



Injuries Amongst Pre-professionals and Professional Ballet and Contemporary Dancers

Farah Fadzali, August 2020

Dance is considered a form of specialised and creative athletic activity. It is noted that dancers who practise genres, such as ballet and contemporary dance, are often engaged in long hours of daily practice followed by rehearsals and performances^{1,12,16,21}. Due to such circumstances, many dancers succumb to problems, such as overtraining* or burnout*, which lead to overuse and recurring injuries.

*Overtraining: Training excessively, overwork

*Burnout: Complete exhaustion through overwork

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Injury rates amongst dancers in Singapore

In Singapore, there is not much research available on dance injuries or practices but one of the few studies had reported one to two recurrent injuries between local professionals, semi-professionals and recreational dancers (69.9%). 69% of the dancers were also reported to engage in one or more performances per year⁵. From this we can infer that dancers across all board will suffer more injuries with greater training load.

A chronic injury (recurring injury) is an injury of the same type and occurs on the same site as the index injury (injury sustained previously). These injuries are commonly sustained from overusing one body area while exercising/training over a long period of time. When injuries are left untreated overtime, this may develop from an acute to a chronic injury. This is commonly seen in our local dance context^{5,6}. One study done on professional contemporary dancers in Singapore had reported 55.6% of dancers with pre-existing injuries. From the aforementioned figure, 46.7% of them occurred in the same area over the last one year, suggesting a potential association to fatigue⁶.



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Common injury site in ballet and contemporary dancers



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Overused injuries are the common type of injury identified in both ballet and contemporary dance¹¹. However, there is a disparity on injury sites between the two genres. The common injuries identified in contemporary dancers is the lower back and knees³, whereas in ballet dancers, it is the foot and ankle⁹. The biomechanics of the different contemporary dance techniques

and muscular strength plays a part in the increased injury rate in contemporary dance^{12,17}. Studies also showed that a lack of strength in the quadricep muscles (muscles in thigh area)

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is associated with high degree of injuries¹² whilst a reduced range of motion and flexibility are associated with increased rates of injury in both ballet and contemporary dancers^{7,8}.

Although overused injuries seem to be the main type of injury for both ballet and contemporary dance genres¹¹, the high rates of injuries found in dance are also partly due to overtraining or burnout¹⁸. In Singapore, professional contemporary dancers have also reported two-thirds of overused injuries during the period of increased rehearsals in preparation for performances⁶.

On the contrary, poor levels of physical fitness are also associated with injury in dance. For instance, inadequate aerobic capacity is linked to fatigue, which may lead to musculoskeletal damage¹³ (which comprises of pain felt in the bones, muscles, ligaments and tendons).

Other considerations to reduce risk of injuries

Injury rates can be reduced significantly if measures^{15,20} is put in place. This is potentially something that we should consider adopting for local dancers to reduce injury occurrence in Singapore.

Here are some measures that has been done to reduce the risk of injuries in dancers abroad:

- **Periodisation**
Preparing the dancer through the use of a periodisation model¹⁹, in a professional or vocational setting, will potentially help prevent overtraining and its link to injury, while improving the dancer's readiness to perform optimally. Read more about periodisation in our previous article [here](#).
- **Implementing strength and conditioning program**
Elmhurst Ballet School has implemented a strength and conditioning programme that saw a 40% reduction in injury rate and other positive effects such as improvements in power, strength and inter-limb asymmetry¹⁵. This suggests that by incorporating such training regime within dance training may have a prophylactic (preventive) effect against acute and overused injuries. Perhaps we can adopt and implement a similar program for dancers in Singapore.



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Farah is now a dance science researcher studying injury prevention and performer's health and safety practices. Together with her achievements and qualifications, Farah hopes to work towards the development of dance science research in Singapore.

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