DOI: 10.7860/JCDR/2025/80478.21744

Study Protocol on Effect of High-Intensity Functional Training on Visuospatial Working Memory in Middle-aged Adults

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ABSTRACT

Introduction: Visuospatial Working Memory (VSWM) is necessary for people to live, study, and work effectively. Impairment or degeneration in VSWM can lead to disruption in performing Activities of Daily Living (ADL's). Physical activity has received a lot of attention as a preventative measure for neurocognitive health and as an alternative to drugs to lower blood viscosity.

Need for this study: Physical activities might help in improving VSWM and researches in this field are being conducted to understand the importance of physical activities in enhancing the VSWM

Aim: To determine the effect of High-intensity Functional Training (HIFT) on Visuospatial Working Memory (VSWM) among middle-aged adults.

Materials and Methods: A total of n=34 middle-aged adults will be recruited according to specified inclusion and exclusion criteria, using a convenience sampling method in a single-group pre-post design. The intervention will consist of a HIFT protocol, and using the N-back test and Corsi block-tapping tasks as an outcome measure. These outcomes will be assessed twice: pre intervention and after completing 3-months intervention. Each HIFT session will begin with a dynamic warm-up, followed by a structured sequence high-intensity, anaerobic and aerobic exercises. After each round, participants will have 2-minutes rest, repeating this cycle five times per session. Each session will end with a 5-minutes cool-down involving stretching exercises.

Keywords: Activities of daily living, Neurocognitive, Physical activity.