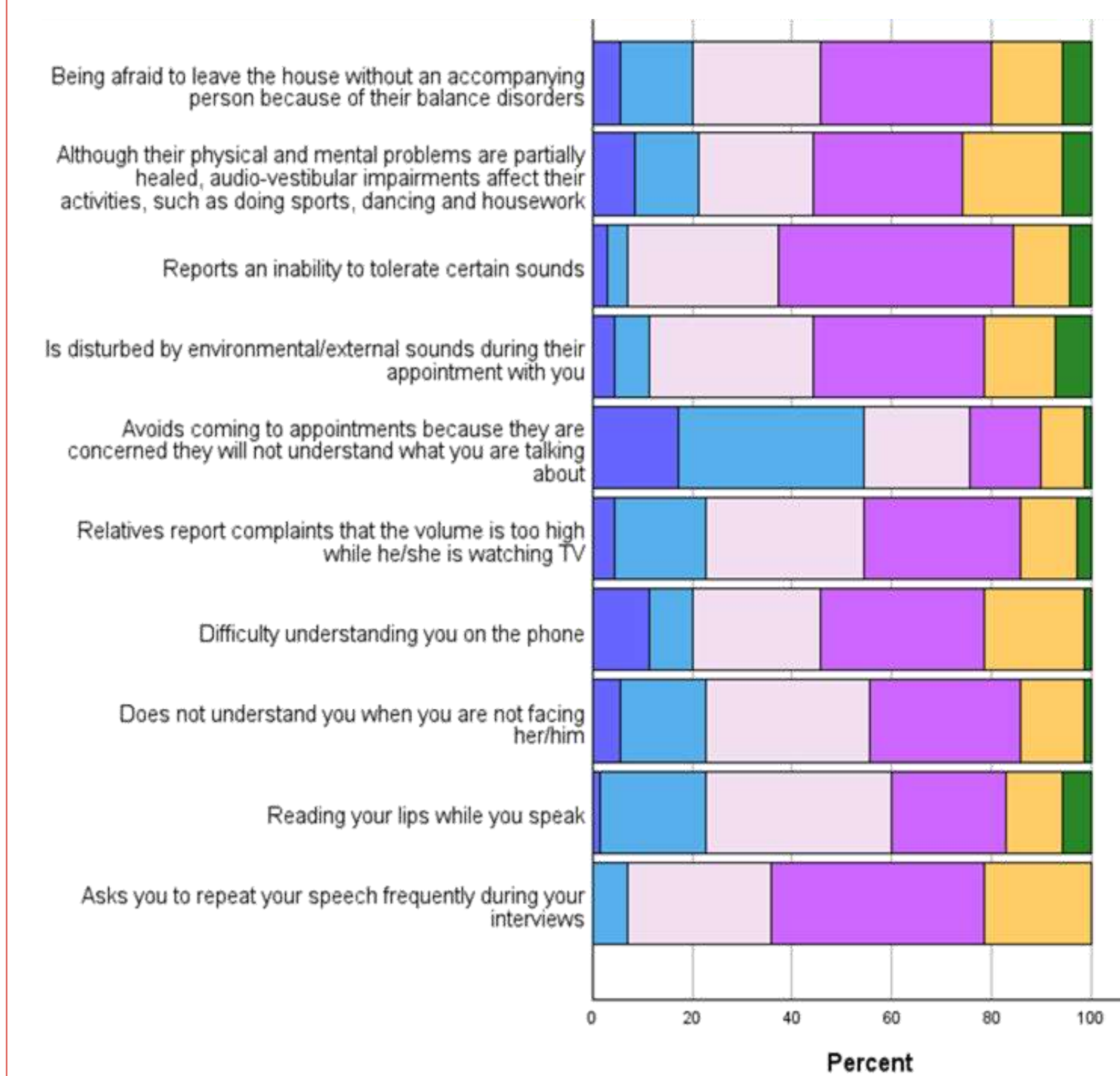


Figure 2. The frequency of audio-vestibular symptoms reported by patients to HCPs and/or observed by HCPs

➤ A number of problems were observed by more than half of HCPs including being asked to repeat the speech during their appointments (64%) and an inability to tolerate certain sounds (63%) (Figure 2) .

