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# An examination of impulsivity in adolescence: Frontal alpha EEG markers and relations with emotion regulation

## Abstract

Abstract presented at the 23rd Australasian Society for Psychophysiology Conference, 20-22 Nov 2013, Wollongong, Australia

## Keywords

markers, emotion, frontal, eeg, alpha, examination, adolescence, relations, regulation, impulsivity

## Disciplines

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# **An examination of impulsivity in adolescence: Frontal alpha EEG markers and relations with emotion regulation**

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**Aims:** This study assessed the relationship between impulsivity, effortful control and emotion regulation. The construct of impulsivity was explored by examining relationships between psychophysiological and behavioural measures, and self and observer reports. **Method:** One hundred and seventy (170) typically-functioning adolescents participated in the study. Frontal alpha EEG power, heart rate, and heart rate variability were recorded while participants undertook two 3-minute resting tasks (eyes open and eyes closed), a visual inhibitory control task and a visual selective attention task. Prior to testing, parents and adolescents completed a questionnaire measuring effortful control, and parents completed a questionnaire measuring AD/HD symptomatology, including impulsivity. **Results:** Analyses revealed mixed findings. A lack of emotion regulation strategies and clarity, and the presence of impulse control difficulties, were most strongly associated with observer-reported impulsivity. There were no significant relationships between emotion dysregulation and psychophysiological measures, or behavioural measures of impulse control. Relationships between subsets of emotion dysregulation and behavioural measures of selective attention were varied. **Conclusions:** Overall, some support for a relationship between emotion dysregulation and impulsivity in adolescents was found, but it was concluded that this relationship may be exclusive to certain aspects of each construct. Finally, while effortful control correlated inversely with impulsivity, there were few significant correlations amongst different measures of impulsivity, suggesting this construct may indeed be multi-dimensional, with different measures tapping into different types or subsets of impulsivity.

**Keywords:** EEG, impulsivity, Emotion Regulation, Adolescent Behavior, Nogo, flanker task

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