

Dance: A Tool through which Active Healthy Living can be Encouraged in Schools

Sharon Phelan*

Department of Physical Education and Dance at the Institute of Technology, in Tralee, Co. Kerry, Ireland

***Corresponding author:** Sharon Phelan, Department of Physical Education and Dance at the Institute of Technology, in Tralee, Co. Kerry, Ireland. Tel:+353872961073; Email: Sharon.Phelan@staff.ittralee.ie

Citation: Phelan S (2018) Dance: A Tool through which Active Healthy Living can be Encouraged in Schools. Adv in Ortho and Sport Med: AOASM-103.

Received Date: 27 August, 2018; **Accepted Date:** 10 September, 2018; **Published Date:** 19 September, 2018

Abstract

This paper views dance as a means through which students of Physical Education can experience active healthy living. Initially, the paper identifies how dance can improve mental health. There, dance provides students with an opportunity to express their thoughts and feelings, to increase their self-esteem and to reduce their stress levels. Then, the paper examines where dance can become a tool to improve the chief components of physical fitness; these include cardio-respiratory fitness, muscular fitness and flexibility. The paper also identifies specific dance types, which are particularly suitable.

1. Improved Mental Health

Usual strands in Physical Education include games, aquatics, gymnastics, athletics, outdoor education and dance. These activities provide students with a chance to improve their memories, their fitness levels, their spatial recognition, and their ability to make decisions and to interact socially. During these classes, the students also experience higher levels of serotonin, the feel good hormone.

However, as there is a mind-body connection in dance, it has the ability to improve mental health significantly. Provided with the right learning environment, Physical Education students can explore their opinions and beliefs about themselves and others using their bodies as tools of expression. Several international studies have identified where dance has improved mental health among adolescents. For instance, Swedish researchers

undertook a study in 2013, which related to mental health levels and dance interventions among 112 young female adolescents. These girls were experiencing low moods and depression. During the project, fifty per cent of the girls undertook weekly dance classes, whereas the other fifty percent abstained. After the project concluded, qualitative research confirmed that the girls who participated in the dance sessions had improved mental health; their moods and outlook on life had become more positive and their self-esteem had increased. These benefits remained in place for approximately eight months after the dance experience concluded [1].

Chief areas, through which dance can improve students' mental health include self-expression, self-esteem and levels of stress. Self-expression is a necessary part of student development. Erik Erikson (1968) has stated that without a "Voice" and "Authenticity" a person might face life, battling with

his or her identity and as a result become withdrawn and depressed [2]. For this reason, students need opportunities to “Voice” their beliefs and feelings as much as possible. While they can use verbal means, they can also use their bodies. In reality, we express approximately 60-65% of our thoughts and feelings non-verbally [3].

Dance types and dance contexts provide differing levels of self-expression. For instance, in socio-recreational contexts, dance types are usually group-based and pre-set. Here “the meanings associated with messages sent by people who are dancing ... are evident through their codes of space, touch, facial expressions, and eye contact” [4]. It is a positive experience, as it enables students to communicate with each other as they dance the same routine together and the feelings, usually expressed, are ones of happiness, self-confidence and love of dance. However, in these contexts, students can also communicate feelings of disinterest towards each other as they dance [5]. They can also be competitive. As a result, students with physical, intellectual and emotional difficulties may want to avoid participating altogether. Finally, the adoption of common routines fails to provide for originality of expression.

On the other hand, during creative dance, students express their thoughts and feelings using basic movement principles to choreograph their pieces. The principles include use of space, relationships, time and flow. As subsequent dance works are not easily interpretable by others the students can reveal their inner “blocks, ruts” and “fears” more comfortably [6]. In addition, they can establish their own style of movement and this makes it difficult to form comparisons and thus a better chance of self-achievement. This is important as it is proven that low levels of self-esteem “Prospectively predict depression in adolescence and young adulthood” [7].

From another perspective, researchers have proven that dance reduces feelings of anxiety and stress. As the student engages in low to moderate aerobic activity, he or she will experience a drop in the secretion of stress hormones from overworked adrenal glands. However, whilst creative dance was appropriate in elevation of self-expression and self-esteem, as a dance form, it does not necessarily keep the body functioning aerobically and the chances of serotonin release can vary considerably. For that reason, dance forms such as line dancing, ballroom dancing and Latin-American dancing will prove more effective.

It is also important to recognise that dance competitions and formal dance performances can reduce the ability to improve mental health. An academic paper, titled “Stress on the Dance floor: The Cortisol Stress Response to Social-Evaluative Threat in Competitive Ballroom Dancers”, refers to the impact of competition on the stress levels of a group of dancers. After participating in a ballroom dance competition, the dancers’ cortisol levels were overly high. The researchers linked the dancers’ increase in stress to the social self-preservation theory, which states that humans have a basic need to protect the social self and that threats to the social self will result in over-increased cortisol levels [8]. A dance competition, complete with a formal audience, would prove threatening for many people. Admittedly, dance competitions rarely occur in schools.

