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2015 BADMINTON WORLD CHAMPIONSHIP: MEN VS. WOMEN BEHAVIOURS

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INTRODUCTION

Observational methodology is the most appropriated way to register and analyse specific skills or behaviours in sports, in a natural and unprepared context of the competition (Anguera, 1990). It lets researchers put the focus on the spontaneous and normal behaviour players context (Sánchez-Algarra, & Anguera, 2013).

In this case, the observational tool proposed describes the occurrence and frequency of actions produced in the game, identifying differences between genders.

Detailed knowledge of the successful shots (those that lets participants win points directly) could be used by coaches in order to specify training exercises, improving their athletes' performance (Losada, Casal, & Ardá, 2015).

The main aim of this study was to assess behaviour differences between genders at 2015 Badminton World Championship, focusing on court movements, shots and time events.

METHODS

Final women (WS) and men (MS) singles matches of 2015 Yakarta World Championship were analysed (150 points and 967 actions).

Official videos from Badminton World Federation were used to carry out the analysis post-event. An experimented observer, previously trained in this methodoly, performed the analysis of both matches.

Kinovea were used to place the 12 zones template on the court (see Figure 1) and LINCE (Gabin, Camerino, Anguera, & Castañer, 2012) for observational analysis. Statistic analysis by IBM SPSS *statistics* v.23 (SPSS Inc., Chicago IL).

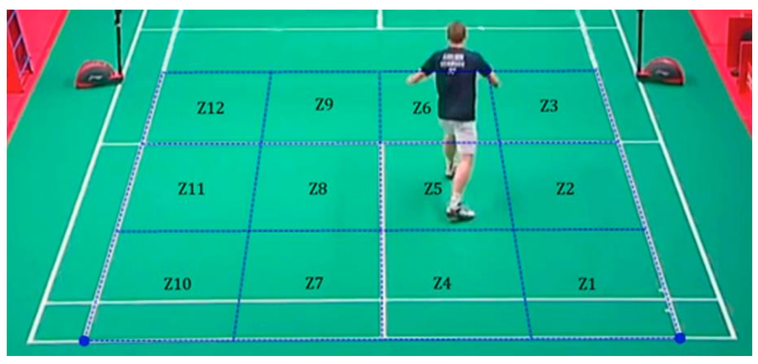

Figure 1. Twelve zones distribution.

OBSERVATIONAL TOOL

Variables analysed were distributed into three macro-levels: contextual (categories: sex, round and set), behavioural (shots and court movements) and result (shot result – successful or unsuccessful –, timing factors and points played).

Time and shot variables are based on the study of Abián, Castanedo, Feng, Sampedro, & Abián-Vicén (2014), and include *match duration, real time played, rally time, rest time, shot frequency, work density, percentage of time played, rest time at point eleven* and *rest time between games,* as timing factors, and *smash, clear, drop, net, drive* and *lob* as shot variables. *Short serve* (close to the net) and *large serve* (near the limits of the bottom of the court) were added as new shots.

Court movements are divided according to the player's displacement (*longitudinal*, *transverse* or *diagonal*), the direction (*left*, *right*, *forward* or *backward*), distance (*short* or *large*) and *no movement*.

RESULTS & DISCUSSION

The comparison between WS and MS (see table 1) shows higher match duration, rally time, shots per rally, rest at point eleven and time played in MS and higher rest between games and work density for WS (Abián-Vicén, Castanedo, Abián, & Sampedro, 2013). Shots per game were higher for WS than MS as Fontes, Chiminazzo, Dobránszky, & Marque de Moraes (2014). Shot frequency obtained is similar for both genders.

Table1. *Time and shot variables: WS vs. MS*

	WS	MS
Match duration (s)	3.680.178	4.047.408
Total real time played (s)	772.564	880.473
% time played	20.993	21.754
Mean rally time (s)	10.033	12.061
Shots per rally (mean)	5.403	6.452
Mean rest time (s)	36.591	45.550
Mean rest time at point 1	97.862	106.626
Work density (mean)	0.274	0.265
Shot frequency (mean)	0.538	0.535
Rest time between game	163.320	152.424
Shots per game (total)	416	471

Figure 2 shows the frequency distribution of the shots.

