

PROSTHETIC LIMB USER EXPERIENCES WITH CROSSOVER FEET: A FOCUS GROUP STUDY TO EXPLORE OUTCOMES THAT MATTER

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INTRODUCTION

A variety of prosthetic feet are available to meet the diverse needs of people with lower limb amputation. Outcome measures selected to assess comparative effectiveness of prosthetic feet are most often chosen by clinicians and researchers.¹ Therefore, these measures may not reflect the outcomes that are most important to lower limb prosthesis users. Qualitative research can give voice to prosthesis users and promote the consideration of user priorities when selecting outcome measures for clinical assessment and research studies. This study explored the lived experience and outcomes of importance to individuals who have worn both traditional energy storing feet and crossover feet.

METHODS

Sample: Convenience sample of prosthesis users
Eligibility criteria: At least 18 years of age, lower limb amputation, at least 1 year prosthesis use, and prior use of an energy storing foot and crossover foot. **Procedures:** An in-person two-hour focus group was held. All procedures were approved by a UW IRB. **Analysis:** A phenomenological theoretical framework was applied to data analysis. Two investigators coded the focus group transcript independently, and a third mediated any discrepancies. Open coding was used to identify initial ideas. Axial coding and inductive reasoning were used to identify themes. Transcripts were reviewed to identify final themes and representative text. Investigators developed a framework of themes and identified instruments capable of measuring outcomes that mattered to focus group participants.

RESULTS

Five people with lower limb amputation (4 males/1female), aged 41-59 years (mean 45.6±7.7 years), and who used a prosthesis daily (mean 15.2±1.1 hours) participated in the focus group. Three categories of themes arose from this focus group: direct outcomes, external influences, and indirect outcomes (Table 1).

Themes such as *balance & stability* well matched standardized measures. Themes like *naturalness* and *peer influence* did not align with available measures, suggesting that new outcome measures may need to be developed. Other themes like *endurance and sustained gait quality* included elements (e.g., time of day, fatigue and gait symmetry) that may be challenging to capture with current assessment methods.

Table 1. Theme definitions

Theme	Definition
Direct outcomes	
<i>Balance & stability</i>	Ability to maintain an upright, controlled posture while standing and walking
<i>Endurance & sustained gait quality</i>	Ability to maintain activity over a prolonged period of time without excessive fatigue or degradation of walking performance
<i>Naturalness</i>	Perceptions of anatomical motion and sensory feedback
External Influences	
<i>Peer influence</i>	Relationships with other people with lower limb amputation that affect outcomes
<i>Prosthetist influence</i>	Relationship with one's clinician that affects outcomes
Indirect outcomes	
<i>Increased confidence</i>	Enhanced trust in one's prosthesis and one's own ability to try new activities
<i>Expanded mobility</i>	An increase in the diversity and type of activities in which one engages

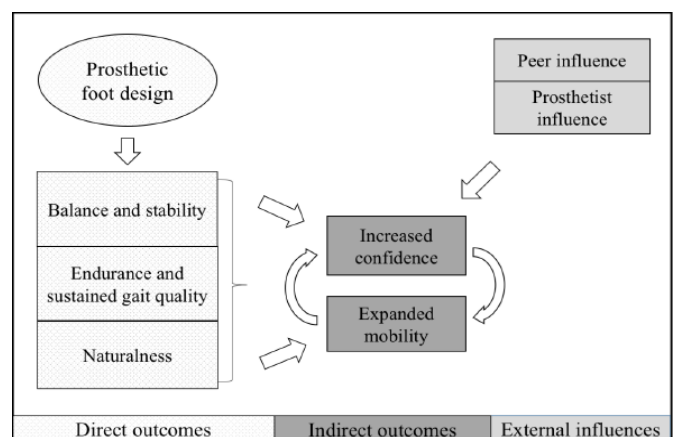


Figure 1. Framework of study themes

CONCLUSION

Prosthesis user engagement through qualitative research can inform selection of outcomes that matter to users. Measurement of outcomes that matter may maximize clinicians' and researchers' ability to assess the effects of prosthetic interventions on users' lives.

REFERENCES

1.Hafner BJ. Energy storage and return prostheses: does patient perception correlate with biomechanical analysis? Clin Biomech. 2002; 17(5), 325-44. DOI: [https://doi.org/10.1016/S0268-0033\(02\)00020-7](https://doi.org/10.1016/S0268-0033(02)00020-7)

DISCLOSURE

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