

Date / Time: **Thursday, Feb 7 / 12:00 - 13:15**

Session Name and Room: **Prosthetics : Lower Limb - 14**

Room 1.03

Abstract Title: **Empirical Support For Distinct Mobility Groups Of Prosthetic Users**

Abstract number: **299**

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Introduction

Questions about mobility were administered to a large sample of individuals with unilateral lower-limb amputations as part of development of the Prosthetic Limb Users Survey-Mobility (PLUS-M). This study investigated the presence of distinct latent classes of prosthetic limb users based on responses to a subset of candidate mobility items. Latent class analysis of cross-sectional data was used to empirically identify groups of individuals with similar patterns of association in symptoms.

Methods

Lower limb prosthetic users over 18 years of age with amputation from trauma or dysvascular causes responded to a survey of mobility, health symptoms, and quality of life indicators. Latent classes were derived from participants' responses to a subset of mobility items selected for their correspondence to US Medicare Functional Classification Levels (MFCL). Model fit criteria (BIC, entropy) and class interpretability guided class selection.

Results

Respondents (n=616) completed 23 mobility items. A four-class solution was selected based on statistical considerations and interpretability of classes. Class 1 (n=111, 17.8%) reported best mobility, least problems with physical and social functioning, and highest employment level (72%). Class 2 (n=197, 31.6%) reported some difficulties with mobility and physical function; nearly half (47.2%) were employed. Class 3 (n=207, 33.1%) reported moderate difficulties with mobility, physical and social function, and higher unemployment (75.4%). Class 4 (n=101, 16.2%) reported low mobility, low physical and social function, and high anxiety, depression, fatigue, and sleep disturbance. Most Class 4 respondents were unemployed (91.1%). Class 1 and 2 had higher proportions of people with below knee amputations and amputations due to trauma.

Discussion

Prosthetic users with higher mobility report better functioning on all aspects of physical and psychosocial function. Better mobility and overall function appears associated with higher employment levels.

Conclusion

Future studies should compare these empirically-derived classes to existing classifications of mobility.