

Sex and gender differences in quality of life and related domains for individuals with adult acquired lower-limb amputation: A scoping review.

Stephanie R. Cimino¹, Abirami Vijayakumar¹, Crystal MacKay^{1,2}, Amanda L. Mayo³, Sara J.T. Guilcher^{1,4}, Sander L. Hitzig^{1,5}

¹Rehabilitation Sciences Institute, University of Toronto; ²Westpark Health Care Centre, Toronto; ³Sunnybrook Health Sciences Centre;

⁴Leslie Dan Faculty of Pharmacy, University of Toronto; ⁵St. John's Rehab Research Program, Sunnybrook Research Institute

Background

- Increasing recognition for the importance of how sex & gender may influence outcomes in rehabilitation.
- Following lower-limb amputation (LLA), differences by sex & gender have been reported in risk factors, health outcomes & experiences.^{1,2}
- There is a paucity of evidence about how sex & gender influence quality of life (QoL) & its related domains.

Objective

A scoping review was conducted to map the literature on what is known about sex & gender differences in QoL & related domains for individuals with an adult acquired LLA.

Methods

- The framework proposed by Levac et al. was followed.³
- A computer-assisted search of four online databases (Medline, EMBASE, CINHAI & PsychINFO) & relevant grey literature from January 1, 2000 to July 13, 2020 was conducted.
- The following inclusion criteria were used:
 1. Any study design that included sex and/or gender as part of their analysis of the data on QoL or a related domain;
 2. At least one individual 18 years or older at the time of their major LLA.
- Articles were assessed for eligibility by two independent reviewers. Full-text articles regardless of language were retrieved for articles that met the above criteria.
- Data were analyzed using descriptive numerical analysis & thematic analysis.

Key Findings

- Following de-duplication, 2,056 unique articles were screened. Of these, 111 met the criteria & were included.
- Most of the articles were cross-sectional in nature (n=93) & conducted in the United States (n=30).
- Women/females were underrepresented. No articles described trans or non-binary participants.
- Fifty-five articles did not find sex and/or gender differences in QoL or related domains, while 66 found differences (see **Figure 1**).
- For studies that reported differences, women/females tended to have poorer outcomes. This was particularly true for prosthetic, mental health & occupation related outcomes.

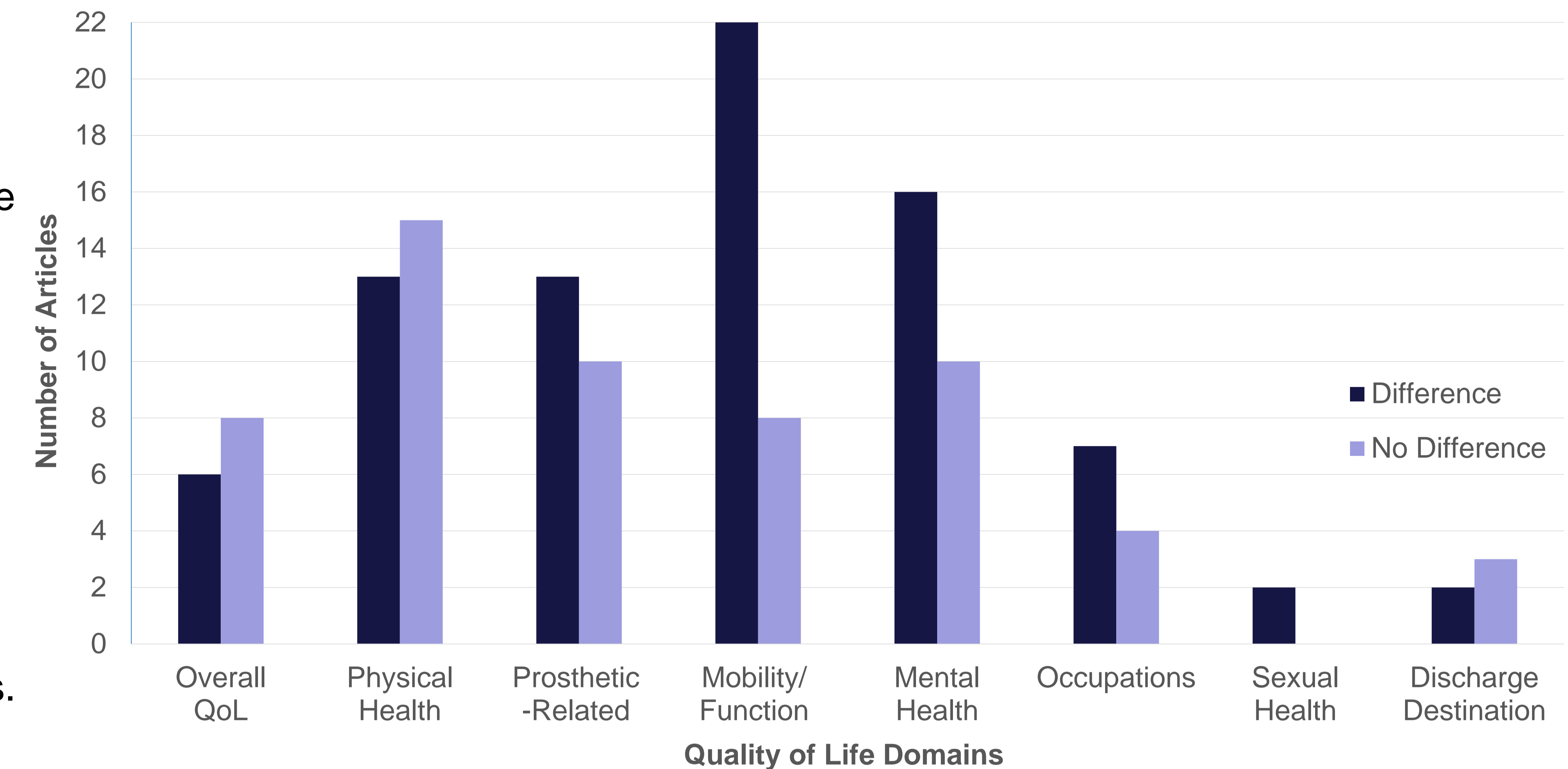


Figure 1: Articles that reported differences vs. no differences for overall QoL & related domains.

Discussion

- The results suggest that differences by sex & gender for adults with an adult acquired LLA for QoL & related domains exist.
- Women/females were less likely to be prescribed a prosthesis, more likely to have higher rates of mental health problems including depression & anxiety & were less likely to return to work & driving following their LLA.
- More work is needed with respect to sexual health & sexuality in order to develop sex & gender specific interventions.
- Due to the lack of information on how gender was defined, it is difficult to draw conclusions on whether differences are sex or gender related. Future research should seek to improve measurement of these constructs to ensure accuracy of the information being captured.

Summary

- Sex & gender play an important role on outcomes following LLA, with clear implications for domains that impact QoL.
- The results of this review can be used to inform more targeted sex or gender practices to optimize care.
- Future research should seek to include gender non-conforming participants to identify additional needs.

References

1. Moura Neto A, Zantut-Wittman DE, Fernandes TD, et al. Risk factors for ulceration and amputation in diabetic foot: study in a cohort of 496 patients. *Endocrine*. 2013;44(1):119-124; 2. Singh R, Hunter J, Philip A, et al. Gender differences in amputation outcome. *Disabil Rehabil*. 2008;30(2):122-5; 3. Levac D, Colquhoun H, O'Brien KK. Scoping studies: advancing the methodology. *Implement Sci*. 2010;5:69.