

第81回スポーツサイエンス研究会

The 81st Sport Science Seminar

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スポーツ科学研究, 7, 98, 2010年, 受付日: 2010年9月13日, 受理日: 2010年9月13日

7月27日(火)、早稲田大学所沢キャンパスにて、「第81回スポーツサイエンス研究会」を開催した。Stony Brook University (米国)より Dr. Greg Hajcak をお迎えし、

「Motivation and error-related brain activity」というテーマで、Performance monitoring に関する講演を行って頂いた。以下は講演の要旨である。

Motivation and error-related brain activity

Greg Hajcak

Stony Brook University

External signals indicating punishment, nonreward, and novelty are thought to activate the behavioral inhibition system (BIS), and may underlie avoidance motivation. We have examined physiological changes that follow errors and these data suggest that mistakes elicit both orienting and defensive activity suggesting that performance mistakes are important and negatively valenced internal events. A growing body of data has examined neural correlates of error processing; in particular, the error-related negativity (ERN) is an event-related potential (ERP) observed just 50 ms after

individuals make mistakes in speeded reaction time tasks. Although dominant computational models relate variation in the ERN to cognitive functions such as response conflict or the evaluation of outcomes in terms of expectations, we have found that the ERN is sensitive to the importance of errors. In addition, the ERN is increased as a function of individual differences in traits that relate to high BIS, such as anxiety. Overall, we believe that the ERN is a trait-like neural response to errors that reflects defensive motivational engagement during response monitoring.

Hajcak 先生は、早稲田大学スポーツ科学学術院准教授の正木宏明先生(グローバル COE 事業推進担当者)と共同研究を行われていた。その期間中に講演を行って

いただいた。急な開催告知であったが多くのグローバル COE の登録学生が参加し、活発な議論が行われた。