Abstracts from the Current Literature

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In recent years it has frequently been suggested that dancers may not be sufficiently prepared for the demands of dance, and that the typical dance technique class by itself is not challenging enough to produce fit dancers. While a technique class can focus on muscular endurance, flexibility and neuromuscular coordination, it generally cannot meet all the physiological demands of high intensity aerobic and anaerobic performance. Therefore, supplementary fitness training outside of the dance class is encouraged to meet present day performance demands. This article offers some suggestions for incorporating fitness training into the dance class, and reports on the effectiveness of different supplementary programs. Some cardiovascular overload could be achieved by conducting the warm up at a continuous, higher intensity level and designing longer traveling sequences that are repeated more frequently with less rest time. Supplementary resistance training is also encouraged. Despite the concern that strength training might negatively affect flexibility and aesthetics there is little scientific evidence to support this. However, the training should be specific to the type of movement patterns used in dance. Theraband and dance-specific plyometric (jump) training are two examples of supplementary training. As part of the overall conditioning of the dancers it is also suggested that somatics, motor learning and psychological aspects need to be incorporated into dance training, such as the use of imagery, visualization, neural re-patterning, motivation and goal setting. One also has to consider how much of the outside of class conditioning transfers to the technique class, and therefore the fitness training that is developed needs to be dance-specific. According to the authors it is no longer necessary to ask whether fitness training should be included in a dancer’s training, but rather how it can best be implemented.


This article is of interest to ballet teachers who are evaluating dancers’ readiness for pointe training and want support for their decisions when communicating with the dancers and/or parents. As background to this research article the reader might refer to the 2009 IADMS resource paper, “When Can I Start Pointe Work?” that can be downloaded free from the website. The resource paper provides some general guidelines for decision-making. The current article provides data on a battery of nine functional tests, and compares it with teachers’ evaluation of pointe readiness. The purpose of the article was to investigate whether functional tests can be used in conjunction with teacher expertise to determine pointe-readiness. The authors point out the importance of trunk and pelvic stability through activation of the core musculature, adequate strength at the ankle, and control of proper alignment and balance during dynamic tasks such as turning and jumping. Thirty-seven pre-pointe students were tested and independently graded on readiness by their teachers. Three tests that assess trunk control and dynamic lower extremity alignment were most closely associated with the teachers’ subjective ratings: the Airplane test (a dynamic balance test on one leg), the Sauté test, involving trunk and lower extremity control during single leg jumps, and the Topple test, involving controlled landings from single and double pirouettes. The authors suggest that these tests may be more useful than the traditionally accepted criteria of 12-year chronological age, years of dance training, and ankle joint range of motion in evaluating pointe-readiness.


Although it has been extensively studied in sport, performance anxiety has not been well researched in dance. The authors review this research and provide good insight into this problem in the dance world. Fifteen professional ballet dancers were interviewed in order to examine how the type, intensity and interpretation of anxiety
symptoms are influenced by the dancer’s experience, self-confidence, and psychological strategies. Anxiety can have somatic symptoms, such as shortness of breath or increased heart rate, and cognitive symptoms, such as worries or negative images. It can have either a positive or negative effect on performance. This qualitative analysis of interviews showed that performance anxiety was experienced by most dancers, but varied in intensity. Not surprisingly, principals appeared to experience greater performance anxiety than corps de ballet dancers, due to increased pressure from demanding roles. Most dancers viewed an optimal degree of somatic anxiety as positive, enhancing the physical performance, but if it became higher it would negatively affect performance. Cognitive anxiety was viewed as having a more negative effect on performance than somatic anxiety. Feeling in control of the anxiety symptoms appeared to be the critical factor. Lack of preparation, injury, and external factors such as costumes, speed of music, stage types and audience members were other factors mentioned that contributed to feeling out of control. External pressures from staff or other dancers, internal pressures to excel and perform well, perfectionism, and self-critical tendencies also contributed to performance anxiety and more general anxiety. The dancers reported that their anxiety was not limited to the actual stage performance but was also present in class and in rehearsals. Extensive quotations in the study provide an intimate look into dancers’ anxiety experiences, and perhaps most relevant for teachers of future performers is the description of strategies for preventing or handling performance anxiety through education, the development of coping strategies, and building the dancer’s self-confidence.


These authors used wire electrodes to examine the effectiveness of common lumbar stabilization exercises. They compared local and global muscles and side-to-side differences. The authors described local muscles as those that are deeper, considered stabilizers, and attach directly or indirectly to the spine, such as the transversus abdominis and lumbar multifidus. Global muscles, on the other hand, are more superficial, control trunk movement, and do not attach to the spine, such as the rectus abdominis and external oblique. They explain that simultaneous contraction of both groups, known as “coactivation,” improves lumbar spinal stability. They investigated several exercises commonly performed by dancers for conditioning purposes: plank, plank with opposite leg and arm raised and reversed, quadruped with opposite leg and arm raised and reversed, bridge, bridge with one leg extended, side plank, side plank with top leg up, and crunch. There are photographs of each exercise. The article includes tables clearly describing which muscles are most active during each exercise. Of interest are the following findings: plank produces the greatest activity of the transversus abdominis and it is does not contract as a single unit (rather one side contracts more than the other when the opposite arm or leg is lifted); crunches produce the greatest activity of the rectus abdominis; side plank with one leg lifted produces the greatest right-left difference in the external oblique, but plank produces the greatest symmetrical activity. The article gives specific detail of muscle activation patterns for each exercise listed. This type of information can assist dance teachers in designing exercise programs that target specific muscles.