The Effects of Resisted Sprint Training on Sprint Performance in Field-based Invasion Team Sport Athletes: A Systematic Review & Meta-analysis

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Introduction

Speed is an essential performance attribute for field-based invasion team sport (FITS) players. Traditional training methods used to enhance sprint performance (SP) such as resistance training, typically aim to improve one's ability to produce force and power [1, 2] or technical efficiency [3]. However, resistance training exercises (e.g. back squat, deadlift) may lack the movement specificity to optimally enhance SP. The principle of specificity states that the training effect which occurs in response to an exercise overload is specific to the way in which the load was applied [4]. Hence, training methods which adopt comparable mechanical properties to the performance movement (i.e. sprinting) may elicit a greater transfer effect. The resisted sprint training (RST) method applies external resistance to the sprinting movement, allowing maintenance of sprint specific mechanical properties. Consequently, RST methods utilised by coaches may represent a more specific and, in turn, a more effective method for enhancing SP than traditional training methods. Therefore, the aim of this review was to investigate the effectiveness of RST methods on improving SP of FITS players.

Methodology

- A search strategy (fig.1) was developed and then applied to the PubMed
- Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) guidelines were adhered to (fig.2)

sprint running

OR "resisted sprint*" OR "resisted running" OR "resisted run" OR "weighted sprinting" OR "loaded sprinting" OR "weighted running" OR "loaded running" OR "resisted sprint training" OR "resisted sprint running" OR sled OR "weighted sled towing" OR "weighted vest" OR resisted OR tow OR drag OR pull OR parachute OR harness OR "resistance band" OR belt OR device OR rope OR "isotonic resistance" OR friction OR "elastic cord"

AND

OR Rugby OR Soccer OR Football OR "Australian Rules" OR Hurling OR Camogie OR "Field Hockey" OR Lacrosse OR Handball OR "Olympic Handball" OR "field sport" OR "field-based sport*" OR "field based sport*" OR "field-sport players" OR "field sport players" OR "field-sport athlete*" OR "field sport athlete*" OR "team sport*" OR "team-based sport*" OR "team based sport*" OR "team-sport players" OR "team sport players" OR "team-sport athlete*" OR "team sport athlete*" OR "invasion-team sport*" OR "invasion team sport*" OR "invasion sport*"

Figure 1: Search Strategy

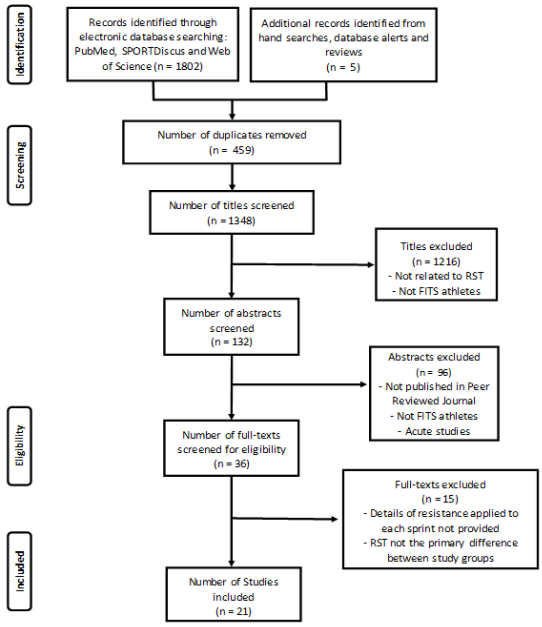
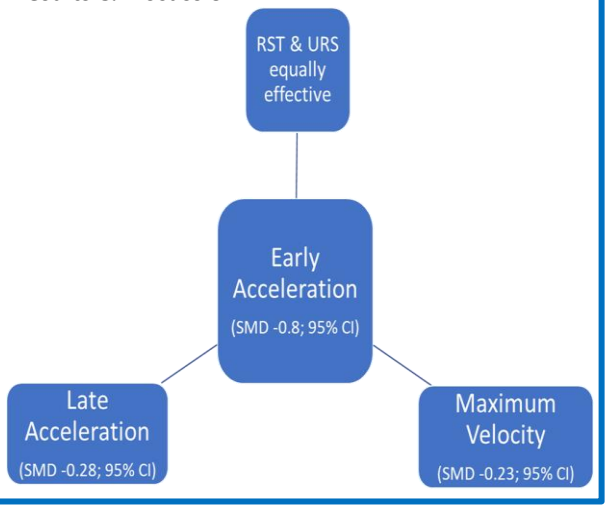


Figure 2: PRISMA Flow Chart

Results & Discussion



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