Xournals

Academic Journal of Dance and Music

ISSN UA | Volume 01 | Issue 01 | June-2018

Role of Dance in Body Fitness

Carla Thomas[1]

Available online at: www.xournals.com

Received 6th February 2018 | Revised 7th May 2018 | Accepted 28th May 2018

Abstract:

Dance is a form of art that involve the rhythmic movement of body and happen with music. Performing the dance with the movement of human body that contain significant medium for communication, feelings and emotions and it is cuddle movement, creation and performance. For improving the health related physical fitness, dance is an excellent alternative exercise and it extend the limits of human physical ability, expressiveness and spirit. When dance come into health dance, then it can be very effective way of establishing a lasting healthy living. It is a non-competitive form of exercise which contain positive effect on physical and mental health. When performing the dance that requires the support from physiological requirement necessary for dancers including cardiovascular fitness, muscle flexibility, muscular strength/power. By dancing, qualities and benefits offered that depend on dance and forms concerned but general rule, it improved the physical health by developing strength, suppleness, coordination and balance in varying amounts. In this review paper, studies about the balance and flexibility between dancer and non-dancer.

Keywords: *Rhythmic movement, Cuddle, Suppleness, Coordination*

Authors:

1. *Prifysgol Bangor University, Bangor*

Introduction

Dance is a form of art that involves the body, emotion and mind with music. It is a physical activity which a means of expression and communication. It is a conscious effort to create visual design in space by continuously moving body through a series of poses and pattern. Movement of human body must also be in symmetric and should follow a particular rhythm.

Dancing is an excellent way to improve physical fitness, a set of attributes that are either health or skill-related and develop social skills, as a result to improving mental health. The best kinds of dance, encourage the people to take up are those which develop cooperation, either with a partner or within a set. It is a healthy activity that are alternative exercise form for children that would participate with improving health related physical fitness elements which is cardiorespiratory endurance, muscular endurance, muscular strength, body composition and flexibility. The positive effects of dance on physical fitness that observed in various areas like flexibility, strength and endurance. In recent studies, increasing the heart rate up to 65-85% by workout of dance fitness. It does not beneficial only for cardiovascular health but also helps for shape of body and weight loss.

By using particular technique, dancers trained in a technique to prepare for choreography. According to Foster, "says that not only was the dancer trained exclusively for that technique but each choreographic work was designed exclusive of others". The requirements of cardiovascular of choreographic work were met during the techniqual training and subsequent rehearsals of that work: demand of the performance, the technique itself and subsequent rehearsals prepared the dancer for the physiological energy.

Flexibility: It is an essential element of normal biochemical functioning of dance. Dancing requires a great amount of flexibility. It is the ability of soft tissue structures (muscles, tendons and connective tissue) to stretch smoothly. For all major muscle groups, dancers must strive to achieve full range of motion. Most form of dance require dancers to perform moves that require bending and stretching, so dancers naturally become more flexible by simple dancing. It is divided into two components:

Dynamic Flexibility – Its obtainable the active range of motion (ROM) in which by contracting muscles, the body's ability to move the joint. For example, dancer's dynamic flexibility is exhibited in the height of a ground battement.

Static Flexibility – During the passive movement, it is achieved the total movement in which producing the external force movement without the muscle contracting. For example, dancer uses the hand to pull the passive leg up further than the maximum height of grand battement.

Strength: It is defined as the ability of a muscle to exert a maximal force against resistance. Dancing build strength by forcing the muscles to resist against a dancer' own body weight. Dancers frequently support body weight each other's, perform flips and many forms of cartwheels and gymnastic-like movement. In case of ballet and contemporary, more demand of muscle strength and this strength utilized to perform the movements such as lifts and floorwork (using gravity to pull them down to floor). In dance training, contributes to strength development in children and after 12 months periods, increasing in hip muscle strength. Requiring muscle strength for jumps and balance on one legs, dancers are reported to have limb strength that in lower than in physically active participants.

Endurance: Without fatigue, it has ability of muscles to work hard for increasingly longer periods of time. For improving endurance, regular dancing is most important especially vigorous dancing such as line and ballroom dancing.

Body Composition: Dance is a highly stylized and artificial art form, it is also requires a very specific body type. Body composition is usually estimated, when assessing the fitness levels of dancers. Body composition of dancers is also important from a nutritional standpoint. From use of Body Mass Index (BMI), nutritional status is typically determined. Fat free mass index (FFMI) might offer a better representation, is an index to take into account the amount of muscle mass a person is carrying and relate that to their height. Body composition is estimated by using equation FFMI = FFM (kg)/m^2 (fat-free mass/height squared) and FMI (fat mass/height squared).

The skinfold caliper measurement test is one of the most common method of determining a person's body composition and body fat percentage. By measuring skinfold thickness, estimates the percentage of body fat from specific location of the body. The thickness of these folds is a measure of fat under skin called subcutaneous adipose tissue. According to person's age and gender, skinfold thickness results rely on formulas that convert these numbers into estimate of a person's percentage of body fat.

Sense of well-being: It is a social activity and provides many opportunities to meet other people. By joining the dance class, increasing the self-confidence level and build social skills. Reduce stress and tension by doing the dance and regular dance gives an overall sense of well-being.

Review of Literature

Koutedakis and Jamurtas (2004), currently in use the dance-only selection and training systems at the height of their professional careers, dancers' muscular balance, muscular strength, aerobic power and bone and joint integrity that are 'Achilles heels'. In particular, poor levels of physical fitness is indicate the dance injuries that resemble those found in sedentary individuals. Preliminary data indicated that off-studio exercise training are increases the fitness that are related with parameters without interfering with artistic and dance performance.

