

Introduction

Work-related shoulder disorders (WSDs) are the third most common musculoskeletal injuries among firefighters (Tahernejad et al., 2023). About 23% of Canadian firefighters experience WSDs (Nazari et al., 2020) but there is limited clarity and evidence on clinicians' perspectives in managing firefighters with WSDs.

Research Questions

- What are the underlying causative factors contributing to WSDs among firefighters?
- What management strategies are specific to firefighters with WSDs?

Methods

- Using interpretive descriptive methodology (Thorne et al., 2016), semi-structured interviews were conducted with 15 physiotherapists (PTs) and orthopedic surgeons between 30 and 61 years of age, who had experience managing WSDs among firefighters.

Results: Demographics

Figure 1: Canadian Provinces

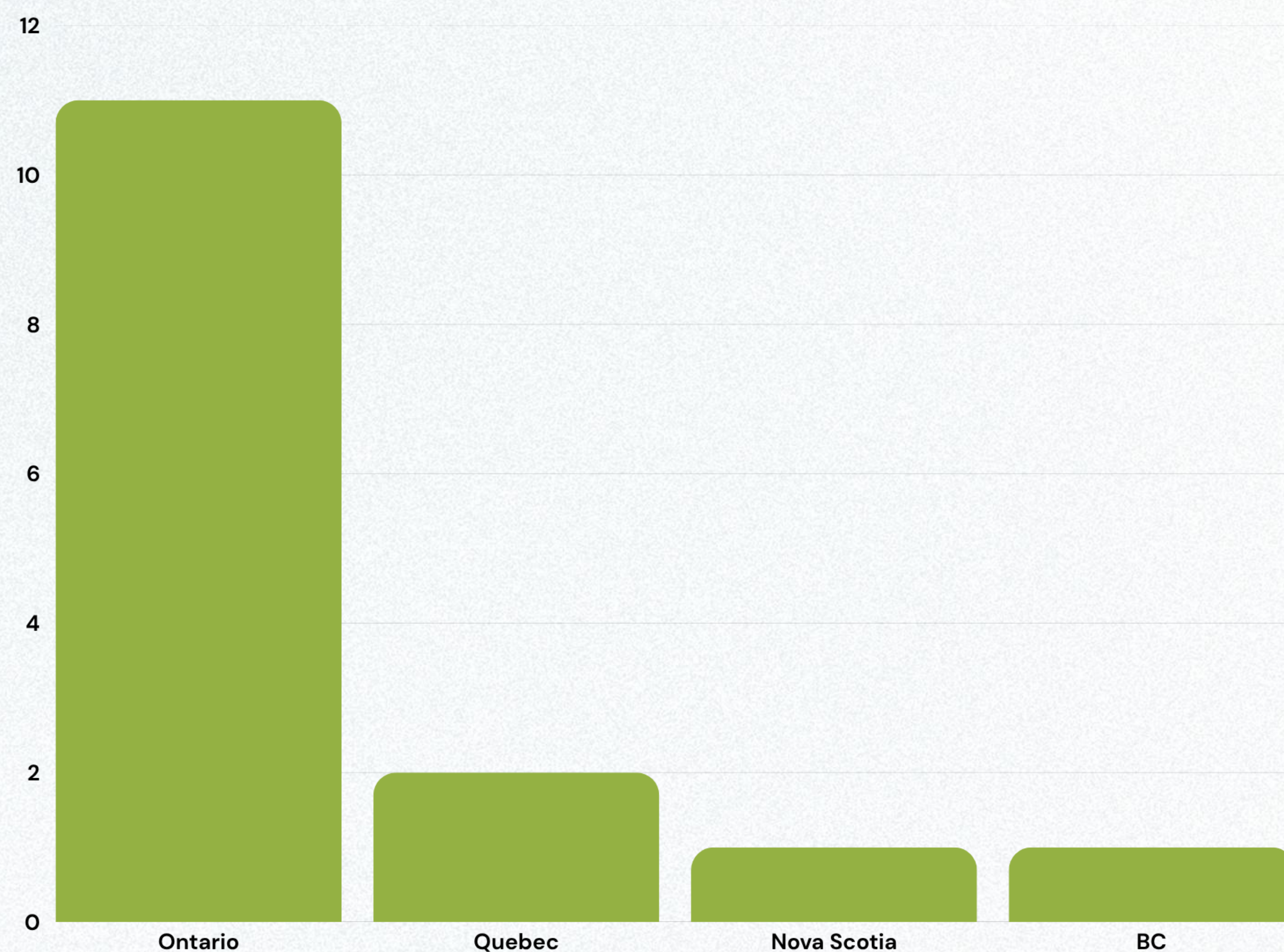
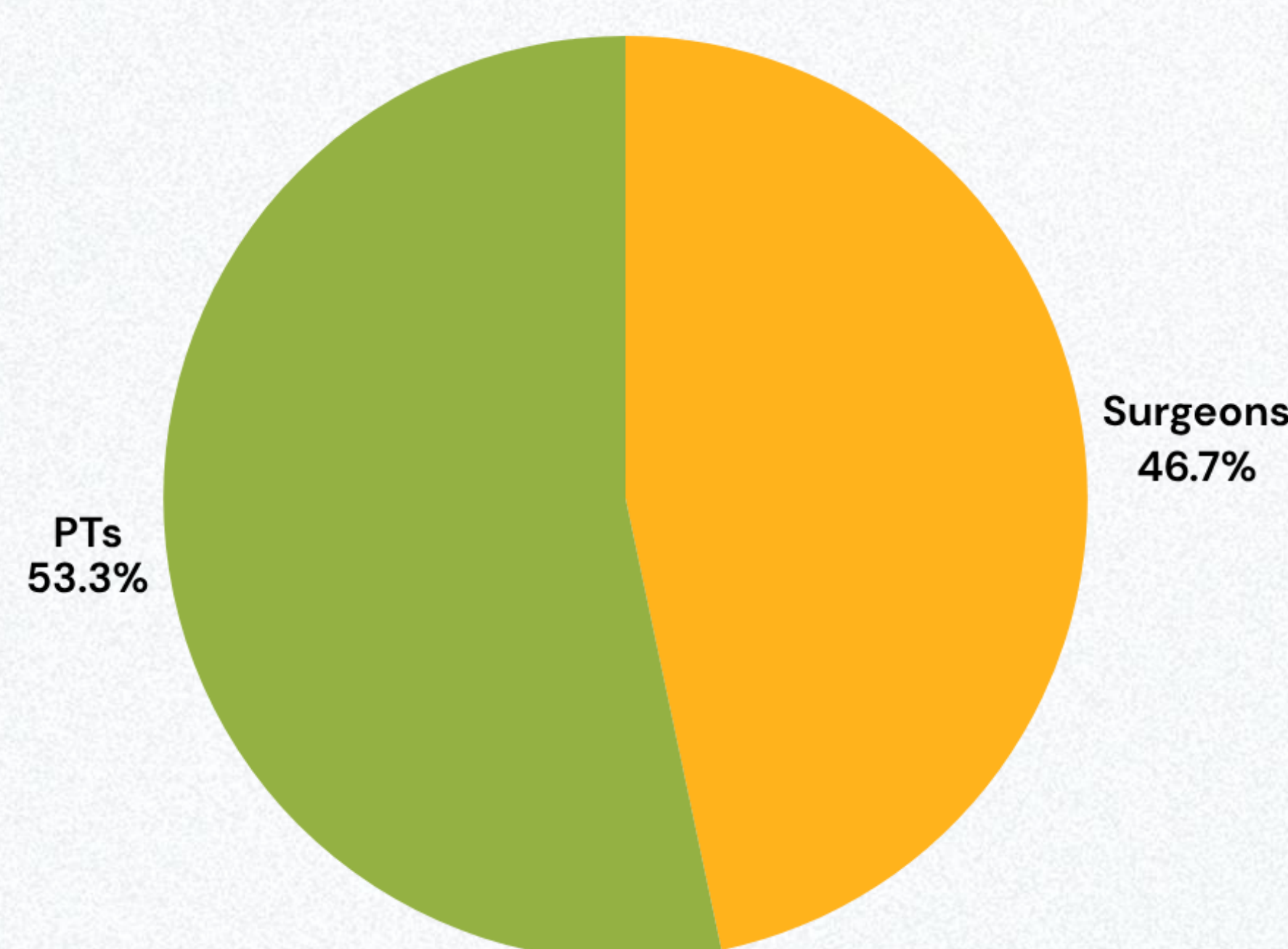
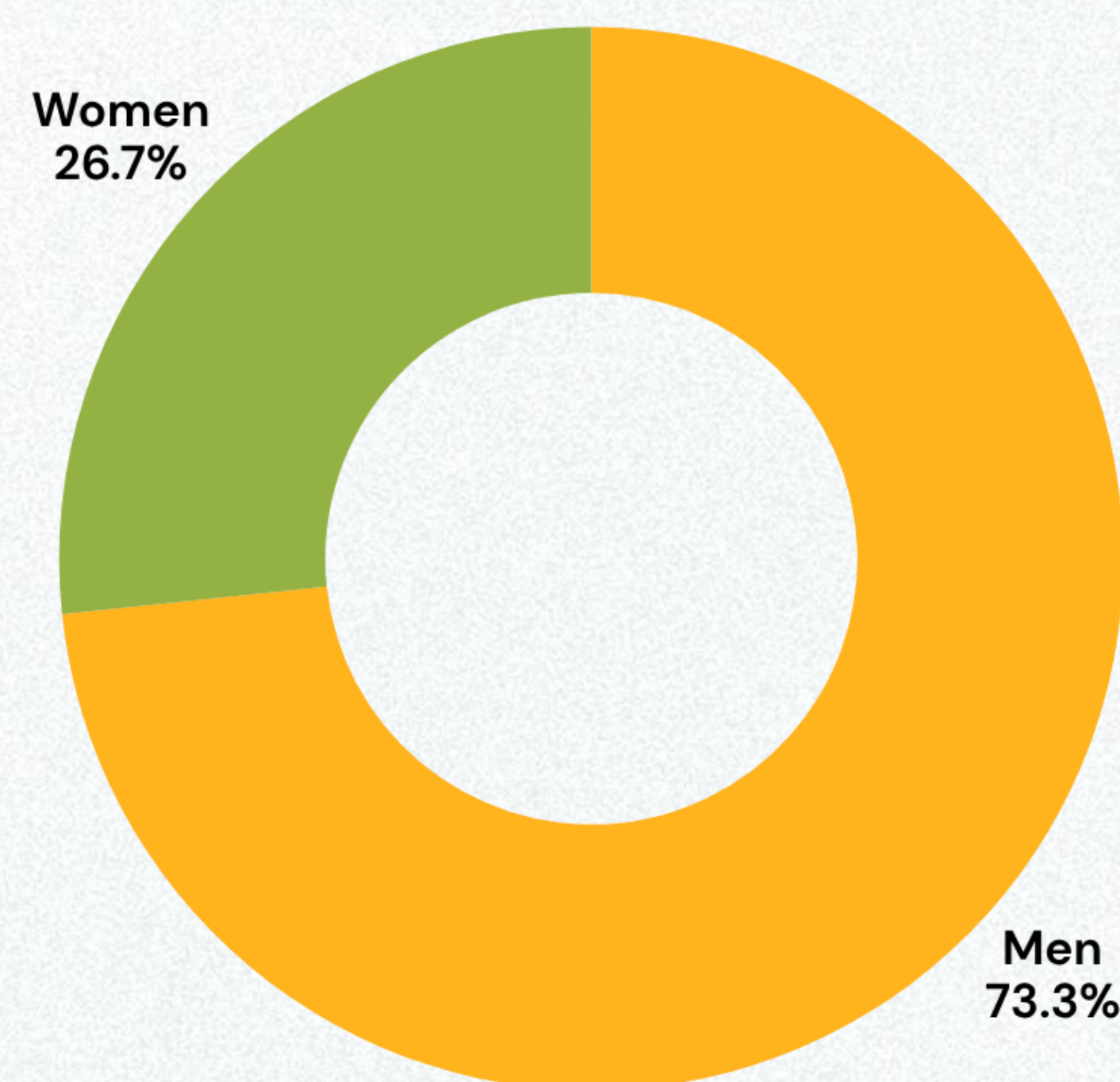
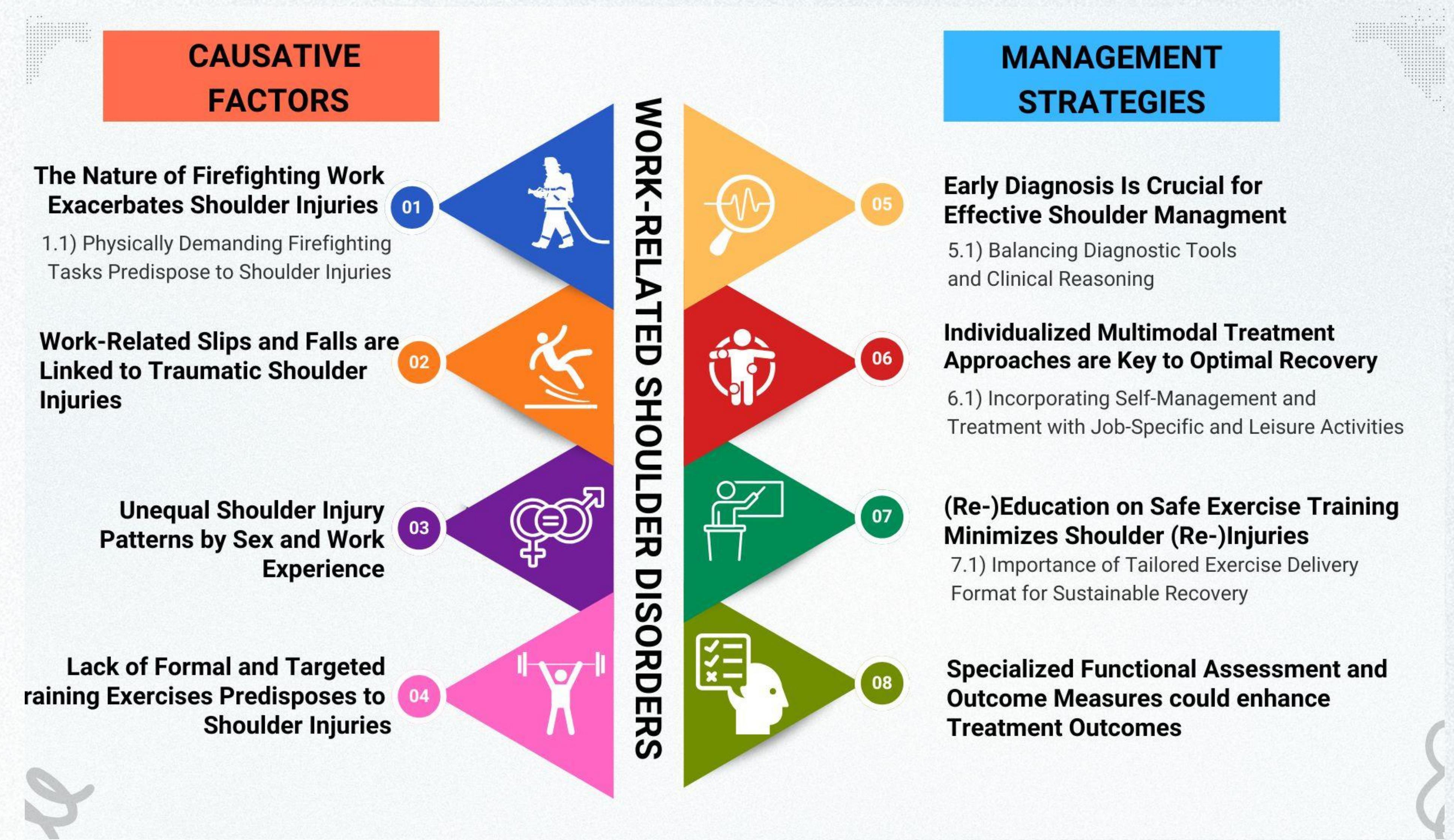


