Accessibility and Quality of Internet Resources on Overhead Throwing Injury Patterns in Female Athletes

Abstract

Introduction: Overhead throwing injuries are highly prevalent among female athletes, who possess distinct biomechanics compared to their male counterparts. Because patients frequently consult Google's "People Also Ask" (PAA) feature for preliminary medical information, the quality, readability, and demographic representation of these online resources are critical. This study evaluated the accessibility, credibility, and content of online information regarding overhead throwing injuries specific to female athletes.

Methods: Four female-specific search terms related to overhead injuries in softball, tennis, volleyball, and swimming were queried using Google. The SEO Minion plugin was used to extract PAA questions and their source URLs to the fifth level, yielding 100 webpages per sport (400 total). Text readability was assessed using the Flesch-Kincaid Grade Level (FKGL) and Gunning Fog Index (GFI). Credibility was evaluated by two independent reviewers using the 4-point Journal of the American Medical Association (JAMA) benchmark criteria.

Results: Of the 400 analyzed webpages, only 11 (2.75%) specifically mentioned female athletes or sex-specific biomechanics, and merely 3 (0.75%) identified a female physician author. Readability metrics revealed that the content was excessively complex, with a mean FKGL of 9.12 and a GFI of 12.93, substantially exceeding the 6th- to 8th-grade reading level recommended for patient education materials. Overall credibility was also low, with a mean JAMA score of 1.75 out of 4.

Conclusion: There is a profound deficit of online educational resources addressing overhead throwing injuries in female athletes. The available information is predominantly male-centric, lacks female authorship, and is written at an inaccessible reading level. The sports medicine community must actively develop and promote accurate, readable, and representative online content to support female athletes and facilitate informed decision-making.

Keywords: *female athletes, overhead throwing injuries, online health information, readability, patient education*