

TITLE

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JOURNAL

Journal of Sport & Exercise Psychology

DATE DEPOSITED

16 June 2017

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Transferability vs. specificity of decision-making skill in sport

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In sport, the adaptations that occur during development of the perceptual-cognitive skills and processes involved when making decisions are crucial to performance (Williams & Ford, 2008). However, little is still known about whether decision-making skill acquired in one sport can transfer to facilitate performance in another sport. We examine whether decision-making skill transfers between sports that share some characteristics, or whether it is sport specific. Skilled adult soccer players ($N = 20$) completed a video-based temporal occlusion decision-making test involving sequences from soccer (11 vs. 11), basketball (5 vs. 5), and tennis (1 vs. 1). The Test film stimuli were projected onto a large video screen and participants were required to decide on which action to execute for each offensive-play situation. Response accuracy was recorded as a measure of performance. Response accuracy was significantly higher ($p < .001$) in the soccer decision-making task ($M = 85.2\%$, $SD = 6.1$) compared to the basketball ($M = 76.0\%$, $SD = 7.8$) and tennis tasks ($M = 55.3\%$, $SD = 7.2$). Furthermore, players' accuracy was higher ($p < .001$) in the basketball compared to the tennis task. Findings suggest that there is some positive transfer of decision-making performance between soccer and basketball, suggesting that at least some aspects of decision-making may be more generic and transferable between sports that are more similar in nature. Additionally, players showed greater decision-making accuracy for their primary sport than for any of the other sports, providing support for specificity of learning. With respect to practical implications, this study supports the proposal that participation in sports that share some characteristics may augment development of decision-making ability; however, acquired practice through engagement in a related sport will not produce better or even comparable decision-making performance than acquired through practice in the primary or main sport.