However, formal performances are present in most schools and Physical Education teachers usually choreograph these productions. Therefore, they need to recognise common stressors and offset them as much as possible. For instance, during the staging of a school production, students may feel the need to self-preserve as they try to fulfil the expectations of others- “Teachers, artistic directors, choreographers, other dancers, friends and family have expectations” [9]. Added stressors can include notions of “The Ideal Body” or the “dancing body” and for this reason, it is vital that Physical Education teachers address dance from a holistic perspective - from socio-emotional, cultural and creative and physical perspectives. There, the students’ ability to relate and create receives as much emphasis as their technical ability. In addition, as this environment focuses on the process of learning, as much as the final product, the pressure to achieve end goals reduces and this provides for a less stressful experience.

2. Improved Physical Health

The paper will now examine ways through which dance can be used to improve physical health. Koutedakis and Sharp refer to the fitness “Jigsaw” in dance. This includes “(a) cardio-respiratory endurance, (b) muscular endurance, (c) muscular strength, (d) body composition, and (e) flexibility [12]. This section will identify these fitness components and suggest ways through which dance programmes can be used to improve them.

2.1. Cardio-Respiratory Fitness

Today, the value of dance as a cardio-respiratory tool is accepted and many trials indicate its aerobic

capacity. One such trial, the “Dance for Health” trial, centred on a group of African American and Hispanic adolescents. During the trial, forty-three students formed an intervention group and they participated in a “Dance-orientated physical activity programme”. This included gym-based classes twice a week and dance classes three times a week. Another group, of thirty-eight students, continued to participate in their routine Physical Education classes.

After the trial, results revealed that the forty-three students participating in the “Dance for Health” programme had a more significant lowering in body mass index and resting heart rate. Rosemary Flores, initiator of the programme, also noted that these students had acquired a more positive attitude towards exercise [13]. For such programmes to succeed, Flores recommended that Physical Education teachers use popular music, provide a variety of easily executable set routines and encourage overweight students to participate [14].

As the “Dance for Health” project focused on dance from physical perspectives, dance as an art form, received less emphasis. However, this does not need to be the case, as teachers can adopt and adapt dance classes to function well aerobically. In these classes, travelling actions are maximised, rest periods minimized and warm-ups are more intense. In addition, the adoption of specific dance types proves significant, as this will impact on the aerobic intensity of the class. For example, ballroom dancing or line-dancing provide for a moderate workout, whereas jazz dance, rumba, salsa or belly dancing provide for a high-intensity workout.

2.2. Muscular Fitness

As mentioned, muscular fitness is an important part of the fitness jigsaw. In reality, students often avoid increasing their muscular fitness, as they assume it will decrease their flexibility and make them look bulky [15]. However, research has proven that increased muscular fitness improves the quality of dance works and the physical aesthetic. This research also proves that increased muscular strength causes less injury [16].

From a dance-based perspective, students can identify the areas of the body, which need increased muscular fitness to dance certain dance types to their full potential. For instance, if they are dancing hip-hop or Spanish Flamenco, they will identify their powerful and sharp sequences, during which the dancers jump, hop and leap using their lower extremities. To dance these dance types to their full

potential the students will recognise the need to strengthen their lower bodies using weights and/or plyometric training sessions (originally termed “jump training” sessions).

The use of machines and free weights, to compliment dance sessions, will increase the students’ strength levels as well as introduce them to gym work. However, as gyms are not always available in schools, plyometrics provide a useful alternative. From a physical perspective, they will impact on the students’ aerobic fitness and from a dance-based perspective, the vertical jumps and hops, integral to plyometrics, form part of most dance forms. Also, the fact, the students jump and hop, using floor patterns, will aid their ability to follow floor patterns in dance. Finally, plyometrics reduce foot and ankle injuries and these are prominent among young adolescents participating in sports, running and gymnastics. For instance, in basketball, “foot and ankle injuries account for 44% to 45% of all injuries in adolescents” [16].

So far, supplementary training sessions have received emphasis, but the adoption of one particular dance form, “Contact Improvisation”, will also build strength levels. During Contact Improvisation, points of physical contact are used for dancers to transfer their weight to each other. This weight transference occurs in a number of ways; the partners lean off each other; they yield their weight into each other; they support each other; they lift and carry each other and they pull and push each other. All these actions will improve muscular fitness.

2.3. Flexibility

Finally, flexibility is an important component of physical fitness and all dance sessions must include a formal period of stretching before the teaching of dance technique takes place. In regular dance classes, the focus is on preparing the limbs for the range of motion involved in the specific dance form. However, in Physical Education classes, teachers stretch all the major muscle groups. A common warm up in Physical Education includes a low-intensity aerobic activity such as walking or marching, followed by static stretching. It focuses on preparing the students’ cardiovascular and musculoskeletal systems for the physical tasks, which lie ahead. In reality, there is often little difference between the warm ups which precede sports and dance during Physical Education.

However, from a dance-based perspective, it is necessary that the warm up is dance-specific and that

it reflects the dance experience, which lies ahead. Instead of employing static stretches, the teacher can use dynamic stretching; here the students are moving as they stretch. It is conducive to dance from a number of perspectives. Firstly, the muscles, which the students will use later in the class, are activated by being placed into a similar range of motion. Secondly, the students' kinaesthetic awareness will be stimulated. Finally, dynamic stretching will also challenge balance, co-ordination and posture, and all these are core elements in dance.

