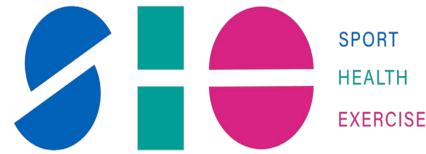


## High intensity interval training practices in competitive field-based invasion team sports

Grassick, S., Ó Catháin, C., Kelly, D., Ní Chéilleachair, N.



### Introduction

High intensity interval training (HIIT) can be defined as alternating bouts of short duration exercise (e.g., 5s to 10 minutes) at near/maximal intensities separated by complete rest or low intensity activity allowing partial/full recovery (1). Formats of HIIT include sprint interval training, repeated sprint training, long and short intervals, with each format capable of inducing high levels of physical stress. Competitive field-based invasion team sports (FITS) such as rugby, soccer and Gaelic games are dominated by technical and tactical components, while high fitness levels are required to supplement these skills as performance is regulated by a combination of physiological and psychological qualities. In spite of the high profile nature of FITS there remains a paucity of scientific literature examining coaches practices within such sports [6]. However it is not clear why/how coaches prescribe HIIT or what methods they implement. The aim of this study is to clarify several aspects of coaches HIIT practices such as why it is used, what methods do they utilise, does their prescription vary depending on the time of season and what variables impact their decision making when selecting a method of HIIT.

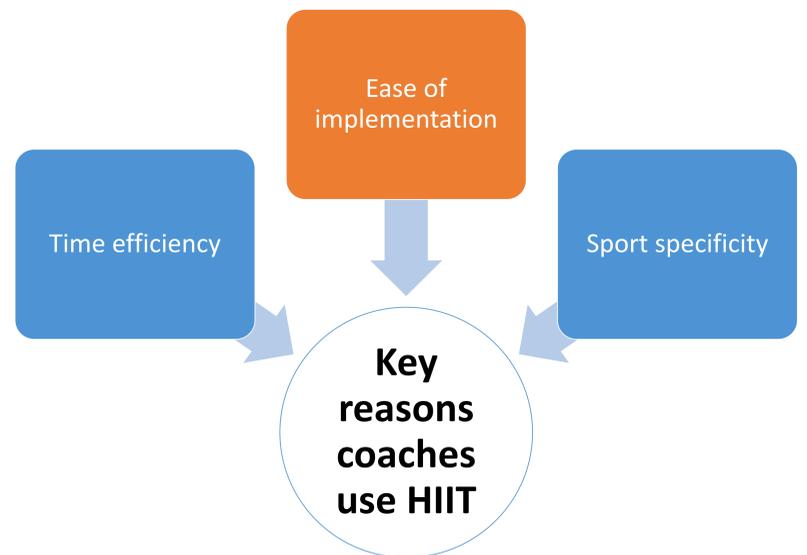
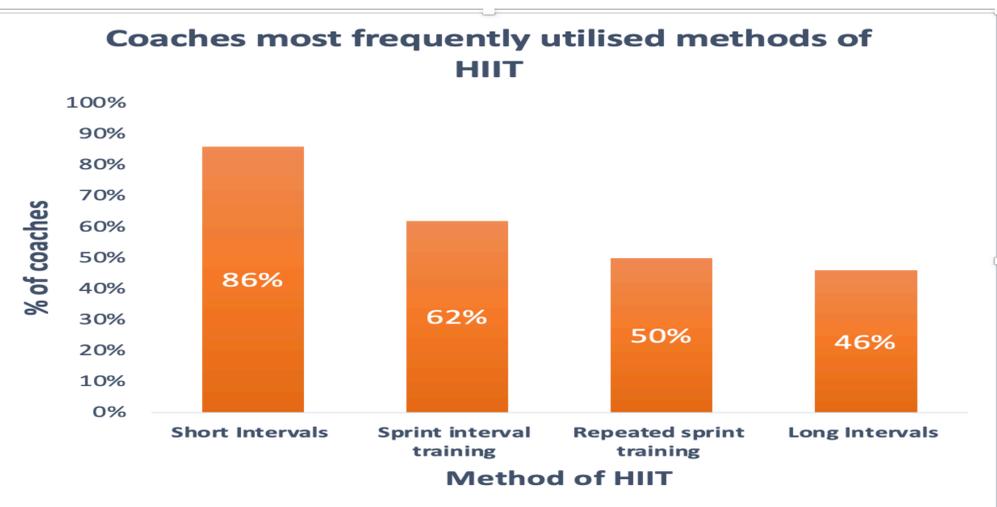
### Methods

- A self-administered online questionnaire to investigate the HIIT practices of FITS coaches
- The survey consisted of fourteen sections
- Content validity of the questionnaire was carried out using the modified Delphi technique
- Fixed response questions were evaluated using a frequency analysis.
- Open-ended questions assessed using a thematic-analysis approach

### Results

- Ninety-five (n=85 male, n=9 female, n=1 prefer not to say) FITS coaches completed this questionnaire.
- Coaches worked within an array of FITS and often with more than one sport, with the most prominent sports being soccer, Gaelic football and hurling.
- In total, 41 coaches reported working with adults, 25 with youth athletes and 29 with both adult/youth athletes.
- Seventy four percent of participants reported working with male athletes, whereas only 20% worked with female athletes and 6% with both.

### Results continued



#### How coaches implement HIIT within their sessions

Type of session	Isolated session	Larger session	Both
Pre-season	8 (11%)	46 (62%)	20 (27%)
In-season	9 (13%)	52 (74%)	9 (13%)

#### Future work



**References**  
 Laursen, P.B. and D.G. Jenkins, *The scientific basis for high-intensity interval training*. Sports Medicine, 2002. **32**(1): p. 53-73.  
 Weston, M., et al., *Effects of low-volume high-intensity interval training (HIIT) on fitness in adults: a meta-analysis of controlled and non-controlled trials*. Sports Medicine, 2014. **44**(7): p. 1005-1017.  
 Dolci, F., et al., *High-intensity interval training shock microcycle for enhancing sport performance: A brief review*. The Journal of Strength & Conditioning Research, 2020. **34**(4): p. 1188-1196.  
 Kelly, D.T., et al., *Comparison of Sprint Interval and Endurance Training in Team Sport Athletes*. The Journal of Strength & Conditioning Research, 2018. **32**(11): p. 3051-3058.  
 Robineau, J., et al., *Concurrent training in rugby sevens: effects of high-intensity interval exercises*. International Journal of Sports Physiology and Performance, 2017. **12**(3): p. 336-344.

