

ORIGINAL RESEARCH

INJURY INCIDENCE, DANCE EXPOSURE AND THE USE OF THE MOVEMENT COMPETENCY SCREEN (MCS) TO IDENTIFY VARIABLES ASSOCIATED WITH INJURY IN FULL-TIME PRE-PROFESSIONAL DANCERS

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ABSTRACT

Background/Purposes: Prospective studies utilizing standardized injury and exposure measures are needed to consolidate our knowledge of injury incidence and associated risk factors for musculoskeletal injury amongst pre-professional dancers. The purpose of this study was to investigate the injury incidence amongst pre-professional dancers attending a fulltime training school in New Zealand. The secondary purposes of this study were to investigate the relationship between dance exposure and injury risk, and the relationship between risk factors (specifically the MCS outcome scores) and injury risk.

Methods: A prospective cohort study of 66 full-time pre-professional dancers was undertaken over one full academic year (38 weeks), included 40 females (mean age 17.78 yrs, SD 1.18) and 26 males (mean age 18.57yrs, SD 1.72). Injury surveillance included both reported and self reported injury data. Dancers were screened using the MCS in the first week of term one.

Results: Eighty-six per cent of dancers sustained one or more injuries. Fifty-nine per cent of all injuries were time-loss. The injury incidence rate was 2.27 per 1000 hours of dance exposure (DEhr) and 3.35 per 1000 dance exposures (DE). There was a significant association between the total number of injuries and total DE per month ($B=0.003$, 95% CI 0.001 - 0.006, $p=0.016$). Dancers who had a MCS score < 23 were more likely to be injured than those who scored ≥ 23 ($B= -0.702$, 95% CI = -1.354 – -0.050, $p=0.035$).

Conclusion: Injury prevalence and incidence was comparable with other international cohorts. The number of dance exposures was more highly associated with injury risk than the hours of dance exposure. The MCS may be a useful tool to help identify dancers at risk of injury.

Level of Evidence: Level 3b, Prospective Longitudinal Cohort Study

Keywords: Dance, exposure, functional movement screening, injury, pre-professional

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