From a fitness-based perspective, dynamic stretching also improves muscular fitness. A study, carried out in 2005, tested the "Acute Effects of different Warm-Up Protocols on Fitness Performance in Children". In the study, "Sixty children performed three different warm-up routines in random order on non-consecutive days. The warm-up protocols consisted of five minutes of walking and five minutes of static stretching, ten minutes of dynamic exercise or ten minutes of dynamic exercise plus 3-drop jumps from 15-cm boxes. The findings suggested that prevent low-intensity aerobic exercise and static stretching could be "Suboptimal for preparing children for activities that require a high power output [17]."

Another study cited in the "Acute Effects of different Warm-Up Protocols on Anaerobic Performance in Teenage Athletes" found that dynamic stretching also improves cardiovascular fitness. The average heart rate (measured by portable heart-rate monitors) during a traditional warm-up (low-intensity aerobic exercise and static stretching) averaged 109 beats per minute, whereas a dynamic warm-up protocol elicited an average heart rate of about 150 beats per minute "[18].

In conclusion, all students regardless of their physical levels of ability will exercise their chief fitness components during dance sessions. However, the extent to which each component is challenged largely lies with the teachers' selection of dance forms and the existence of supplementary training. The more frequently used dance forms tend to emphasize muscular endurance versus muscular power and operate at a low intensity aerobic level. Therefore, Physical Education teachers need to adopt a wider range of dance types and adapt their dance sessions to realize the full potential of dance as a tool to improve their students' physical fitness.

3. Conclusion

This concludes the paper. One final point worth emphasizing is that adolescent students can encounter problems with their body co-ordination, proprioception (internal body awareness) and strength due to growth spurts. For this reason, Physical Education teachers need to adopt an all-inclusive policy in their dance studios, while they teach dance. There, these students will work within their own parameters in a friendly and supportive environment and develop a passion for dance as an art form and as a fitness tool.

Reference

Books

1. Alisha Ali, Crowley DJ (2010) *Silencing the Self across Cultures: Depression and Gender in the Social World*, Oxford University Press, Oxford, New York.
2. Blom, Chaplain (1998) *The Moment of Movement*.
3. GuerreroLK, Hecht ML (2008) *The Nonverbal Communication Reader* (2nd ed.), Waveland Press, Inc, Prospect Heights, IL.
4. Jack DC, Ali A (eds) (2010) *Silencing the Self Across Cultures: Depression and Gender in the Social World*, Oxford University Press, England.
5. Koutedakis Y, Craig SharpNC(1999)*The Fit and Healthy Dancer*, Wiley and Sons Ltd., Chichester, England.
6. Novack Cynthia J(1990) *Sharing the Dance: Contact Improvisation and American Culture*, University of Wisconsin Press, Wisconsin.
7. Wilmerding MV, Krasnow D (eds)(2017)*Dancer Wellness*, Human Kinetics, Champaign, Illinois.

Journals

1. Faigenbaum A, Bellucci M, Bernieri A, Bakker B, Hoorens K (2005) "Acute effects of different warm-up protocols on fitness performance in children" in *Journal Strength Conditioning Research* 19: 376–381.
2. Faigenbaum A, Kang K, McFarland J, Bloom J, Magnatta J, et al. (2006) "Acute effects of different warmup protocols on anaerobic performance in teenage athletes" in *Pediatric Exercise Science* 18: 64-75.
3. Orth Ulrich, Robins Richard W, Roberts Brent W (2008) *Journal of Personality and Social Psychology* 95: 695-708.

4. Peick, Melissa (2005) Journal of Undergraduate Research VIII 1-11.
5. Rohleder N, Beulen SE, Chen E, Wolf JM, Kirschbaum C (2007) "Stress on the Dance floor: The Cortisol Stress Response to Social-Evaluative Threat in Competitive Ballroom Dancers" in Personality and Psychology Bulletin 33: 69-84.
6. Caspersen CJ, Powell KE, Christenson GM (1985) "Physical Activity, Exercise and Physical Fitness: Definitions and Distinctions for Health-Related Research" in Public Health Reports 100: 126-131.
7. Flores Rosemary (1995) "Dance for Health: Improving Fitness in African American and Hispanic Adolescents" in Public Health Reports 110: 189-193.
8. Koutedakis Y, Clarke C, Wyon M, Aways D, Owolabi EO (2009) "Muscular Strength: Applications for Dancers" in Medical Problems of Performing Artists 24: 157-165.
9. Malanga GA, Ramirez-Del Toro J (2008) "Common Injuries of the Foot and Ankle in the Child and Adolescent Athlete" in Physical Medicine and Rehabilitation Clinics 19: 347-371.
10. Kozai A (2012) "Supplementary Muscular Fitness Training for Dancers" in Journal of Dance Medicine and Science 9: 15-17.

Copyright: ©2018 Sharon Phelan. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permit unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.*