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EXPLORING RELATIONSHIPS BETWEEN PRACTICE HISTORY, PERFORMANCE, AND INJURY RISK IN A SAMPLE OF DEVELOPMENTAL ALPINE SKIERS

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Achieving elite status in sport often requires athletes to overcome significant physical injuries. However, to date, there has been a paucity of studies exploring how hours engaged in practice and early developmental milestones influence injury rates in 'high-risk' winter sports, such as alpine skiing. Moreover, despite numerous published reports on injury epidemiology, a lack of objective measures of performance has been a notable oversight. The purpose of this study was to assess how previous sport engagement and performance are related to injury in a sample of sub-elite youth alpine skiers. Adolescent skiers enrolled in U.S. academies ($N = 169$, males = 81) were given questionnaires assessing practice/injury history and sport-specific milestones, while performance in speed and technical disciplines were derived from participants' National points (i.e., ranking) for each year available. Simple correlations, MANOVAs, and linear mixed-effect regressions were used to assess relationships between predictors: age, gender, sport-specific milestones (e.g., age of first competition), practice hours, ranking; and the outcomes of interest: *injury incidence* (i.e., proportion of seasons an athlete sustained injuries causing them to miss > 4 weeks) and *injury impact* (i.e., average weeks missed due to injury each year). Results revealed that while older athletes had accumulated more injury weeks across their career ($p = .020$), female skiers reported greater injury incidence ($p = .049$). Neither injury incidence nor injury impact was associated with performance trends (all p 's > .05), but they were negatively associated with time spent in group and individual practice (both p 's < .05). Finally, the age of first competition was positively correlated with injury impact ($p = .014$). These and other findings are discussed in relation to previous studies of sport-injury, as well as applied implications for working with developmental athlete populations in high-risk domains.