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Adaptive devices in youngsters with upper limb reduction deficiencies: Use and satisfaction

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Many youngsters with an upper limb reduction deficiency (ULRD) reject prostheses. To perform difficult activities, they use alternative solutions, such as adaptive devices (ADs). The aim of the study is to evaluate the use, satisfaction and social adjustment with ADs compared to prostheses in youngsters with ULRD. In a cross-sectional study, youngsters with ULRD (2-20 years) and their parents responded to a questionnaire evaluating participants' characteristics, difficulties with and preferred solutions for activities, usage, satisfaction and social adjustment with ADs versus prostheses. The Quebec User Evaluation of Satisfaction with assistive Technology (QUEST) and a subscale of Trinity Amputation and Prosthesis Experience Scales (TAPES) were used. Of 218 participants, 58% were boys, 87% had transversal ULRD, 76% ever used ADs and 37% ever used prostheses. Youngsters (>50%) had difficulties in performing activities. Of 360 ADs, 43% were used for self-care (using cutlery), 28% for mobility (riding a bicycle), 5% for leisure activities. Prostheses were used for self-care (4%), mobility (9%), communication (3%), recreation and leisure (6%), and work or employment (4%). The preferred solution to facilitate difficult activities was using unaffected and affected arms/hands and other body-parts (>60%), ADs (< 48%) and prostheses (<9%). Satisfaction and social adjustment with ADs were greater than with prostheses (P<0.05). Besides using unaffected and affected arms/hands and body-parts, youngsters with ULRD use, are satisfied and socially well-adjusted with ADs. The fact that satisfaction with ADs was greater than satisfaction with prosthesis promotes inclusion of ADs in rehabilitation as good alternatives to the prosthetic treatment.

Biography

Ecaterina Vasluian is currently finalizing her PhD at the University of Groningen, University Medical Center Groningen, the Netherlands in the field of Rehabilitation Medicine. Her research focused on rehabilitation of youngsters with upper limb reduction deficiencies (ULRD). The main research objectives were: (1) to evaluate the impact of prostheses and adaptive devices on functioning and (2) to provide clinicians with an appropriate test for the measurement of functioning with the ULRD. Ecaterina has a BSc in Biomedical Engineering and a MSc in Prosthetic technologies and Biomaterials. Her MSc project evaluated the osseointegration of titanium alloy implants coated with hidroxyapatite.

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