

OT'S ROLE IN MANAGEMENT OF VESTIBULO-OCULAR DEFICITS

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References



Introduction

- Mild traumatic brain injury (mTBI) or concussion are associated with vestibulo-ocular (VO) deficits resulting in significant impact on overall performance and participation in daily occupations. Visual and vestibular impairments can limit an individual's ability to engage in their desired occupations within the home and community.
- Unfortunately, occupational therapy's (OT) role within concussion rehabilitation is not well defined.
- This project aimed to determine confidence and competence levels of OTs in managing VO deficits after a concussion or mTBI within the military setting using a voluntary electronic survey.

Literature Review

Over 472,000 service members experienced a TBI between 2000 and 2022 (Traumatic Brain Injury Center of Excellence, 2023). It is estimated that oculomotor dysfunction and dizziness could be as high as 90% in individuals with mTBI (Ciuffreda et al., 2007; Roberts et al., 2016; Traumatic Brain Injury Center of Excellence, 2021). The presence of vestibular deficits at evaluation was found to be associated with a delayed return to desired tasks (Martinez et al., 2020).

Overall skill and comfort levels in evaluating and treating individuals with post-concussive deficits vary widely across the field of occupational therapy. In a 2020 exploratory study, 30% of participants reported having adequate education on vision and 16% reported having adequate education on concussion in their entry-level programs (Reiser et al., 2020). Increased comfort and confidence in treating patients with post-concussive deficits was related to continuing education credits taken or self-study (Finn, 2019).

Significance

Military service members are exposed to environments that put them at an increased risk for concussive events including scenarios with blast exposures or hard landings. VO deficits after a concussion can be life-altering and impact an individual's ability to participate in ADLs and household tasks, such as vacuuming, reaching to pick up a child, or going to the gym (McGuire, 2022).

OTs are an essential part of the multi-disciplinary team treating individuals after concussive events, but many OTs do not feel that they have the knowledge or abilities to adequately manage these individuals. Deficits may go untreated leading to prolonged functional limitations amongst patients.

Advocating for OT's role with this population should focus on the functional presentation of deficits and be careful not to duplicate services with other medical professions. The top-down and occupation-based framework that OT provides should be incorporated into multidisciplinary treatment of patients with acute or chronic concussive symptoms.

Research Question

What level of confidence and competence do occupational therapists have in managing patients with vestibulo-ocular deficits after a concussion or mTBI within the military setting?

Methods

The overall goal of this project was to enhance OT's role and competency in managing VO deficits after concussive events. A survey was used to determine the current level of confidence and competence amongst OTs in managing patients with VO deficits after a concussion. Based on the survey results, a brief resource guide was developed focusing on evaluation and treatment for VO deficits.

Participants: 25 occupational therapy providers within the military network

Instrument:

