

A Systematic Review of Sex-Related Differences in Response to Post-Operative Orthopaedic Pain Management Protocols

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Introduction. Current literature indicates that sex and gender impact the pain experience, with increased incidence and intensity of clinical pain being observed among women. Much of orthopaedic literature, across conditions, does not consistently disaggregate study results based on sex. The purpose of this study was to review the literature concerning orthopaedic surgery post-operative pain and whether (and how often) sex was considered when assessing results of pain management interventions.

Methods. Literature searches utilized PubMed, Science Direct, ClinicalKey, and CINAHL Complete. Articles that described pain management after orthopaedic surgery published in English between January 25, 2016 and April 30, 2022, were included. The data abstracted included study type, type of pain management, and presence of sex-based reporting of results.

Results. Of the 8,610 article abstracts reviewed, 48 articles were included for further evaluation. Nine (19%) discussed the differences in pain between women and men in terms of opioid consumption. 37 (77%) of the articles mentioned sex in the demographics but stated “no difference in treatment or response” between sexes in the results, without providing raw data or related statistics, preventing further interpretation of results. Two (4%) articles did not report the sex of participants within the publication.

Conclusions. Clinical research suffers from underrepresentation of women participants and underreporting of results based on sex or gender. The incorporation of sex and gender as variables in health outcomes is critical for optimal care for patients. Further research is needed to fully understand how sex affects the pain experience and post-operative pain management.