

Appendix 2: Excluded studies

The following 11 studies were excluded from the systematic review after reading the full-text manuscripts, for the following reasons:

- The study did not assess aggression or injury related to players in an actual ice hockey setting:

Ciavarro C, Dobson M, Goodman D. Alert Hockey: An Endogenous Learning Game. Canadian Games Study Association (CGSA) 2006 Symposium; 2006.

[The study did not assess aggression or injury related to players in an actual ice hockey setting, only via a computer game.]

Glang A, Koester MC, Beaver SV, Clay JE, McLaughlin KA. Online training in sports concussion for youth sports coaches. International Journal of Sports Science and Coaching. 2010;5:1-12.

[The study did not assess hockey players' aggression or injury in on-ice on in game, but solely through their comprehension of the online training program.]

Goodman D, Bradley NL, Paras B, Williamson IJ, Bizzochi J. Video gaming promotes concussion knowledge acquisition in youth hockey players. Journal of Adolescence. 2006;29:351-60.

[The study did not assess the effect of the video game intervention on-ice, but only compared it to a concussion symptoms questionnaire.]

Echlin PS, Johnson AM, Riverin, S, et al. A prospective study of concussion education in 2 junior ice hockey teams: implications for sports concussion education. Neurosurg Focus. 2010;29(5):E6.

[The study only compared concussion knowledge scores; no on-ice follow-up.]

- The study did not include an intervention:

Emery CA, Meeuwisse WH. Injury rates, risk factors, and mechanisms of injury in minor hockey. American Journal of Sports Medicine. 2006;34:1960-9.

[No intervention, but an injury surveillance system to examine injury rates, risk factors, and mechanisms of injury.]

Bushman BJ, Wells GL. Trait aggressiveness and hockey penalties: predicting hot tempers on the ice. Journal of Applied Psychology. 1998;83:969-74.

[Only assessed aggression scores at the beginning and end of the hockey season, no intervention used to reduce aggression.]

Smith AM, Stuart MJ, Wiese-Bjornstal DM, Gunnon C. Predictors of injury in ice hockey players. A multivariate, multidisciplinary approach. American Journal of Sports Medicine. 1997;25:500-7.

[Goal of study was to assess the incidence and predictors of injury; no intervention.]

Echlin, PS, Tator, CH, Cusimano, MD, et al. A prospective study of physician-observed concussions during junior ice hockey: implications for incidence rates. *Neurosurg Focus*. 2010;29(5):E4.

[The objective of the study was to measure the incidence of concussion and recurrent concussion, not prevent it.]

Benson, BW, Meeuwisse, WH, Rizos, J, et al. A prospective study of concussions among National Hockey League players during regular season games: the NHL-NHLPA Concussion Program. *CMAJ*. 2011;183(8):905-11.

[The study explored post-concussion signs, symptoms and time loss experienced by players; no method to prevent these injuries.]

- The study consisted of only qualitative feedback

Montelpare W, McPherson M, Sutherland M, Faught BE, Baker J, Keightley M, et al. Introduction to the Play It Cool Safe Hockey Program. *International Journal of Sports Science and Coaching*. 2010;5:61-73.

[The study only consisted of qualitative feedback from the coaches who participated in the program; no quantitative assessment of the reduction in injury or aggressiveness.]

- The study had no comparison group:

Silva JM. Competitive Sport Environments: Performance Enhancement Through Cognitive Intervention. *Behav Modif*. 1982;6:443-63.

[The study was n=1 and no way to account for random effects; therefore not possible to have statistical significance.]