



Effects of a Single Session of Health-Related Aquatic Versus Land-Based Training on Mood States in Elderly Women

Monika Wiech¹ , Dagmara Budnik-Przybylska²

¹ Gdansk University of Physical Education and Sport, Gdańsk, Poland; ² University of Gdańsk, Gdańsk, Poland

Background and Aim. Physical activity provides numerous physiological benefits and is also recommended for individuals experiencing mood disturbances, which are common among older adults. Aquatic exercise environments may offer additional therapeutic advantages over land-based training due to the unique physical properties of water, including buoyancy, hydrostatic pressure, resistance, and temperature. The aim of this study was to evaluate the acute effects of a single session of health-related aquatic versus land-based training on mood states in elderly women.

Methods. Eighty women aged 60–80 years participated in a single 45-minute training session. Participants were allocated to either an aquatic training group ($n = 41$) or a land-based training group ($n = 39$). Both sessions were designed according to health-related training principles, with a focus on improving body posture. Mood states were assessed before and after the session using the Brunel Mood Scale (BRUMS).

Results. The findings indicate that a single session of health-related training had a significant effect on mood in both groups. In the aquatic group, higher levels of fatigue were observed at baseline ($p = 0.03$), whereas significantly greater calmness was reported post-intervention ($p = 0.04$). Overall, both training modalities demonstrated beneficial effects on mood states.

Conclusions. A single session of health-related exercise, whether conducted in an aquatic or land-based environment, appears to positively influence mood states in older women. Aquatic exercise may provide additional benefits in promoting calmness.

Keywords: Aquatic exercise; land-based exercise; health-related training; mood; older adults

Funding and Disclosures: The authors declare no external funding and no conflicts of interest.

Informed Consent Statement: The study was approved by the Bioethics Committee (Approval No. KB-5/22). Written informed consent was obtained from all participants. The study was conducted in accordance with the Declaration of Helsinki.

