

Italian Folk Dance For Health

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Although dance is considered a rhythmic aerobic activity contributing to improve overall physical fitness, no study has quantified the intensity of folk dances (FD) workouts. Among Italian FD, Pizzica and Tammurriata are very popular, and they are characterized by intense rhythm, with Pizzica being more intense than Tammurriata.

PURPOSE: To determine activity intensity and session ratings of perceived exertion (sRPE) of Pizzica and Tammurriata workouts.

METHODS: Thirty-three young adults (age 27.7±5.5 years; weight 60.4±11.6 kg; height 1.7±0.1 m; BMI 22.0±3.0 kg/m²) gave their consent to participate in the study. To evaluate the intensity of 45-minute FD sessions, heart rate (HR) and sRPE on a CR10 scale were monitored in Pizzica and Tammurriata workout sessions randomly organized with at least one week in between. Percentages of age-predicted maximal HR (%HRmax) were used to classify the intensity of the activity in very light: <57%HRmax; light: 57-63%HRmax; moderate: 64-76%HRmax; vigorous: 77-95%HRmax; near maximal to maximal: ≥96%HRmax, according to the classes of intensity proposed by the American College of Sports Medicine (ACSM).

RESULTS: ANOVA for repeated measures showed no difference between Pizzica and Tammurriata for both HR and sRPE data. Significantly higher ($p<0.0001$) frequency of occurrence of %HRmax was observed for the very light intensity (Pizzica: 39.9±30.7%; Tammurriata: 33.3±23.6%) with respect to light (Pizzica: 16.0±9.7%; Tammurriata: 17.2±4.8%), moderate (Pizzica: 25.9±14.4%; Tammurriata: 27.6±9.2%), vigorous (Pizzica: 20.2±19.4%; Tammurriata: 21.3±18.3%), and near maximal to maximal (Pizzica: 0.1±0.3%; Tammurriata: 0.4±1.6%) intensities. According to sRPE values (Pizzica: 1.8±1.8; Tammurriata 1.8±1.1) subjects perceived FD as easy.

CONCLUSIONS: Results indicate that Pizzica and Tammurriata can be classified as very light according to ACSM guidelines. As dance is therapeutically used in improving motor function, body composition, social aspect and quality of life, FD might be an effective strategy to support social relations, participations in group-activities and to improve overall health-related physical parameters among frail populations.

A Comparison Of Dynamic And Static Yoga Programs On Body Composition, Flexibility, And Balance

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Essentrics is a dynamic full body stretch and strengthening workout that requires dynamic movements such as, but not limited to, ceiling reaches, side-to-side bends with lunges, and side leg lifts that may elicit improvements in body composition, flexibility, and balance.

PURPOSE: To examine the benefits of 6-weeks long Essentrics (dynamic) program compared to standard (static) Yoga on body composition, flexibility, and balance.

METHODS: Thirty-one participants (24 females and 7 males, age = 20.4 ± 0.2yrs, and BMI = 22.58 ± 0.55kg/m²) were assigned to two groups - a standard Yoga (YOG, $n = 20$) and an Essentrics (ESS, $n = 11$) group. Each group met 3 times per week for a total of 45-50 minutes per day for 6 weeks. Anthropometric measurements, body composition (dual-energy x-ray absorptiometry), flexibility (sit-and-reach), and balance (lower extremity Y-balance) were assessed before and after the 6-week program. Measurements of the balance test included 3 reaches and their combined values [anterior (ANT), posteromedial (PM), posterolateral (PL), and composite reach distance (CRD)]. All reaches were averaged for the right and left side and then normalized to leg length. Data were analyzed using an ANOVA with repeated measures ($p < 0.05$), and a post-hoc test was performed if any significant main or interaction effects were found.