Figure 2: Clinician Specialty

Figure 3: Gender of Clinicians



Results: Major Themes and Sub-Themes



Thematic Quotes

Themes	Quotes
1. The Nature of Firefighting Work Exacerbates Shoulder Injuries	“Extended hours... overtime... unpredictable workplace combined with fatigue may put them (firefighters) at higher risk of (shoulder) injury.” PT04
2. Work-Related Slips and Falls are Linked to Traumatic Shoulder Injuries	“...Two of the injuries I’ve had (treated) came from slip and falls, like the subluxation came from slipping while moving over a tree and pushed into the crank position and dislocating them (shoulders)...” PT07
3. Unequal Shoulder Injury Patterns by Sex and Work Experience	“Most of the people that I see would be somewhat experienced (with firefighting). Chronic (shoulder) injuries happen with age... acute injuries... age is less of a factor...” OS09
4. Lack of Formal and Targeted Training Exercises Predisposes to Shoulder Injuries	“...So, I do agree that having some kind of formal recommendation for training is key... But I think once they’re firefighters. There’s nothing to maintain that...” OS12
5. Early Diagnosis is Crucial for effective shoulder management.	“Yes, I think the time sensitive diagnosis in the shoulder tends to be the rotator cuff tendon tears. ...They undergo atrophy and do develop some irreversible changes fairly quickly, so I think it’s very important to ...pursue treatment quicker...” OS08
6. Individualized Multimodal Treatment Approaches are Key to Optimal Recovery	“Every shoulder is different... they still need to be managed in a personalized way.” PT07
7. (Re-)Education on Safe Exercise Training to Minimize Shoulder (Re-) Injuries	They’re in their 40s or 50s lifting like they’re in their 20s... that’s causing wear and tear. There’s a lot of education points on what overuse really is.” PT01
8. Specialized Functional Assessment and Outcome Measures could enhance Treatment Outcomes	“...Specific to firefighters, I do occasionally use the DASH, but besides that ...I also use the patient specific functional scale (PSFS)...” PT05

Conclusion/Implications

- Firefighter WSDs are multifactorial, exacerbated by occupational exposures, sociodemographic factors and delayed or non-specialized care.
- Clinicians emphasize the need for implementing targeted functional rehabilitation approaches that consider the unique physical and operational demands of firefighting duties

3-minute Storytelling of Findings



References

1. Tahernejad S, Farahi-Ashtiani J, Veisani Y, Ghaffari S, Sahebi A, Makki F. A systematic review and meta-analysis of musculoskeletal disorders among firefighters. J Safety Res. 2024;88:374–81. pmid:38485380
2. Nazari G, MacDermid J, Cramm H. Prevalence of musculoskeletal disorders among Canadian firefighters: A systematic review and meta-analysis. Journal of Military, Veteran and Family Health. 2020;6(1):83–97.
3. Thorne S. Interpretive Description. 2016. <https://doi.org/10.4324/9781315426259>
4. Osifeso TA, MacDermid JC, Limenih G, Szekeres M, Parikh P, et al. (2026) “Every shoulder is different”: A qualitative study of clinicians’ insights on the causative factors and strategies of managing work-related shoulder disorders among firefighters. PLOS ONE 21(5): e0348934. <https://doi.org/10.1371/journal.pone.0348934>