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LETTER

Music and Caffeine Intake Effects on Gait, and Its Relationship with Psychological Parameters, in Middle-Aged Women [Letter]

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Dear editor

I have read a research article, "Music and Caffeine Intake Effects on Gait, and Its Relationship with Psychological Parameters, in Middle-Aged Women", by Alsaeed and Waer.[1] I want to congratulate the authors on this successful article and make some contributions. This research has five advantages: 1) research shows that listening to music you like during walking activities can reduce fatigue and increase enjoyment when exercising. This helps improve walking performance and supports the ability to carry out daily activities more optimally, especially for middle-aged women. 2) exposure to music has been shown to have a positive impact on brain function, specifically by increasing neurogenesis (the formation of new brain cells) and synaptic plasticity (the brain's ability to adapt and change). These effects can improve sensory and motor performance, improving control in walking movements. 3) Individually selected music can trigger a positive emotional response, which not only improves mood but also provides a boost of motivation and energy. This effect is directly related to increased physical performance and quality of walking activities. 4) caffeine intake has been shown to improve cognitive and motor performance, especially when individuals face situations requiring multi-tasking or dual-task processing. This means caffeine can help a person stay focused and perform movements more precisely and efficiently. 5) study results showed significant improvements in gait parameters, including distance traveled, number of steps, and walking rhythm when participants listened to music and consumed caffeine. This increase shows that external stimulation from music and caffeine can provide greater positive effects than conditions without these stimuli.

However, we identified three limitations of this study that can be addressed in future research: 1) the study's results were limited to middle-aged women, so the results are difficult to generalize to a wider population. Future research needs to involve participants from various age groups, genders, and different health conditions so that the findings are more representative and can be applied to a more heterogeneous population.[2,3] 2) the relatively small sample in this study limits statistical power and reduces the results' reliability. To increase the validity of the findings, future research should involve more participants so that the statistical analysis can be more robust and the research results more reliable.[4] 3) this study did not explore the long-term effects of music and caffeine on gait or exercise performance. To understand the lasting impact of such interventions, longitudinal studies are needed to provide deeper insight into how music and caffeine affect performance and physical health over a longer period.[5]

In conclusion, research, accompanied by a thorough explanation of its methods and findings, is essential in advancing healthcare practice and improving patient outcomes.

Disclosure

The author reports no conflicts of interest in this communication. The author alone is responsible for the content and writing of the paper.

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