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Proceedings of the Annual Meeting of the Cognitive Science Society

Title

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Journal

Proceedings of the Annual Meeting of the Cognitive Science Society, 46(0)

Authors

Watanabe, Ken

Saijo, Naoki

Minami, Sorato

et al.

Publication Date

2024

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

Ken Watanabe

NTT Communication Science Laboratories, Tokyo, Japan

Naoki Saijo

NTT Communication Science Laboratories, Atsugi, Kanagawa, Japan

Sorato Minami

Kashino Diverse Brain Research Laboratory, Atsugi, Japan

Makio Kashino

NTT Communication Science Laboratories, Atsugi, Kanagawa, Japan

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.