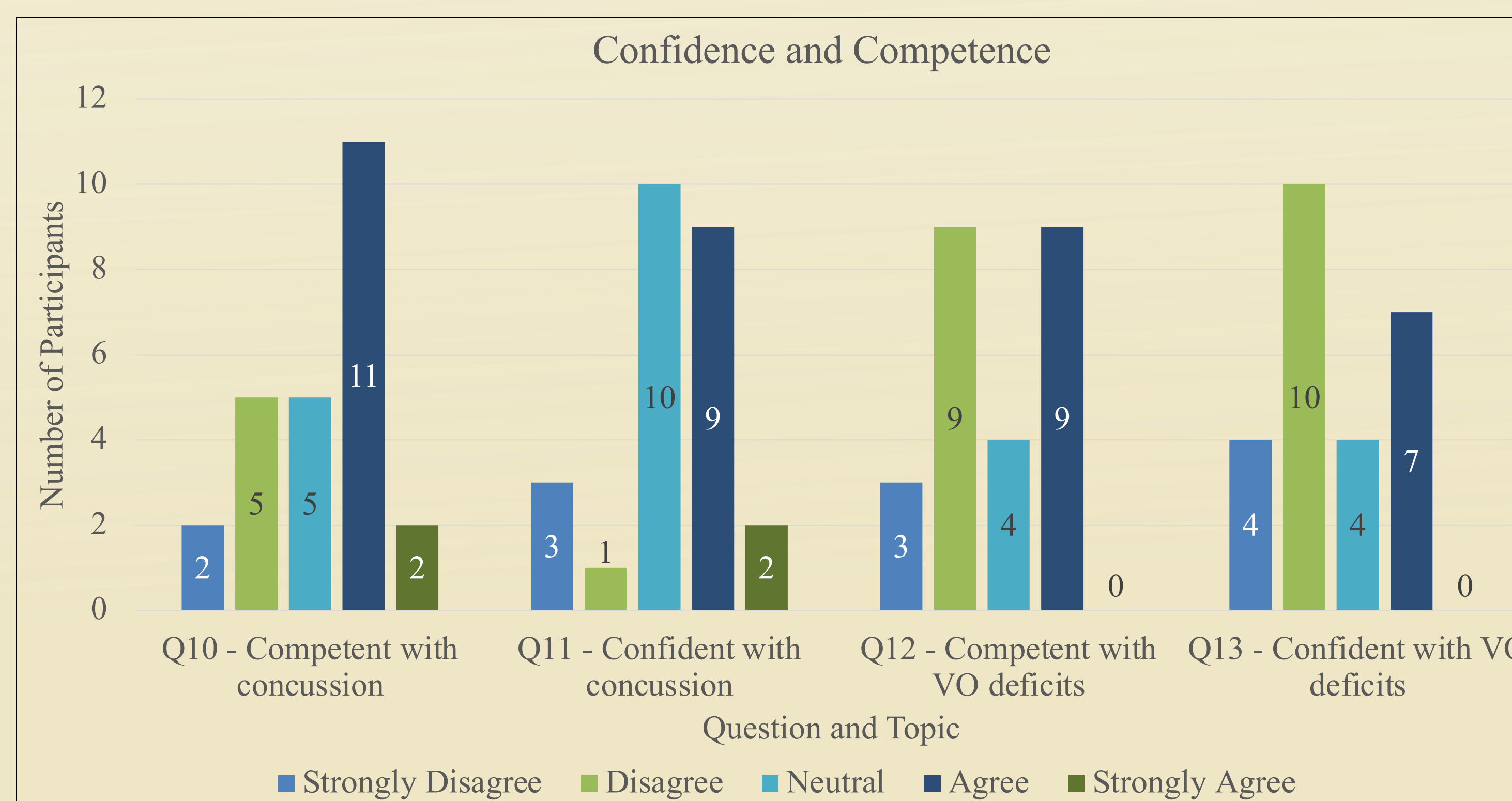
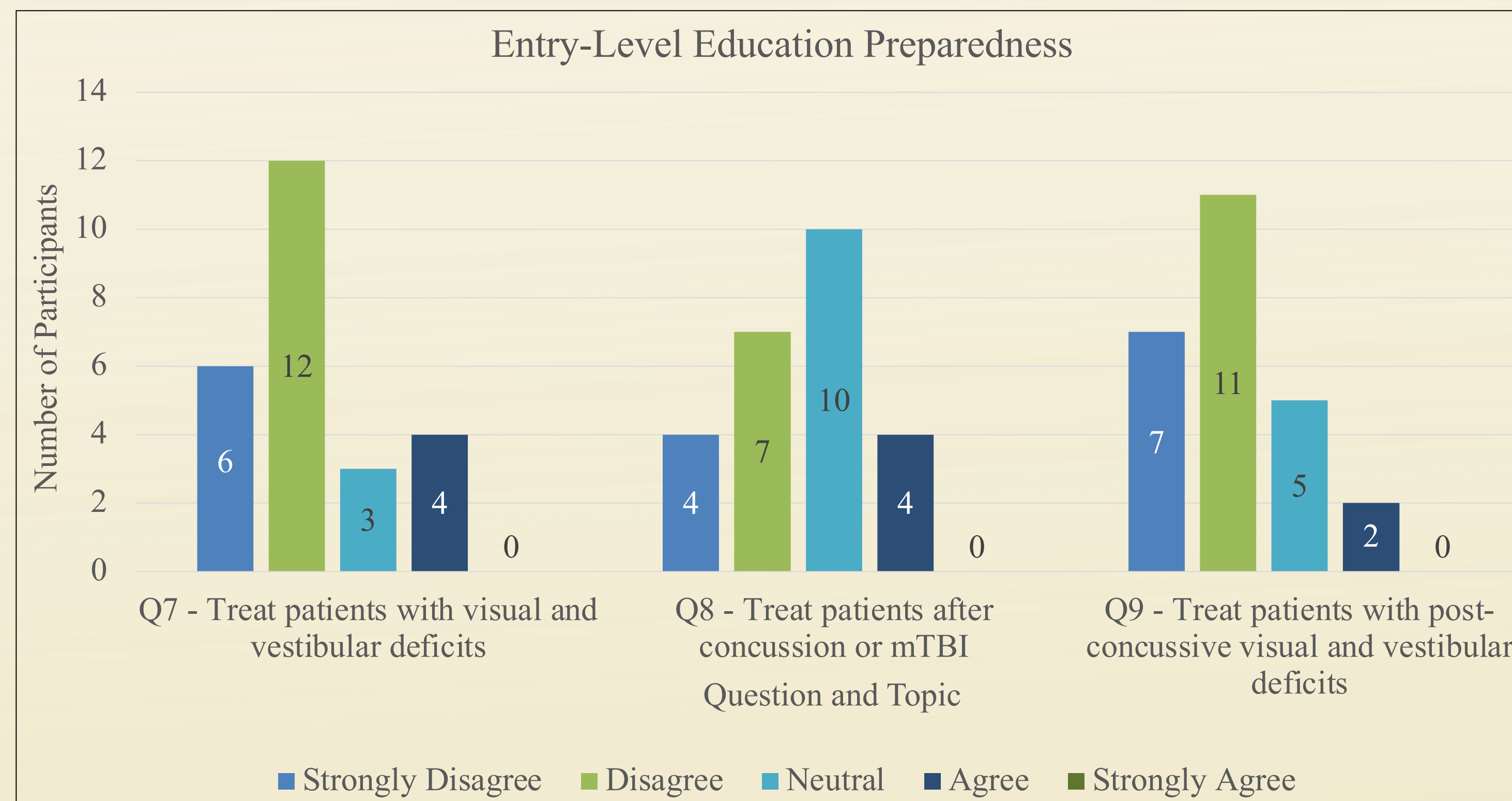
- Electronic survey with qualitative and quantitative components
- Measured overall confidence and competence of OTs in managing post-concussive VO deficits

