

Group dance/movement activity is useful for psychosomatic stress reduction in postmenopausal women

Asuka Watanabe¹, Shougo Tamura², Takanori Moriyama³, Tadayoshi Asaka³, Kiyoshi Moriya⁴
¹*Faculty of Human Sciences, Hokkaido Bunkyo University, Sapporo, Japan,* ²*Graduate School of Health Sciences, Hokkaido University, Sapporo, Japan,* ³*Faculty of Health Sciences, Hokkaido University, Sapporo, Japan,* ⁴*Tenshi College Graduate School of Nursing and Nutrition, Sapporo, Japan*

Introduction: Postmenopausal women experience harmful changes in psychosomatic states upon the cessation of secretion of ovarian estrogen. When exposed to chronic or acute distress on a daily basis, their psychosomatic state and symptoms often worsen, because their sympathetic nervous system causes hyperactivity and increased anxiety. Therefore, it is an important health measure for postmenopausal women to reduce the stress levels in their lives. Group dance/movement activity (DMA) with music consists of low intensity aerobic dance/movement, relaxation techniques, and mutual soft body contact. Participation in DMA produces better psycho-physiological responses by providing a more comfortable emotional state. Thus, we have been attracted to DMA among many occupations. **O b j e c t i v e s :** This study aimed to confirm that DMA is effective in stress reduction and can improve the psychological and physiological aspects of postmenopausal women living independent lives. **Methods:** Subjects were twenty postmenopausal women (58-73 years old) from Sapporo City who had no previous experience with DMA. After a careful explanation, all subjects gave their written informed consent. The subjects were randomly allocated into a DMA group (GDMA; n=11) or a static occupation group (Control; n=9). The subjects attended 90-minute sessions 16 times over 13 weeks. Both groups used the same music at each corresponding session. We evaluated the subjects' stress levels by the Mental Health Pattern questionnaire (Hashimoto, 1999) and by measuring urinary biopyrrin levels, which are oxidative metabolites of bilirubin. **Results:** Although the GDMA achieved significant short-term reduction in psychological stress levels between the mornings before and after the sessions ($P=0.001$), the Control showed little change in this stress level. Urinary biopyrrin levels' variations between similar points of evaluation were more significantly decreased in the GDMA than they were in the Control ($P=0.045$). **Conclusion:** Psychological stress has been shown to increase bilirubin metabolites in human urine (Yamaguchi T, et al, 2002). The more decreased psychological stress and biopyrrin levels in the GDMA in the present study provided good evidence that a 90-minute DMA session is useful for short-term stress reduction, both psychologically and physiologically, in postmenopausal women living independently.