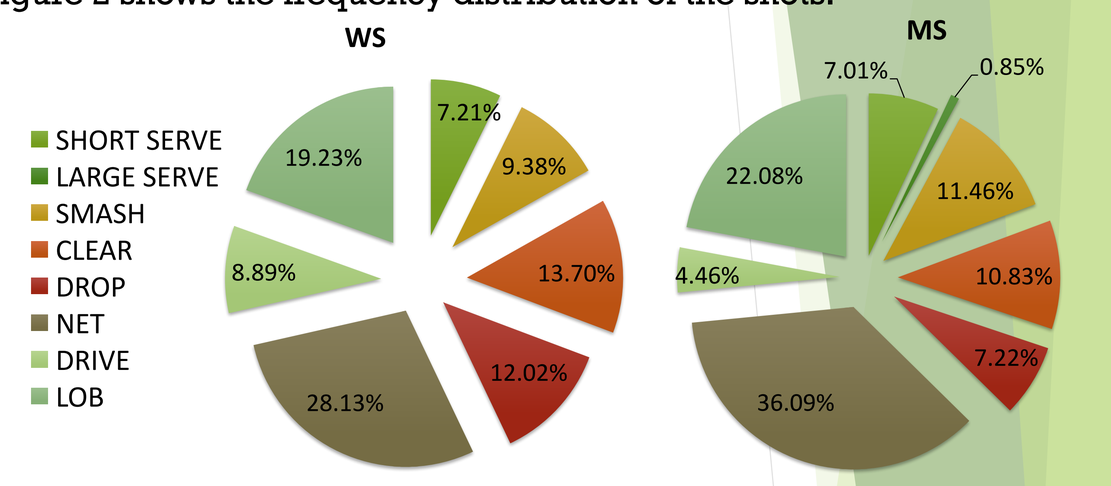

Figure 2. Shots frequency: WS vs. MS.

Outcomes obtained considering successful and unsuccessful shots are shown in the figure 3, meanwhile gathered court movements appears in the figure 4.

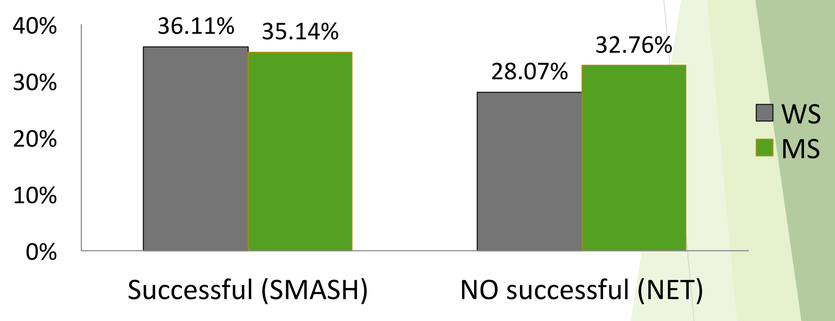

Figure 3. Successful/Unsuccessful shots: WS vs. MS.

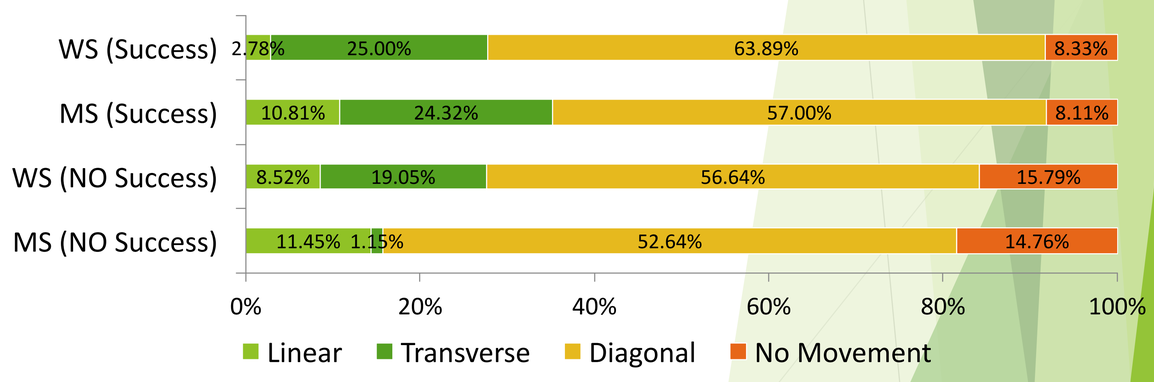

Figure 4. Gathered Court Movements: WS vs. MS.

CONCLUSIONS

The results obtained from the analysis of final women and men 2015 Yakarta World Championship single matches, suggest that:

- Timing factors are, in general, higher in MS than WS. However, work density is higher for WS due to the low rest time in the match.
- As a result of minor time of play and lower shots per game for WS, shot frequency is similar for both.
- The most used court movement during the match is "diagonal", followed by hit the shuttle with "no movement", "transverse" and "longitudinal" in last place.

Successful court movements and shots could be taken into account to prepare specific training sessions and matches.

However, more matches should be analysed to compare with this founds.

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