

The Effects of Timeouts on Psychological Momentum

INTRODUCTION

In sporting events, a coach may call a timeout to attempt to slow down the momentum of the opposing team (Fernández-Echeverría, Gil, García-González, Soares, Claver, & Del Villa, 2013; Permutt, 2011). Though prior research has investigated this strategy's effectiveness in volleyball matches (Cloes, Bavier, & Pieron, 2001; Fernández-Echeverría et al., 2013) no authoritative conclusion has been reached. In this study, we analyzed how timeouts affect women's college volleyball games with an extensive sample. We hypothesize that timeouts will not benefit the team calling out the timeout under any circumstance.

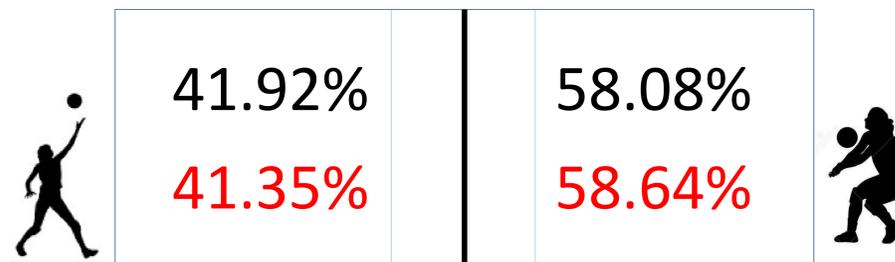


METHOD

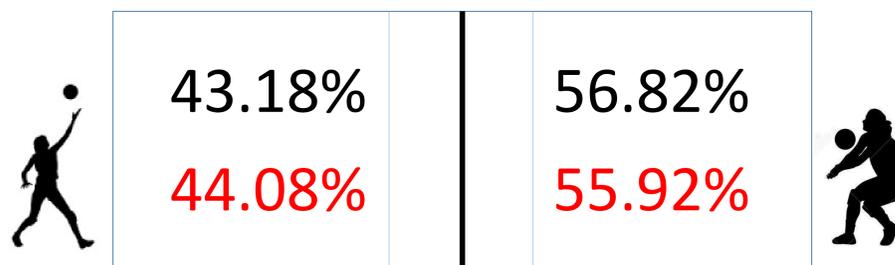
We coded archived play-by-play data from three major conferences during the 2013-2014 NCAA Division I volleyball season (10,827 plays, 5445 timeouts). The conferences were selected based on overall competitiveness (top, middle, and last finish). The analyses for each individual timeout included the score at the timeout, consecutive points scored before timeout, which team took the timeout, and which team scored after the timeout. We compared the timeout win rate (the team calling the timeout winning the point after the timeout) to the expected win rate (a team would expect to win the point after without having called the timeout).

RESULTS

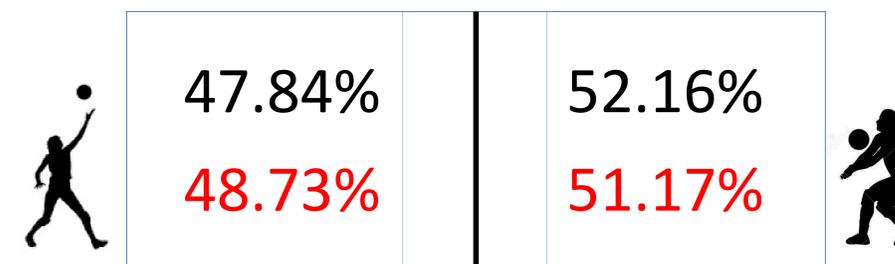
BIG 10 (Normal play, $n = 3,867$; After timeout, $n = 2,522$)



Conference USA (Normal play, $n = 4062$; After timeout, $n = 2282$)



Southwestern Conference (Normal play, $n = 2898$; After timeout, $n = 641$)



BIG 10 - Situations	n	Serve wins (%)	Receive wins (%)	χ^2	p
Expected (Normal Play)	3867	41.92	58.08		
After timeout	2522	41.36	58.64	0.33	0.56
Score difference 0-2	861	39.14	60.86	2.73	0.10
Score difference 3+	1661	42.50	57.50	0.23	0.63
Run of 0-2	1173	39.81	60.19	2.14	0.14
Run of 3+	1349	42.70	52.34	0.34	0.56
Close game (score ≥ 20), difference ≤ 5	559	39.53	60.47	1.31	0.25
Really close game (score ≥ 20), difference ≤ 2	395	39.24	60.76	1.66	0.28

CONCLUSION

- We found that the timeout win rate did not differ from the expected win rate.
- Supporting previous research (Saavedra, Mukherjee, & Bagrow, 2012), we found that timeouts have no effect on psychological momentum, measured by winning the point after the timeout.
- This finding holds true for a variety of situations, including in close matches, and after various scoring runs by the opponent.
- Further research should be conducted to see if these findings hold true in other sports and at other levels of play.



REFERENCES

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