

Injuries, load, mood, stress, and compliance with monitoring within semesters of a tertiary dance program: A longitudinal cohort study

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Purpose: This investigation aims to analyse the weekly pattern of injuries, monitor load, mood, and stress, and assess compliance with training monitoring in a three-year tertiary dance cohort to guide injury reduction strategies.

Methods: A retrospective and prospective cohort study design was followed, with consenting tertiary dance students included. Access was granted to onsite physiotherapy notes for injury data, in addition to academic timetables, and enrolment information to determine exposure data. Injury was defined as requiring medical attention. Rate ratios of injury were calculated for each week compared with other weeks for the six semesters of the program. Participants entered daily ratings of perceived exertion, collected weekly, and completed mood and stress questionnaires at time points across one semester. Mean and standard deviations for training load, mood and stress were observed across one semester. The University Human Research Ethics Committee approved this study

Results and Discussion: Fourteen students (six first years, two second years, six third years) consented to participate. Injury rates were significantly increased for Weeks 5, and 2 of Semesters 1, and 2, and Week 1 in Semesters 3 and 4. Participants involved in an international tour had mean fatigue scores of 4 ± 1.83 out of a possible 16 at semester 6 commencement, increasing to 6.5 ± 2.08 post-tour, and further to 11.5 ± 0.71 in week 10 of 14. Participants not involved in the tour were observed to have an increase in anger from 3.75 ± 1.67 at semester commencement, to 7.33 ± 0.58 in week 12. Compliance with completing monitoring questionnaires decreased from 81% to 0% across the semester.

Conclusion: Certain weeks in proximity to returning to technique classes were observed to have increased injuries across a tertiary dance training program. Increases in fatigue, and anger can be seen in separate subgroups across the semester, spikes in training load seen in parallel with injury, and increases in stress during rehearsal weeks were seen. Compliance with

monitoring strategies was poor within this cohort. Providing education, giving feedback, and introducing monitoring early in careers may promote compliance with training monitoring. Further research should consider the perceptions of training load practices in dance populations.

Recommended Readings

- Fuller, M, GM Moyle, AP Hunt, and GM Minett. 2019. "Ballet and contemporary dance injuries when transitioning to full-time training or professional level dance: a systematic review." *Journal of Dance Medicine & Science* 23 (3):112-125.
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