

# Men's and women's soccer: Physical or technical?

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When the sports performance of elite men and women soccer players is compared using absolute criteria, the differences are significant. This is one of the conclusions of the study by the Faculty of Physical Activity and Sports Sciences (UPV/EHU), conducted in collaboration with other universities in Europe. Over a hundred soccer players of both genders were monitored during UEFA Champions League matches to conduct this research. Apart from this conclusion, one of the practical applications of the study in the short term could lead to adapting the physical and technical preparation to the needs of each gender. Another to be applied in the long term could be the possibility of adapting soccer to the physical capacity of women, as in other sports.

"There were no surprises, we expected these results," admitted Julen Castellano, researcher at the Faculty of Physical Activity and Sports Sciences (UPV/EHU-University of the Basque Country) and member of the group that conducted the comparative study of physical and technical performance between genders, men and women, in elite soccer matches. Anthropometric differences and physical qualities are responsible for the difference. The results, obtained after monitoring over 100 men and women players participating in UEFA Champions League matches, could be summed up in two aspects: firstly, the physical one, in which women run a shorter distance overall and at high intensities and, unlike the men, display fatigue during the second half of the match; and, secondly, the technique-tactics aspect, where there were no differences in the number of ball touches, time in possession of the ball and total duels won. Interesting conclusions, but ones that nevertheless raise a new

question.

## Final reflections

If absolute values are used as the reference criteria when the comparison is made, we may be committing the error of underestimating the effort made by the female [gender](#). If we take as the reference the values relating to men in order to compare both genders, as men are faster and have more stamina, we might be led to believe that women "don't give all they've got", but "we are in no doubt that women do give the maximum; so if this is relativized to the actual values of the population being studied, the results would be different with respect to the physical demands involved in women's soccer," points out Castellano. But right now, it is virtually impossible to conduct studies of this type. One would need to know the maximums and particular speed and stamina thresholds for each woman player, and this is delicate information that teams 'scrupulously' conceal so as not to give their rivals any clues. So, despite the fact that we have this first descriptive approach, more research needs to be done by incorporating new variables, by expanding the sample and by adapting the ranges of intensity of the population studied; while guaranteeing equality, that would enable us to complement the comparison with respect to the demands made on both genders when playing a football match.

In any case, and this is the second reflection, according to Castellano, that could be drawn from the study and it is that female football should not just be "a mirror of high performance masculine football," and should therefore not aspire either to the speed, intensity or distance covered by men. A piece of data that is along this line is that even if both genders are playing the same game, they each do it in their own way.

## Video-tracking

To make the comparison, the video-tracking technique was used; it is a system that recognises each player in the video image and monitors him/her, 25 times a second; that way one knows where each player is and, therefore, the variables associated with the x and y coordinates at time t, like locations, distances covered or speeds. Today, this technology is increasingly used in professional teams, in fact the Spanish La Liga has been using a similar system known as TRACAB for the last four years. With another similar system, this type of technology, already in its early stages in the Spanish league, provided hitherto unknown results: the 2002/2003 league champions Real Madrid, managed by Vicente Del Bosque, was the team that ran the shortest distance. Subsequent studies support the thesis that winning teams run less than their rivals. Could it be that the physical side is not the most important aspect in soccer?

**More information:** [www.sciencedirect.com/science/.../S0167945713001097](http://www.sciencedirect.com/science/.../S0167945713001097)

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