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Superior Psychological Skills of Advanced Players in Esports: An Examination of Physiological Synchrony

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Abstract

Video game competition, called esports, is an intriguing subject for the investigation of psychological skill differences between players; such skills are more weighted toward achieving optimal performance than physical skills are. We looked for differences in psychological skills between advanced and intermediate players and the kind of psychological skill that is critical for defining a player's skill level. We measured the physiological states of players in esports matches and found that the temporal heart rate pattern during competitive matches was highly correlated among advanced players, rather than among intermediate players or players of different levels. Additionally, physiological synchrony among advanced players decreased under sparring situations in which no winner or loser was determined. These results suggest that the unique superior psychological skills of advanced players are motivation control, which is characterized by the ability to maintain and demonstrate a high motivation to win.