# PERFORMANCE DIFFERENCES BETWEEN WINNING AND LOSING PADEL PLAYERS REGARDING SERVE SITUATION

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### INTRODUCTION

Padel (also known as paddle tennis) is a doubles racket sport that uses tennis rules and scoring system but is played inside an enclosed synthetic glass and metal court (10 x 20 m), allowing for the use of side and back walls. Previous studies have detected certain factors that contribute to successful performances in racket sport (Hughes, & Bartlett, 2002, Lees, 2003). Serve is clearly one of these key elements, since enables winning the rally directly through an ace or indirectly through taking advantage of opponent's imbalance after a great serve (Furlong, 1995; Reid, McMurtrie, & Crespo, 2010). More specifically, researches have found greater success when moving to the net as a part of an attacking play (i.e., serve-and-volley), and lower performance when drawn to the net by the opponent in professional tennis players (Hughes & Moore, 1998; Martin, Bideau, Nicolas, Delamarche, Kulpa, 2012; O'Donoghue & Ingram, 2001). Thus, moving to the net as quickly as possible is crucial to impact the volley in an advantageous court location.

Similar effects might be expected in padel, where players are constantly fighting for reaching the net to enhance scoring options. In fact, direct strokes (i.e., hitting ball before bouncing on the floor or the wall) accounted for 70% of the game, being the volley (25.5%) the most prevalent action in padel (Carrasco, Romero, Sañudo, & de Hoyo, 2011). Moreover, players nearly always move to the net after serving for volleying to enhance scoring options (Ramón-Llín, Guzmán, Llana, Vuckovic, & James, 2013). Therefore, the aim of this study was to analyse performance differences between winning and losing professional padel players regarding serve situation.

### METHOD

*Sample and variables*

The sample contained 2107 rallies (308 services) from the 15 male matches of the 2013 Masters Finals World Padel Tour. Variables pertaining to

attack effectiveness (points and errors), match result (winner and loser), court area (net and baseline), and serve situation (serving and resting) were included in the analysis. To estimate predictions on match result, data were restructured including frequencies per match for winners (n=15) and losers (n=15).

*Procedure*

Data were collected through systematic observation, performed by two observers specialized in padel and specifically trained for this task. Data reliability included inter- and intra-observer evaluation through Cohen's Kappa, obtaining scores over 0.80, considered as very good strength of agreement (Altman, 1991, p.404). The recording instrument used was the LINCE software (Gabin, Camerino, Anguera & Castañer, 2012), flexible digital recording software that allows data exportation for its treatment on statistical packages.

*Statistical analysis*

A descriptive analysis was conducted for all variables. Odds Ratio (OR) and their 95% confidence intervals (CI) were estimated by a series of binomial logistic regressions, to predict the influence of effectiveness at the net and baseline (predictors) on final match result (outcome) regarding serve situation. Statistical significance of the predictors was assessed by means of Wald's test ($P < 0.05$). The Hosmer-Lemeshow test was used to evaluate the goodness of fit of the models. Data were processed in IBM SPSS 20 Statistics for Macintosh (Armonk, NY: IBM Corp.).

RESULTS

Players won 83.4% of games when serving and received a mean of 3.40 ± 1.72 (M±SD) breaks (lost service) per match. Specifically, four out of ten breaks were received at the middle of the match (games 4, 5 and 6). Moreover, the majority of the points were finished (63.4%) and scored (83.3%) at the net. Results from binary logistic regressions revealed about 52% less unforced errors at the baseline for winners when serving ($X2(4) = 10.733$, $p = 0.030$, $R2=.26$). Besides, winners scored about 65% more points and committed about 37% less unforced errors at the net when resting ($X2(4) = 16.511$, $p = 0.002$, $R2=.56$).

DISCUSSION

Main results showed that dominating the net game seems to be a key factor to win the match in padel. Similarly, previous research in tennis reported greater proportion of points won at the net compared to the baseline (O'Donoghue & Ingram, 2001). More importantly, it was detected differences

on game performance regarding serve situation. Winners achieved higher effectiveness at the net when resting but at the baseline when serving. This seems to be a consequence of superior technical skills of better players when attacking and defending. Tactically, it might be also suggested a better players' decision-making and location as a product of a better knowledge of the game. Then, recovering the net when serving and adopt an aggressive game style at the net when resting seems to increase winning options to best players. Finally, results revealed a higher (but not significant) proportion of breaks in games 4, 5 and 6, being a key moment of the match to consider. Nonetheless, deeper approaches in tennis did not revealed any effects such as the 'hot-hand effect', in which winning a game increases one's chances of winning the next (Klaassen & Magnus, 2001; O'Donoghue & Brown, 2009). This information may be useful in the design of accurate training programs for improving players' performance (Eccles, Ward, & Woodman, 2009).

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