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S12-3: Empowering Older Adults: Evaluation of An Activity Bench Project on Physical Activity and Development of a Fall Risk Measurement Protocol

Jora Broerse[1], Kristel Lankhorst[2], Maarten Thysen[3], Jan Cornelissen[3], Miel Vanhaverbeke[3]

[1] Research group Sport Management & Sport Business, Faculty of Health, Sport & Physical Activity, Amsterdam University of Applied Sciences, Amsterdam, The Netherlands

[2] Research group Physiotherapy Moving Towards Preventive Care, Faculty of Health, Sport & Physical Activity, Amsterdam University of Applied Sciences, Amsterdam, The Netherlands

[3] IPitup NPO, Werchter, Belgium

Purpose: This project aims to enhance physical activity and fall prevention among older adults by installing and activating an IPitup activity bench next to an apartment building of a residential care group in Amsterdam. The project was developed through collaboration among various stakeholders, including municipal sports, health and welfare services, academic research departments, and private partners.

Project Description: The research focused on two main areas: evaluating the effectiveness of the activity bench as a tool to promote physical activity and the development of a fall risk measurement protocol that can be used at the bench. The roll out of the project consisted a strategic roadmap to ensure the creation of a physical activity friendly environment. This involved combining the installation of the bench with an offer of accompanying activities led by trained local community coaches and aligning both at an organisational level (hardware-software-orgware). Evaluation of this process concerned collecting qualitative data through participant interviews and feedback to assess engagement and usability. A literature review was conducted on suitable measurement methods and effective exercise interventions for older adults at risk of falling. A valid and reliable measurement protocol was developed that can be applied at the activity bench, containing muscle strength, mobility, and balance elements as key components.

Conclusions: It is essential for older adults at increased fall risk to participate in a recognised fall prevention programme led by certified individuals to improve stability and movement control while addressing social and cognitive risk factors like isolation and cognitive decline. The activity bench project can offer post-programme support, facilitating ongoing physical activity and social engagement. Within this research, the activity bench project has had a significant social and physical impact on participants. It brought together various local stakeholders which contributed to achieving different policy goals. Recommendations were made to further strengthen these collaborations, increase visibility, and ensure sustainability. The protocol appeared to be feasible, but needs to be tested with a group of seniors at risk of falling. Future research should focus on the design and assessment of an activity bench exercise programme that aligns with established fall prevention programmes.

Keywords: Physical activity, fall prevention, older adults, community-based intervention, fall risk assessment