Data Collection: Online survey using Survey Monkey

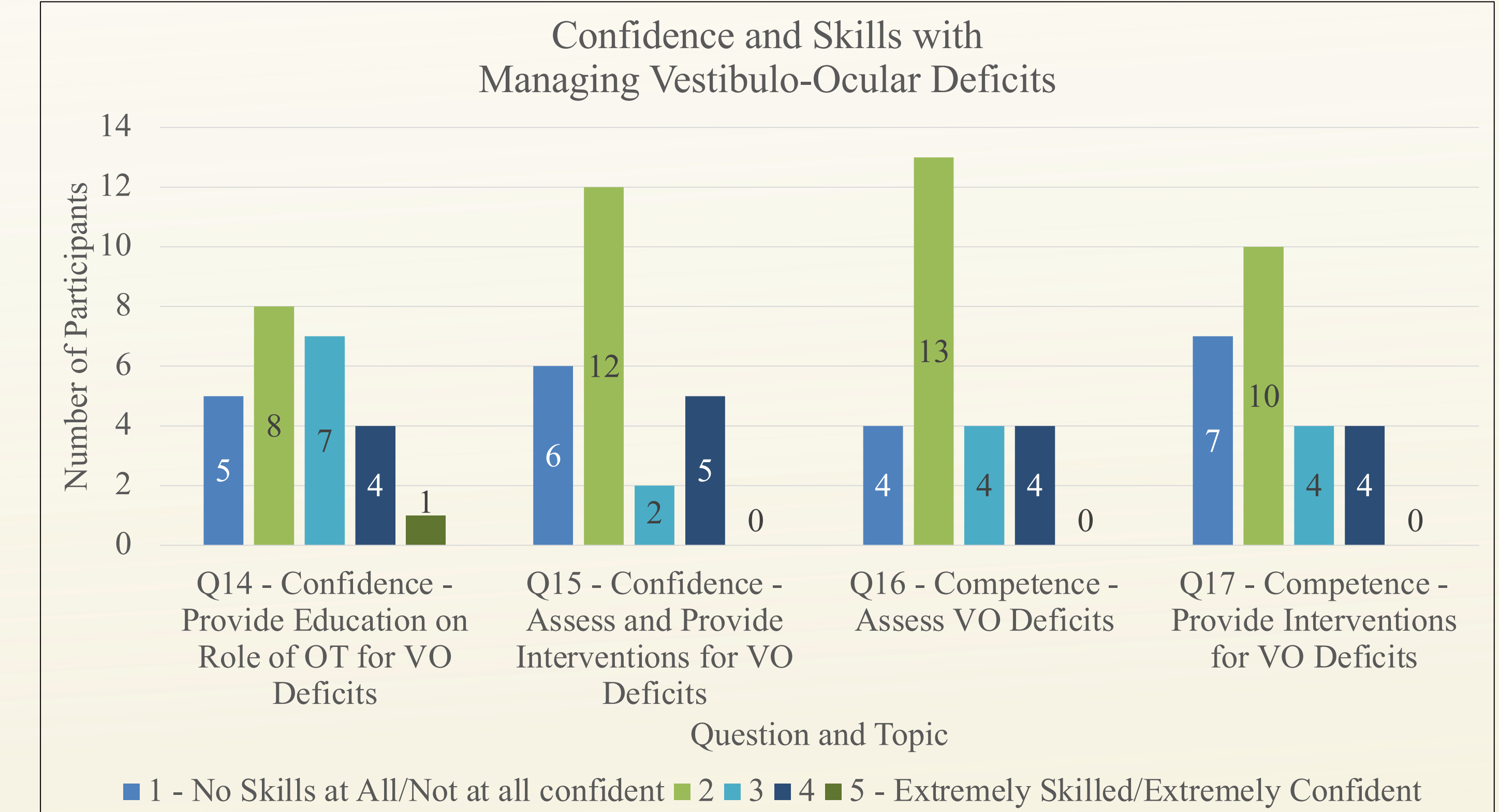
Data Analysis:

- Categorical variables and numerical data from the Likert-scale and multiple-choice questions were analyzed to determine frequencies and percentages
- Data received from optional open-ended questions was reviewed to determine common patterns or themes

Results



Results



Most intimidating part of assessing and treating vestibulo-ocular deficits

- Lack of training or knowledge
- Lack of experience or exposure
- Overlap with other medical professions
- Specific topics

Fears, concerns, or personal/environmental barriers

- Fears: "gross incompetence"
- Personal Barriers: "limited knowledge"
- Environmental Barriers: "limited opportunity for OT"

Most helpful methods to increase confidence and competence

- CEUs
- In-person/hands-on training
- Foundational education
- Advocacy

Limitations

The survey included a small sample size representing OTs within the military and Veterans Affairs network. The results cannot be generalized to the population but still represent the need for further education within this area. The survey only included questions regarding current level of confidence and competence in managing VO deficits after a concussion. Future projects would be beneficial to analyze any changes in confidence and competence after review of educational materials or participating in an educational series.

Summary

The OT profession continues to grow and define its role in a variety of settings and with countless populations. OTs are experts in understanding the impact an injury, illness, or disability can have on a person's functional participation. Most individuals recover fully and quickly after a concussion or mTBI, but some may have persistent symptoms. Vestibulo-ocular deficits after a concussion or mTBI can be life-altering.

Results gathered from this project support the need for a continued emphasis on education of concussion management focusing on VO deficits. It is anticipated that educational resources focusing on the functional presentation of vestibular and visual deficits within the military setting will guide OTs in the evaluation and treatment of these deficits to promote independence and return to desired tasks.