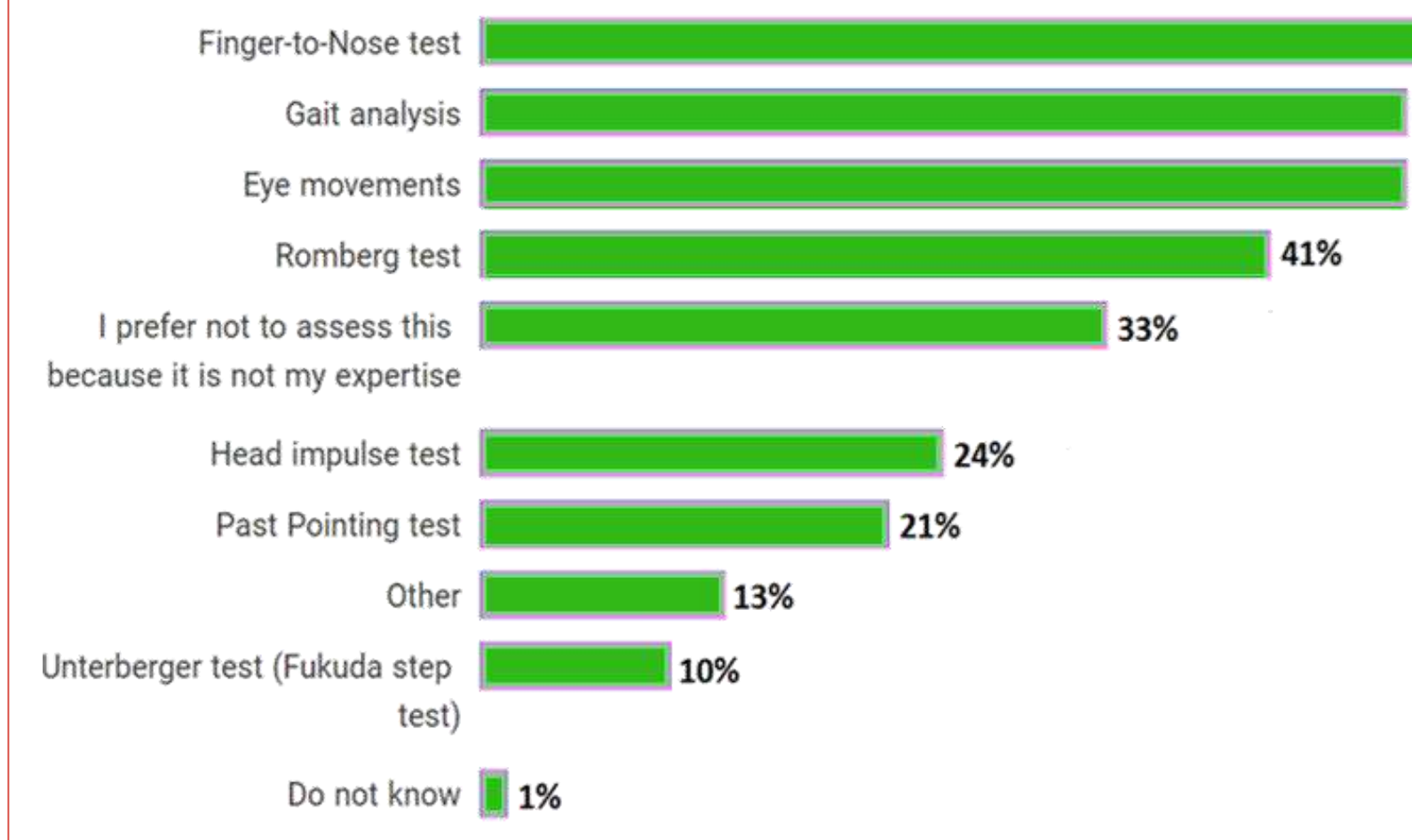


Figure 3. The screening methods preferred by HCPs to assess dizziness and balance disorders

➤ 74% reported that they asked about their patient balance status
➤ Whilst 33% reported that they did not perform balance assessments, the majority reported using screening tests (Figure 3).

