

EDITORIAL**Preventing Harms for Exercise Intervention Among Older Adults in the Community****Muhammad Kamil Che Hasan & Mohd Khairul Zul Hasymi Firdaus***

Kulliyyah of Nursing, International Islamic University Malaysia, Pahang, Malaysia.

Email: zulhasyimi@iium.edu.my

There are many intervention programmes introduced in the community involving older adults, including exercise (1,2). The most important issue during an exercise intervention is safety, thus specific inclusion and exclusion criteria should be considered by researcher before conducting exercise programme. One of the example is the ESCAPE-pain programme where no major physical discomforts reported by research participants in different context (3,4). This programme highlighted exclusion criteria such as the presence of severe congestive cardiac failure; severe respiratory problems for instance chronic obstructive pulmonary disease (COPD); uncontrolled hypertension; recent fracture or surgery; myocardial infarction in past 6 months; severe cognitive impairment; wheelchair use; severe auditory or visual impairment; and peripheral neuropathy or other uncontrolled medical conditions likely to compromise the ability to exercise. A health check by a medical officer who has information about the health of the patient may be undertaken for older adults to ensure that they are fit for the exercise intervention programme.

The level and intensity of the exercise programme are recommended to be tailored to the participants' ability and adjusted as required. It could be slightly different for older adults in old folks home with impairment (5) or restricted movement during pandemic COVID-19 (6). Thus, the risk of injury associated with the exercise programme could be minimised. Special attention should be given to the older adults while doing exercises as they would be more likely to experience adverse events post exercise, such as chest pain, muscular pain, dizziness, nausea, vomiting, unusual fatigue, discomfort or other inconvenience (7). If the older adults feel the pain in the chest, muscular pain, dizziness, nausea, vomiting, unusual fatigue, discomfort or other inconvenience, they could stop the exercise immediately.

Safety precautions for home-based exercise should be continuously observed (8). Preventive action against adverse events could be practised as follows:

- i. strict full medical check for exercise safety by certified personnel.
- ii. double check the physical fitness before any intervention programme.
- iii. ensure that the older adults last meal should be a minimum of two hours before the exercise.
- iv. begin the exercise with a warm-up.
- v. do exercise with the existence of other people, in case required assistance or emergency situation.
- vi. ensure that older adults are in good condition and mood at the beginning of the exercise.

A serious adverse event (SAE) for exercise-based programme defined as an untoward occurrence that:

- i. results in death,
- ii. is life-threatening (life-threatening in the definition of an SAE refers to an event in which the subject was at substantial risk of death at the time of the event, or use or continued use of the programme might have resulted in the death of the participant,
- iii. requires hospitalisation (>24 hours) or prolongation of existing hospitalisation (emergency room visits that do not result in admission to the hospital should be evaluated for one of the other serious outcomes, e.g., life-threatening; required intervention to prevent permanent impairment or damage; another serious medically important event),
- iv. results in disability or permanent damage (substantial disruption of the participant's ability to conduct normal life functions, e.g. permanent change, impairment, damage or disruption to the participant's body

- function/structure, physical activities, and/or quality of life),
- v. an event that requires intervention to prevent permanent impairment or damage; medical or surgical intervention being necessary to preclude permanent impairment of a body function, or prevent permanent damage to a body structure; either situation being suspected to be due to the performance of the activities/programmes,
 - vi. other serious important medical event, that is, when the event does not fit the other outcomes, but the event may jeopardise the participant and may require medical or surgical intervention (treatment) to prevent one of the other outcomes – and is considered medically significant by the medically responsible person and the safety committee.

Insurance coverage should be available in respect of research involving human subjects, which provides cover for legal liabilities arising from its actions or those of its participants. The insurance available should be able to provide compensation for non-negligent harm to research subjects occasioned in circumstances that are under the control of the sponsor.

REFERENCES

1. Sherrington C, Fairhall NJ, Wallbank GK, Tiedemann A, Michaleff ZA, Howard K, et al. Exercise for preventing falls in older people living in the community. *Cochrane database Syst Rev*. 2019 [cited 2021 Mar 18];1(1):204–5. Available from: <https://pubmed.ncbi.nlm.nih.gov/30703272/>
2. Liu-Ambrose T, Davis JC, Best JR, Dian L, Madden K, Cook W, et al. Effect of a Home-Based Exercise Program on Subsequent Falls Among Community-Dwelling High-Risk Older Adults After a Fall: A Randomized Clinical Trial. *JAMA*. 2019;321(21):2092–100. Available from: <https://pubmed.ncbi.nlm.nih.gov/31162569/>
3. Hurley M V., Walsh NE, Mitchell H, Nicholas J, Patel A. Long-term outcomes and costs of an integrated rehabilitation program for chronic knee pain: A pragmatic, cluster randomized, controlled trial. *Arthritis Care Res (Hoboken)*;64(2):238–47. Available from: <http://doi.wiley.com/10.1002/acr.20642>
4. Che Hasan MK, Stanmore E, Todd C. A Feasibility Study of the ESCAPE-pain Programme for Patients with Knee Osteoarthritis in the Malaysian Context: Preparation of A Protocol. *Int J Care Sch*. 2019;2(2):21–9. Available from: <https://journals.iium.edu.my/ijcs/index.php/ijcs/article/view/128/45>
5. Syed Elias SM, Azizan AF. Prevalence and Factors Associated With Cognitive Impairment Among Older People Living In Old Folk Homes, Malaysia. *Int J Care Sch*. 2020;3(2):28–32. Available from: <https://journals.iium.edu.my/ijcs/index.php/ijcs/article/view/164/60>
6. Che Hasan MK, Nik Mohd Hatta NNK. Exercise and Physical Activity for Musculoskeletal Care In A New Normal. *Int J Care Sch*. 2020;3(2):1–2. Available from: <https://journals.iium.edu.my/ijcs/index.php/ijcs/article/view/170>
7. Geneen L, Moore R, Clarke C, Martin D, Colvin L, Smith B. Physical activity and exercise for chronic pain in adults: an overview of Cochrane Reviews. *Cochrane database Syst Rev* [Internet]. 2017;4(4). Available from: <https://pubmed.ncbi.nlm.nih.gov/28436583/>
8. Hansen D, Niebauer J, Cornelissen V, Barna O, Neunhäuserer D, Stettler C, et al. Exercise Prescription in Patients with Different Combinations of Cardiovascular Disease Risk Factors: A Consensus Statement from the EXPERT Working Group. *Sports Med*. 2018;48(8):1781–97. Available from: <https://pubmed.ncbi.nlm.nih.gov/29729003/>