ABSTRACT

**Background:** There is an increasing cross-fertilization between the movements in contemporary dance and aesthetic sports such as rhythmic gymnastics. In such sports, supplementary training is commonly used to enable athletes to achieve all of their training goals, however dancers typically do not engage in cross training from other disciplines.

**Purpose:** The aim of this research was to test the effectiveness of a rhythmic gymnastics-based supplementary training program on lower limb flexibility and power of contemporary dancers.

**Study Design:** Experimental study using a between-groups design

**Setting:** Training Intervention: Prahran Rhythmic Gymnastics Specialist Centre, Testing: Deakin University

**Methods:** Eleven female contemporary dancers were randomly assigned to either a control or intervention group. The intervention group (n = 6) participated in an eight-week rhythmic gymnastics-based supplementary training program comprising two one-hour sessions per week in addition to their usual training. The control group (n = 5) continued their usual dance training. Pre and post measures of range of motion (ROM) and power were taken via a dance-specific kick test using an isokinetic dynamometer and a customized grand jeté test in a 3D-motion laboratory.

**Results:** Significant increases in right and left leg grand jeté ROM, right leg peak kicking torque and left leg grand jeté height were recorded in the intervention compared to the control group.

**Conclusion:** The results of the study suggest that rhythmic gymnastics training could provide a viable means for contemporary dancers to target active ROM and power of explosive dance movements. Future research should include subjective evaluations of dance performers to confirm that training adaptations are transferred to improvements in performance quality.

**Level of Evidence:** III

**Key words:** contemporary dance, injury prevention, movement system, rhythmic gymnastics, stretching, supplementary training

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**Conflicts of Interest:** The authors declare no conflict of interest.

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