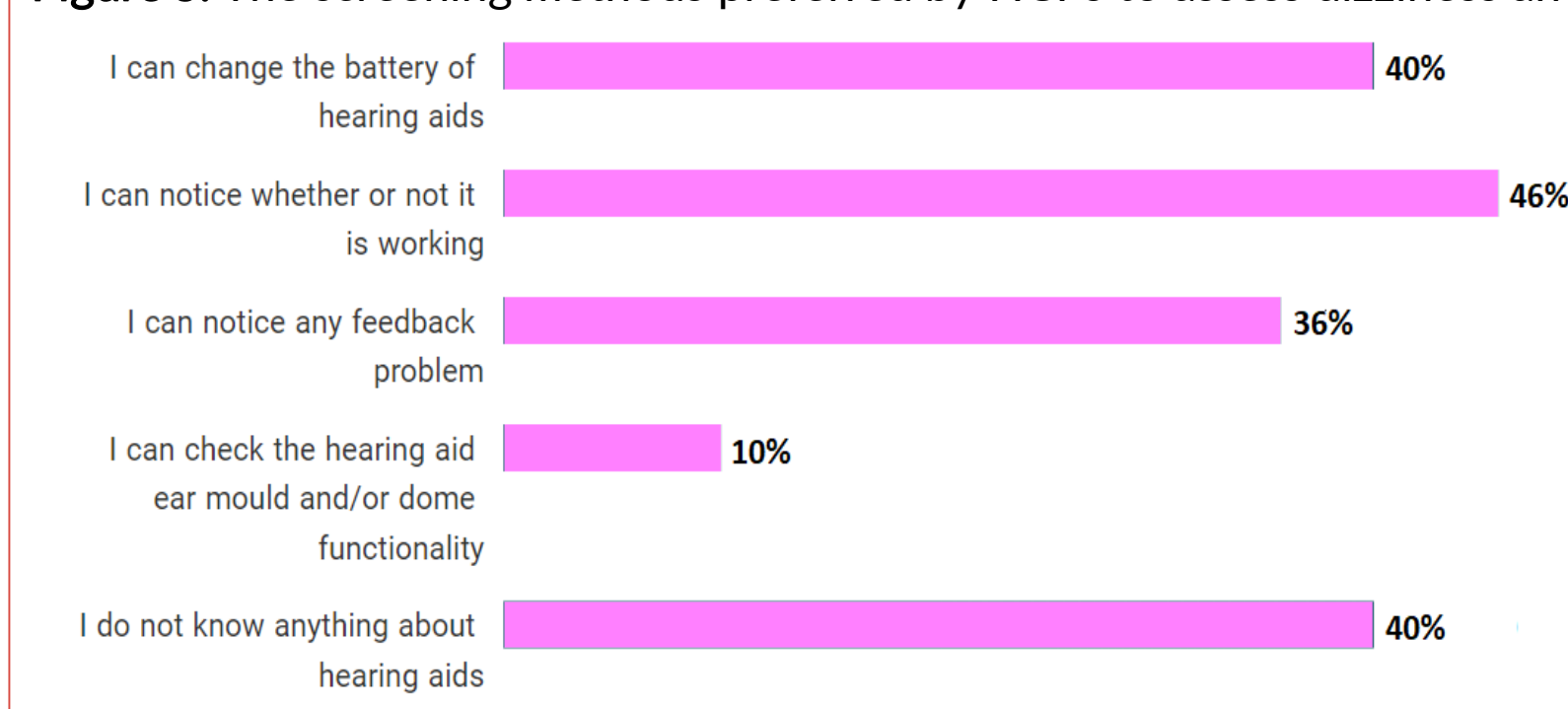


Figure 4. The confidence of HCPs to help patients with hearing aids

➤ 44% HCPs stated that if the patients have hearing loss, they recommend to use a hearing aid if they would like
➤ 40% did not know anything about hearing aids(Figure 4).

Conclusions

- HCPs who care for TBI patients are aware of audio-vestibular consequences but may not always be aware of the negative consequences of untreated auditory-vestibular impairments following TBI.
- A simple framework for screening and indications would be useful for onward referral for non-audiological specialists who see this patient group.

Reference: ¹ Dewan, M.C. *et al.* (2018). *Journal of neurosurgery*, 130(4), 1-1097.