Angioi *et al.*, (2009), stated that aerobic/strength training is effectiveness and improve dance performance. According to one well-methodology, increase in fitness components that give result in related beneficial effects in aspects of performance. One of the most important is improvement in individual fitness components for different reasons. Knee extensor and flexor low muscle strength levels have been associated with increased injury severity in professional dancer that are expressed as the total time off dance training.

Anbarasi, Rajan and Adalarasu (2012), stated that injured dancer have high hamstring tightness that lead to pain and Mean Sac Diameter (MSD). All dancers are indorsed to do regular yoga stretch in which yoga is the integral part of Bhratnatyam. It is note-worthy that every stretching exercises necessary for body, for any athletic event or Bhratnatyam is well documented in yoga. Large group of dancers complaints of pain, though the pain level was not stop their dance career.

Costa, Ferreira and Felicio (2013), dictated that static balance is better in ballet dancers in relation to non-trained individuals and athletes of different sport modalities. Dancers are presented more visual dependency in order to maintain static balance due to specificity of their training.

MALKOGEORGOS *et al.* (2013), concluded that dance is an excellent alternative exercise for improving the health related fitness elements. Dancer's physical fitness developed that are seems to be more by a product of skill acquisition that focused fitness training. Fitness depends on the individual's ability to work under aerobic and anaerobic conditions and develop high levels of muscle tension. Dancers require support from enhance physiological requirements for performing the dance that includes joint mobility, muscular strength, cardiovascular fitness, body composition and suggested.

Hwang and Braun (2015), in this review paper, strong evidence suggest that dance, irrespective of style and dosage that improves older adult's functional fitness. It concluded that dance may not be sufficient to change body composition significantly. Although dance involvements have low attrition rates, a majority of the older adults participating in the dance interventions were female.

Sil (2016), concluded that significance of difference between group mean for yoga students and Bhratnatyam dancers have analyzed by t-test that give result, is flexibility an static balance are higher for yoga students that the Bhratnatyam dancers. It is also reveal that difference between means for static balance between yoga and dancer groups were not statistically significant but in case of difference between means for flexibility between Yoga and Dancer groups were statistically significant.

Burzynska *et al.* (2017), at functional and structural levels, dancers' brains differed from non-dancers'. In this review, group differences were skill-relevant and correlated with objective measures of dance skill and balance. It increasing induce neural alterations which is promising in that long-term, versatile, combined motor and coordination training and support performance demands. Neurostimulation techniques are used in dance training that modulate the brain function and structure to optimize skill acquisition and motor performance.

Conclusion

Dance play an important role in health fitness, it has some positive impact on health fitness and well-being of an individual. It is an excellent alternative exercise form improving health related physical fitness elements. Development of dancer's physical fitness seems to be more a byproduct of skill acquisition than focused training. When performing the dance, then requires support from enhanced physiological requirements that is necessary for dancers including joint mobility, muscular strength, cardiovascular fitness, body composition and suggested that supplementary aerobic and or strength exercise training.

References:

"*Stretching for Dancers*" Available at: www.iadms.org.

Anbarasi, V., *et al.* "Analysis of Lower Extremity Muscle Flexibility among Indian Classical Bharathnatyam Dancers." *International Journal of Medical and Health Sciences*, vol. 6, no. 6, 2012, pp. 225–230.

Angioi, M., *et al.* "Fitness in Contemporary Dance: A Systematic Review." *International Journal of Sports Medicine*, vol. 30, no. 07, 2009, pp. 475–484., doi:10.1055/s-0029-1202821.

Burzynska, Agnieszka Z., *et al.* "The Dancing Brain: Structural and Functional Signatures of Expert Dance Training." *Frontiers in Human Neuroscience*, vol. 11, 2017.

Chatterjee, Dr. Saikot, *et al.* "A Comparative Study on Balance and Flexibility between Dancer and Non-Dancer Girls." *IOSR Journal of Sports and Physical Education*, vol. 1, no. 5, 2014, pp. 36–40.

Hwang, P W, and K L Braun. "The Effectiveness of Dance Interventions to Improve Older Adults' Health: A Systematic Literature Review." *Advances in Pediatrics.*, U.S. National Library of Medicine, 21 (5), 2015, pp. 64–70. Available at: www.ncbi.nlm.nih.gov/pubmed/26393993.

Koutedakis, Yiannis, and Athanasios Jamurtas. "The Dancer as a Performing Athlete." *Sports Medicine*, vol. 34, no. 10, 2004, pp. 651–661.

Lung, C. -W., *et al.* "The Differences in Gait Pattern between Dancers and Non-Dancers." *Journal of Mechanics*, vol. 24, no. 04, 2008, pp. 451–457.

Malkogeorgos, Alexandros, *et al.* "Physiological Elements Required by Dancers." *Sport Science Review*, vol. 22, no. 5-6, Jan. 2013.

Redding, Emma. "Dancers: Fit Bodies?" *International Symposium on Performance Science*, 2013, pp. 5–10.

Sil, Pintu. "Static Balance and Flexibility of Teen Aged Yoga Students and Bharatnatyam Dancers: A Comparative Analysis." *International Journal of Research & Review*, vol. 3, no. 3, Mar. 2016, pp. 89–91.

Silveira, Michelle Silva da, *et al.* "Static and Dynamic Balance in Ballet Dancers: a Literature Review." *Revista Brasileira De Hematologia e Hemoterapia, Associação Brasileira De Hematologia e Hemoterapia*, 20 (3), 2013, pp. 229–305. Available at: www.scielo.br/scielo.php?pid=S1809-29502013000300016&script=sci_arttext&tlng=en.