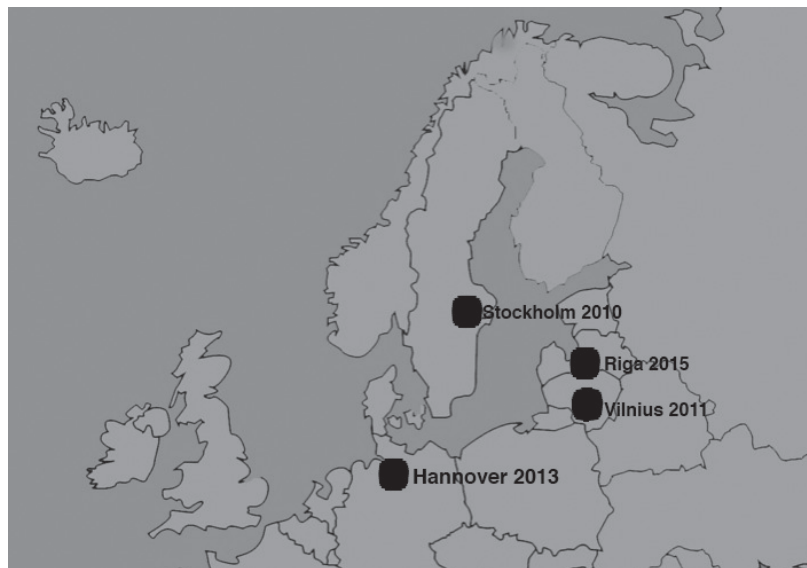


4th Baltic and North Sea Conference on Physical and Rehabilitation Medicine

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Baltic & North Sea Conferences on PRM

TABLE OF CONTENTS

Immunology and Rehabilitation	767
Communication in rehabilitation teams	767
Avoiding monoprofessional thinking in teamwork	767
Rehabilitation across borders – round table discussion	768
Communication and assistive devices	768
Acceptance & Commitment Therapy (ACT) as a first line intervention for lifestyle changes to treat and prevent chronic changes	768
Habilitation – transition from childhood to adulthood	769
Robotics and rehabilitation	770
Journal of Rehabilitation Medicine Symposium: Stroke rehabilitation	771
Qualitative research in rehabilitation medicine	771
Dysphagia management	773
Free oral presentations	774
Poster presentations	784
Author index	800

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syndrome may affect all organs and systems, the impact of range of motion limitations caused by immobility on functional capacity to perform activities of daily living is often very severe. Mobilization and active exercise have beneficial effects that counteract the impact of immobility on the body. *Objective:* This study aims to assess the effect of a mobilization and active exercise program on the range of motion of bedridden patients with disuse syndrome. *Method:* A quasi-experimental pre-post study was developed. The sample consisted of 26 persons that have been bedridden for more than six months at home. A mobilization and active exercise program was designed, fitting patients' individual needs and implemented 2 times/week for 2 months. Caregivers were trained to transfer the patient from bed to chair and to repeat active exercise every day. Data collection was performed before and after intervention, using the Barthel Index and a goniometer for range of motion evaluation. *Results:* 26 study participants, aged 77.19 ± 11.67 and bedridden for 18 months (18.73 ± 15.25) were enrolled, but only 24 completed the intervention program. There was a minimal difference in the sex distribution with 7.6% more women than men. The results showed a statistically significant increase on range of motion of the shoulder, elbow, wrist, hip and knee. There was statistical significance in plantar flexion but not on the dorsiflexion. Barthel Index score increased significantly (28.65 ± 21.28 vs 31.46 ± 23.28 ; $p=0,035$) after the mobilization and active exercise program. *Conclusion:* A mobilization and active exercise program implemented regularly may contribute to improve range of motion of bedridden patients with disuse syndrome.

