

The Physical Demands of Kī-o-Rahi Competition

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Abstract

Kī-o-Rahi is a traditional Māori ball game that encompasses the Māori world view (Palmer et al., 2009). Recently, the game has experienced a revival with ~50,000 players nationwide, including secondary school students who participate in annual regional and national tournaments (Palmer et al., 2009; Pillaar, 2011; De Graf, 2013; Brown 2010; 2013; www.kiorahi.com). To our knowledge, there are no published studies on the physical demands of Kī-o-Rahi. This information could be useful to develop specific training programmes for competition, and also to determine if Kī-o-Rahi could be used in Kaupapa Māori programmes to improve health outcomes. Therefore, the aims of our research project are: 1. To Quantify the physical demands of Kī-o-Rahi competition and 2. To determine if participation in Kī-o-Rahi meets exercise prescription guidelines for improving health. This presentation shows preliminary findings from the Canterbury secondary schools' tournament. Informed consent was obtained, and the study had institutional ethical approval. Players (n=16; 9 females, 7 males) wore 10Hz GPS units during five of six 20min-matches in the tournament. On average, players covered 1129±256 m per match of which 484±126 m and 64±13 m were at ≥7.1 km/hr and ≥16 km/hr respectively. There was a trend for distances to decrease in later games despite the number of substitutions being similar, which suggests fatigue accumulated throughout the day. We found participation in a Kī-o-Rahi tournament was physically demanding, therefore specific training and coaching strategies may be required to ensure players are prepared for the demands of competition. Anecdotally, the game was of sufficient intensity and duration to improve fitness. However, further analysis and data collection including heart rate measurements is needed to answer the second aim of the project.

Keywords: *Kī-o-Rahi, exercise, team sport, Māori, indigenous*