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Title
Checklist use for assessment of satisfaction with trans-tibial prostheses.

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Summary
This study was done to assess the value of using a checklist during certified prosthetist orthotist (CPO) consultation and found that checklist use identified additional factors of dissatisfaction regarding the prothesis and residual limb and improved the quality of consultation.

Introduction/ basics
Prosthesis user’s satisfaction is an important goal in rehabilitation and is influenced by characteristics of the prosthesis and residual limb. However, more than 50% of prosthesis users are not satisfied with their prosthesis. During prosthesis checking, the certified prosthetist orthotist (CPO) takes inventory of issues causing prosthesis user’s (dis)satisfaction. This assessment is often not systematic or standardized. We developed a checklist to systematically assess prosthesis user’s satisfaction with their prosthesis during CPO consultation and evaluated its value. Aims of this study were: (1) to systematically assess, by using a checklist, prosthesis user’s satisfaction with their trans-tibial prosthesis and problems with the residual limb during CPO consultation, (2) evaluate potential benefits of checklist use, as perceived by prosthesis users and CPOs and (3) summarize problems with the prosthesis and/or residual limb presented by prosthesis users during CPO consultation.

Material method; implementation/ process
Adult trans-tibial prosthesis users (n=82) and CPOs (n=19), with 2 to 42 years of experience in prosthesis care, participated. Prosthesis users reported reasons for consultation, factors causing prosthesis (dis)satisfaction and residual limb problems, assessed during CPO consultation with a checklist containing known factors influencing prosthesis satisfaction. Checklist use was implemented in the regular consultation procedure and evaluated with a visual analogue scale (VAS) directly following. An open text section was available for issues of

dissatisfaction not included in the checklist. The study used a cross sectional design and was performed in multiple locations in the Northeast of the Netherlands.

Results

200 envelopes with checklists and sets of evaluation forms were distributed and 82 (41%) usable forms were returned and assessed. 52 prosthesis users mentioned in total 93 issues or problems as reasons for consultation prior to assessment with the checklist. 30 (32%) of these problems concerned factors enclosed in the checklist. Other reasons for CPO consultation ranged from routine control visits, substitution of prosthesis components, prosthesis maintenance and prevention of malfunctioning. In total 126 issues/problems were reported during assessment with the checklist. Most dissatisfaction with the prosthesis concerned fit (33%), mainly regarding the movement of the residual limb in the socket (16%). 52% of prosthesis users mentioned residual limb problems, mainly concerning pressure points on the skin and 27% experienced phantom pain. 30 prosthesis users mentioned no issues or problems prior to checklist assessment. However, during assessment with the checklist, 50% of these users were dissatisfied with one or more factor. Evaluation scores, given by CPOs and prosthesis users, were significantly higher than neutral regarding the checklist helping the CPOs to gather more information and make clear what issues the prosthesis user was dissatisfied about. Prosthesis users reported that assessment with the checklist made them feel more understood by the CPO and they rated the consultation with a 7 or higher (range 0-10, mean 8.8 (±0.9)).

Discussion/ conclusion; conclusion for the practice

Checklist use during assessment of the prosthesis and residual limb identified more factors of dissatisfaction in almost all domains than mentioned by the prosthesis user prior to CPO consultation. In practice, checklist use was challenging, for some CPOs seemed to be fixed in their regular consultation routine. Furthermore, not all evaluation forms were adequately filled in, possibly caused by difficulties encountered during the consultation procedure and limited time available to complete the checklist. We were unable to analyse CPO influences on scores. Checklist use in assessing trans-tibial prostheses and residual limbs is beneficial in identifying issues of dissatisfaction and improves quality of CPO consultation. In future developments, on-

line completion of the checklist may be available prior to consultation, making it accessible for the CPO in preparing for the consultation beforehand, increasing efficiency and saving time.

References

Baars ECT, MD,PhD; Geertzen JHB, MD,PhD; Dijkstra PU, PhD. Checklist use for assessment of satisfaction with trans-tibial prostheses. JRM-CC;Vol.4,2021.

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