RESULTS: There were no significant differences in flexibility and balance between YOG and ESS groups. However, both groups improved their balance after 6-weeks of program; PM (87.13 ± 11.64cm to 92.25 ± 9.91cm, $p=.001$), PL (82.88 ± 11.28 to 88.62 ± 9.62cm, $p=.002$), CRD (225.96 ± 27.17 to 238.26 ± 22.98cm, $p=.001$), normalized PM (98.31 ± 11.68 to 104.27 ± 11.14%, $p=.001$), normalized PL (93.60 ± 11.98 to 100.15 ± 10.70%, $p=.001$), and normalized CRD (255.12 ± 27.89 to 269.21 ± 25.07%, $p=.001$). Additionally, the flexibility improved (51.42 ± 8.24 to 53.38 ± 7.04cm, $p=.010$) after 6-weeks of program. Interestingly, total body fat percentage was significantly reduced only in the YOG group (24.44 ± 6.73 to 23.51 ± 6.32%, $p=.002$).

CONCLUSION: Regardless of the type of yoga program followed (static vs. dynamic), both improved flexibility and balance. Individuals seeking to improve balance and/or flexibility can benefit from either program.

A Six-week Hatha Yoga Intervention On Total Body Muscular Strength In Resistance Trained, Young Adults

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Yoga is a common exercise modality, ranking in the top 20 fitness trends for the last decade. Recent research has suggested that participating in yoga may provide supplemental benefits to muscular strength, when partnered with resistance training, in young adults. However, previous research has methodological limitations that impact the ability to properly understand the effects of yoga on muscular strength.

PURPOSE: To determine the effects of a 6-week Hatha yoga intervention on total body muscular strength in healthy, resistance-trained, young adults.

METHODS: Resistance-trained adults ($n=18$); age: 23.1±2.0 yr; 61% females) were randomized to either the yoga intervention ($n=10$) or control group ($n=8$). The yoga intervention involved 18 Hatha yoga sessions over 6 weeks, while the control group maintained normal activities. Both groups continued their resistance training programs. Muscular strength was assessed pre- and post-intervention using 1-RM for bench press, deadlift, and squat using standard procedures. Data were analyzed using a 2 (time) x 2 (group) repeated measures ANCOVA, controlling for sex, with an alpha level set at 0.05.

RESULTS: There was a significant difference in bench press 1-RM due to time ($p<0.001$) with an increase in 1-RM following the intervention (pre: 55.4±9.9 kg vs. post: 59.2±10.0 kg). Deadlift 1-RM also increased across the intervention (pre: 96.7±19.0 kg vs. post: 103.0±18.1 kg; $p=0.04$). There were no differences in 1-RM for bench press ($p=0.08$) or deadlift ($p=0.29$) between the two groups. There was a significant increase in squat 1-RM across time (pre: 79.5±15.2 kg vs. post: 86.3±15.4 kg; $p<0.001$). Further, the yoga group had a significantly higher squat 1-RM (90.8±15.0 kg) compared to the control group (75.0±15.0 kg; $p=0.04$).

CONCLUSIONS: A 6-week Hatha yoga intervention does not improve deadlift and bench press 1-RM differently than resistance training alone. However, yoga may provide beneficial improvements to the 1-RM for squat in resistance-trained, young adults. Future research would be beneficial to investigate alternate forms of yoga on muscular strength such as Vinyasa yoga. Research should also aim to determine whether supplementing resistance training with yoga is beneficial in other populations such as older individuals and those with musculoskeletal disorders.

High-Intensity Functional Training For Children With Autism Improves Social Skills, ASD Symptoms And Physical Performance

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PURPOSE: This study assessed the feasibility and effectiveness of a 10-wk high intensity exercise program offered after-school for children with autism spectrum disorder (ASD) without intellectual disability.

METHODS: Children with ASD ($n=11$, M age: 9.53 ± 2.1 yr) engaged in a 1 hr after-school high intensity functional training exercise session, 2 d/wk for 10 wks that targeted social skills, ASD symptoms, and physical performance. Each group exercise session included an instruction period, warm-up, high intensity workout, related game, and cool-down. Social skill and symptom outcome measures included the Adapted Skillstreaming Checklist (ASC) and Social Responsiveness Scale 2nd Edition, School Age Form (SRS-2). Physical performance data (i.e., strength, flexibility, PACER aerobic fitness, power) were also collected. Paired t -tests were used to assess pre to post program performance differences. Participant and parent/guardian satisfaction surveys (7-point Likert scale) were administered following completion of the program.

RESULTS: Feasibility and safety were supported in high levels of fidelity (96%), participant and parental satisfaction (4.66, 6.53 out of 7, respectively), and attendance (90% of all sessions),