Abstract

Title of Thesis: The analysis of swimming techniques, such as breast stroke and crawl stroke, for individuals after upper limb and lower limb amputations.

Targets: The target of the thesis was to analyse and evaluate swimming techniques, such as breast stroke and crawl stroke, for individuals after a lower limb amputation in comparison to the individuals after an upper limb amputation. Further findings impact periodical mobility in an aquatic environment for the overall condition of the human body in the individuals mentioned.

Methods: The thesis is completed in the form of a pilot study. The study was originated in conjunction with the individuals after a limb amputation; the study was conducted over a six month period. The study includes the analysis of medical documentation, the construction of the kineziological analyses, the realization of self-education and the processing and comparing of resultant indicators with professional literature.

Results:

Proband A reached a minor improvement in physiological functions. Further, they have reached a better quality in both trained swimming techniques. The individual have achieved better results in the breast stroke swimming technique. The breast stroke was the more preferred technique.

Proband B has reached improvement in physiological functions, management of respiration and reduction in pulse frequency. Further, they have also reached a better quality in both trained swimming techniques. The better result values have been reached in the crawl stroke swimming technique. Again, the breast stroke was the more preferred technique.

Conclusions: After analysing the results from the kinesiological analysis, it shows a positive impact of regular movement in aquatic environment for individuals after upper and lower limb amputation.

Keywords: lower limb amputation, upper limb amputation, therapeutic swimming, crawl stroke swimming technique, breast stroke swimming technique, the kinesiological analysis, progressive steps.