PP27

INSTITUTIONALIZED ELDERLY REHABILITATION – IMPROVING BALANCE ABILITY WITH A PLATFORM TECHNOLOGY

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Introduction: Ageing is associated with a decrease in the functionality of all organic systems. One factor that affects the quality of life in the elderly is the decrease of balance that sometimes leads to falls and consequently the fear of falling. In this sense, it is essential to try to mitigate this progressive degeneration. Wii is a platform technology and method that can be used to improve balance in elderly and thus enable them a better quality of life and well-being. *Objective:* To investigate whether an exercise programme using Wii games, improve balance in a group of institutionalized elderly. *Method:* A quasi-experimental study was design in which it was used a sociodemographic questionnaire, nine of the ten tests of Fullerton Balance Advanced Scale to assess balance and the Falls Efficacy Scale (FES) to assess fear of falling. The exercises program were performed on the Wii platform, and applied in 10 minutes session three times a week for two months. *Results:* Twenty elderly were included, 70% women, with an average age of 82.20 ± 4.92 years, 55% were widowed, 35% single and 10% married. The results of the Fullerton Balance Advanced Scale evaluation showed that 17 elderly improved balance and 3 elderly decreased. The Fear of falling results showed a statistically significant increase ($Z=-2.875$; $p=0.004$) from the first to the second assessment moment (67.20 ± 12.07 vs 70.25 ± 12.94). *Conclusions:* The exercise program set up with the Wii platform improved balance ability and decreased fear of falling in the elderly who participated in this study. Wii games can be used in rehabilitation of elderly to improve balance and reduce fear of falling.

PP28

IMPLEMENTING A PROPRIOCEPTIVE EXERCISE PROGRAM IN ELDERLY

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J Rehabil Med 47

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Introduction: With aging, the human body goes through a period of transformation that generates decline of some physical capacities, such as decreased flexibility, agility, coordination, joint mobility and balance, compromising the functional capacity of older people, which is essential for carrying out Activities of Daily Living. The physical exercise is key to improving the functional capacity of the elderly, in particular with proprioceptive exercises, which have been used in recent studies with elderly. *Objective:* The aim of our study is to evaluate the effects of a proprioceptive exercise program on functional capacity in the elderly group. *Method:* To achieve this objective, we designed a quasi-experimental study with pre- and post-intervention measurements. All participants were evaluated with hand grip strength, finger pinch force, the Tinetti Gait and Balance Test, single leg balance test, evaluation of senior fitness test by the “arm curl test”, “sit to stand test” “timed up and go test”, “back scratch test” and “chair, sit and reach test “ by Rikli & Jones. The program was conducted 2 times a week for 12 weeks. *Results:* The sample consisted of 24 elderly, 12 of them in the intervention group (67.25 ± 2.01 years) and the other 12 in a control group (68.08 ± 1.73 years). According to the results, the intervention group showed a statistically significant improvement in all evaluations performed after the program. In the control group, there was no significant improvement in functional capacity components evaluated after 12 weeks. *Conclusion:* Our proprioceptive exercise program proved to be improving the functional capacity of the elderly. This proprioceptive training program is one of the pioneers in this specific area with great potential for future use.

PP29

ELDERLY WITH FEMORAL NECK FRACTURE: ANALYSIS OF FALLS AND FUNCTIONAL CHANGES

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Introduction: According to the Portuguese Ministry of Health there are in Portugal more than 9,500 femoral neck fractures each year, which reached hospital expenses of around 52 million euros. The same source estimates the mortality from 20% to 30% over a year after fracture; referring to severe disability it reaches a prevalence of 40% in the same period. *Objective:* To know the effect on the functional capacity of the elderly falling victim, which results in femoral neck fracture. *Method:* This research is a descriptive, longitudinal, prospective correlational study with a quantitative methodology. The sample consisted of 35 elderly patients at the first assessment and thirty in the second, all admitted to the trauma service of the Bragança Hospital Unit, Portugal. Data collection took place between February and June 2014 and the second evaluation was conducted between August and December, 2014. It was intended to assess the degree of recovery of functional ability after fracture of the proximal end of the femur, the fear of falling and characterize the falls. The instrument used for calculating the degree of functional recovery was the Katz index. *Results:* Of the sample studied 33.3% had femoral neck fracture and the remaining 66.6% had trochanteric, subtrochanteric and intertrochanteric fractures. Surgical treatment was instituted in 93.3%. The values of the Katz index decreased from 15.53 to 12.93 points. The degree of recovery of functional independence is significantly higher in patients who underwent osteosynthesis with hip prosthesis, whether it was partial or total. *Conclusion:* The variables that most influenced the functional recovery were the type of fracture and the type of osteosynthesis. There was a decline in functional capacity and in parallel an increase in the fear of falling.