

Role of Pilates Exercise on Athletic Performance of Badminton Player: A Literature Review

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ABSTRACT

Badminton is a popular sport around the world, played both individually and in teams. Physical endurance, core strength, agility, balance, and coordination are required for powerful smashes and fast court movements. Badminton performance is determined by a number of factors, including physical, psychological, and sociological elements. Pilates combines the mind, body, and breath to strengthen the core and improve back agility. It is based on six core principles: centering, concentration, control, precision, flow, and breathing. The aim of this narrative review is to evaluate the role of Pilates exercise on athletic performance of badminton player. Published literature was reviewed using the PICO strategy, the Pub Med, Google Scholar, Cochrane, DOAJ, PEDro and MEDLINE databases for relevant research published from 2000 to 2024. The search terms such as "Pilates and physical fitness in badminton players", "Impact of Pilates on agility, strength, and flexibility in badminton players", "Mat-based Pilates for athletic performance in badminton", "Pilates exercises " using Boolean operators AND, OR

were used. The entire free full text original article, English language articles in explicitly explaining the role of Pilates exercise on athletic performance of badminton player were included, irrespective of the type of the study. Letter to editor comment, duplicate study, other language except English language were excluded. A total of articles were retrieved from different databases, out of which only 3 articles fulfilled the inclusion criteria and 347 articles were included in the exclusion criteria. A total of 110 participants were included and divided into two groups: the experimental and control groups included 55 participants each. The results showed that Pilates exercises helps in improving core muscle strength, lower limb strength, dynamic balance, agility, flexibility, and also benefit overall psychophysical development. This review concludes that Pilates exercises were effective in improving core muscle strength, balance, agility, flexibility and lower body strength. Coaches can include Pilates movements into badminton instruction to enhance core muscle strength, balance, and agility.

Keywords: Agility, Core strength, Flexibility, Physical endurance