

# FUNCTIONING OF ELDERLY LOWER LIMB AMPUTEES - PATIENTS' PERSPECTIVE

H. Burger, Sa. Kotnik  
Institute for Rehabilitation, Ljubljana, Slovenia

## Abstract

*The aim of the present study was to find out whether International Classification of Functioning, Disability and Health (ICF) can be used to describe all the problems in the area of activities and participation and to define the most important environmental factors influencing the functioning of elderly lower limb*

*amputees. All the subjects visiting lower limb amputee outpatient clinic in January 2008, who had been amputated at least one year before, had prosthesis and were willing to participate were included into the study. Nineteen out of twenty-four subjects experienced pain, they had problems with 15 activities and participation items on average (0 to 34) and had 14 facilitators (8 to 21) and 13 (6 to 19) barriers in the environment.*

## INTRODUCTION

Most lower-limb amputations in the developed countries are performed due to vascular pathology (1). Most of the patients are therefore elderly at the time of amputation and may have many other diseases (2). Vascular problems usually affect the vessels of other organs which may together with age, other diseases and the amputation itself cause several problems in the patients' functioning, such as phantom and stump pain, balance problems, walking and other mobility problems and others (3-5).

There are several outcome measures and clinical tests used for assessing outcome and functioning after lower-limb amputation. Some of them are generic, others have been developed especially for lower limb amputees, but there is no consensus among clinicians regarding the most appropriate one (6). Besides, they cover only partial and not the entire functioning of an individual person. In particular, there is a lack of outcome measures for participation and environmental factors.

The aim of the present study was to find out whether International Classification of Functioning, Disability and Health (ICF) can be used to describe all the problems in the area of activities and participation and to define the most important environmental factors influencing the functioning of elderly lower limb amputees.

## METHODS AND SUBJECTS

### Methods

The subjects' functioning was assessed by ICF. All the codes relevant to each individual were used from Activities and

Participation and from Environmental Factors. Only the subjects' performance was assessed and two qualifiers only were used: 0 - no problem, 1 - problem. All the included subjects were interviewed by a trained student of occupational therapy. The results were statistically analysed.

### Subjects

All the subjects visiting lower-limb amputee outpatient clinic in January 2008, who had been amputated at least one year before, had prosthesis and were willing to participate were included into the study.

## RESULTS

The study included 24 subjects, 21 men and 3 women, amputated 2 to 68 years before the study. Eleven had transfemoral and 13 transtibial amputation. Ten subjects were amputated due to an injury to lower limb, 12 due to peripheral vascular disease and 2 due to diabetes.

Nineteen out of twenty-four subjects had pain which affected their functioning. Four subjects had problems with some basic learning activities, up to 14 had problems with Mobility, Self care, Domestic life and Participation. On average, they had problems with 15 activities and participation items (0 to 34). Most of them had problems moving around, walking, driving, caring for household objects and doing housework. They had 14 facilitators (8 to 21) and 13 (6 to 19) barriers in the environment. Health professionals were facilitators for all of them, followed by products and technology for use in daily living. Design, construction and buildings for public use, attitudes of people in positions of

authority, support and relationships of peers, neighbours, community members and physical geography were the most frequent barriers.

The subjects amputated due to an injury had fewer problems at the activities and participation level than those amputated due to vascular problems and diabetes (9 versus 18). The number of problems, facilitators and barriers did not depend on the amputation level.

## DISCUSSION

The study found that elderly lower limb amputees had several problems at the activities and participation level and several barriers in their environment. Most frequent activity problems were those with mobility and household activities. Some mobility problems are more or less addressed in almost all the outcome measures used in the assessment of lower-limb amputees (FIM, Locomotor Capability Index), but household activities are not. Also driving and using transportation are mentioned only in some studies that used questionnaires and are not found in most frequently used outcome measures (4). However, they are important especially at the level of participation (4). Most household activities covered by the interview are important for independent living.

There were several facilitators, but still many barriers in the environment of the included subjects. In spite of the law on the accessibility of newly-built public buildings, these were still the main barrier in the environment. Additionally, support and relationship of peers, colleagues, neighbours and community members was low and worrisome, but even worse were the attitudes of people in positions of authority. People in Slovenia seem to have a very negative attitude towards persons with disabilities and are not really willing to help. Much more has to be done in the field of education to change those attitudes.

The subjects included into the study were not a true representative sample of lower-limb amputees in Slovenia. In

general, most of the amputees have been amputated due to vascular problems whereas in the present study almost half of the subjects had been amputated due to an injury.

## CONCLUSION

Elderly lower limb amputees were found to have several activity limitations and barriers in their environment. Many of them have to be addressed and changed in order to improve the lives of lower limb amputees in Slovenia as well as the lives of other persons with disabilities.

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