How Effective Is a Video Review System in Soccer?

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For the first time in soccer history, FIFA allowed additional technology to support referees' decisions at the World Cup 2014. Debates are pursued regarding the implementation of a video review system. The present study aimed to take up this debate and investigate if different visual perspectives and the use of slow motion influence referees' decisions. One hundred nine (inter)nationally licensed referees (Mage 1/4 30.8 years) took part in an online video test and judged 48 video clips on foul decisions in the penalty box. Each incident was randomly shown 4 times (3 different perspectives and 1 slow motion). Perspective A showed the typical television broadcast view, Perspective B showed the assistant, and Perspective C showed the additional assistant referees' view. After each video clip, the referees indicated if the situation should be categorized as no foul, foul, yellow card, or red card. Decision accuracy (DA) was significantly higher for the slow-motion condition (M 1/4 69.8%, SD 1/4 13.55) com- pared with the real-time condition (M 1/4 64.98%, SD 1/4 13.16), t(109) 1/4 5.07, p , .01, d 1/4 0.48. Referees were most accurate in Perspectives A (M 1/4 63.53%, SD 1/4 15.37) and C (M 1/4 65.29%, SD 1/4 12.39), signifi- cantly better than Perspective B (M 1/4 59.10%, SD 1/4 12.85), F(2, 107) 1/4 16.81, p , .01, h2 1/4 .24. The highest DA was obtained at the 3rd viewing, F(3, 105) 1/4 5.38, p , .01, h2 1/4 .13. The results show that referees benefit from slow-motion video displays and repeated viewings, with a threshold after 3 viewings. The results also suggest that a video review system should include different video perspectives, with the broadcast and the close-up view behind the goal showing the greatest effects. These results seem interesting, considering current discussions about additional technology in soccer.