Investigating the preferences of prosthetic limb users: An online survey [Abstract]

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Investigating the preferences of prosthetic limb users: An online survey

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Abstract Submission

Introduction: Although there are many investigations which show that people with limb loss are dissatisfied with the prostheses they use, the research around people’s preferences towards prostheses is limited.

Aims: By dividing prostheses in three categories; those of realistic (RP), functional (FP), and expressive (EP), the aim of the study was to investigate users’ preferences in order to understand possible factors that drive these preferences. The objectives were:

• To critically analyse prior knowledge about issues surrounding users’ satisfaction towards prostheses;
• To gather insights regarding the prostheses participants own, as well as demographic and disability related variables;
• To explore the reasons which led participants to their choices;
• To establish key criteria which drive users’ preference based on demographic and disability related characteristics and compare them with previous investigations in order to evaluate which variables influence their choices.

Methods: An online survey, based on questionnaires with nominal questions, was used in order to gather a large number of data and determine relationships. Non-probability sampling methods were used (snowball and volunteer) in order to approach people with limb loss by contacting 136 private companies, support groups, private clinics etc. All participants met the inclusion criteria: being over 18 years old and own prosthetic limb(s).

Results: By the 157 people who completed the questionnaires, only 136 responses (87%) were valid; the majority of those were men (65%) and over 45 years old. Regarding the prostheses participants own, RP and FP present the same percentages (47% and 48% respectively); EP is the least popular among prosthetic users. However, the hierarchy of participants’ preferences differs as first is FP (65%), EP comes second (19%) and last is RP (16%). Various demographic and disability related variables were tested; the analysis shows association between participants’ preferences and sex, cause of amputation, years since amputation and years wear prostheses, whilst there is no association between their preferences and educational level. Although the analyses of Chi-square tests regarding age, level of annual income, area of residence, area and level of limb loss are mentioned in the Results, they cannot be considered as reliable due to the unevenly spread of the sample and they need further investigation. The analysis of the reasons participants chose their preferable prostheses shows functional as the most important reason.

Conclusions: The design of prosthetic limb is continuously changing; however, the level of people’s satisfaction with their prostheses remains low. The objectives of the study have been met, and half of the participants answered they would like to use a different type of prosthesis as they are not satisfied with the one they have. The transitions of their preferences show the majority of the participants who own RP and are not satisfied chose FP, while the majority of the participants who own FP and are not satisfied chose EP.