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Title

Prosthesis satisfaction in lower limb amputees, a systematic review of associated factors and questionnaires

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Summary

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Patient prosthesis satisfaction is an important objective in rehabilitation treatment but often not fully achieved. Many factors influence satisfaction and these can be categorized in aspects of the prosthesis and residual limb, while relevance seems to be related to patient characteristics.

Introduction

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Regaining mobility with the use of a prosthesis is an important objective for persons with a lower limb amputation. Satisfaction with the prosthesis optimizes use. However, many amputee patients are not satisfied with their prosthesis and specific groups even reject their prosthesis as a result of dissatisfaction. Prosthesis satisfaction is influenced by many factors that have thus far been studied fragmentarily.

Methods

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Aim of this study was to review literature regarding factors influencing patient satisfaction with transtibial prostheses, report satisfaction scores, present an overview of questionnaires used to assess satisfaction and examine operationalizations of satisfaction.

A literature search was performed in PubMed, Embase, CINAHL, Cochrane and Web of Knowledge electronic databases from conception to February 2018. Inclusion criteria for studies were: satisfaction with a definitive transtibial prosthesis in adult patients assessed by using a questionnaire, with sample sizes larger than 10 and published in English, Dutch or German languages.

Results

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Twelve of the 1832 studies identified met inclusion criteria. Sample sizes ranged from 14 to 581 participants, mean age ranged from 18 to 70 years, and time since amputation ranged from 3 to 39 years. The Prosthesis Evaluation Questionnaire (PEQ), Satisfaction with Prosthesis Questionnaire (SATPRO), Socket Fit Comfort Score (SCS), Survey for Prosthetic Use (SPU), Trinity Amputation and Prosthesis Experience Scales (TAPES) and 2 author-designed questionnaires were used in assessing different aspects of prosthesis satisfaction. Satisfaction was influenced by appearance, properties, fit, and use of the prosthesis, as well as aspects of the residual limb. These influencing factors were not equally relevant for all patients. Significant associations were found between prosthesis satisfaction and patient gender, amputation level/etiology and liner use. No single factor was found to significantly influence prosthesis satisfaction or dissatisfaction.

Conclusion

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A variety of factors influence prosthesis satisfaction. These were categorized in prosthesis domains (appearance, properties, fit and function/use) and aspects of the residual limb including skin aspects and residual limb/phantom pain. Relevance of certain factors was related to specific patient characteristics including age and gender. The questionnaires assessing prosthesis satisfaction used different operationalizations, making outcome comparisons between the included studies difficult.

References

References: Baars EC, Schrier E, Dijkstra PU, Geertzen JHB. Prosthesis satisfaction in lower limb amputees: A systematic review of associated factors and questionnaires. *Medicine (Baltimore)*. 2018 Sep;97(39):e12296.