

Impact of alcohol advertising content and warnings format on young adults: An fMRI study protocol

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Context

The Evin Law (1991)



Prohibits advertising for alcohol in media targeting young people

Regulates content in authorized media (only factual/informative data and objective qualities of alcohol products)

Requires the warning message 'alcohol abuse is dangerous for health' to be included in all alcohol advertisements.

Such restrictions / laws on alcohol advertising have been adopted by more than 50 countries worldwide (WHO, 2018)

Literature

- Many studies showed that exposure to alcohol advertising (through media) is associated with early consumption initiation, increased alcohol use and binge drinking patterns among young people, especially minors
- Although alcohol advertising [content regulation](#) has been adopted in many countries, its effects remain under-investigated
- Most studies on alcohol marketing have used self-report methods that present limits (neglecting the unconscious reactions involved in different subsystems and/or being influenced by social desirability)

The protocol described here has two objectives

- to understand better how different alcohol advertising contents influence young people
- to find out whether displaying pictorial warnings on ads, compared to text-only messages, can counteract the effect of attractive contents.

Method

Declarative measurements (behavioural responses) combined with [functional magnetic resonance imaging \(fMRI\)](#) to investigate the neural basis of ad and warning perception

The protocol, designed to assess the effect of various alcohol advertising contents that display different warning formats, comprises **six steps**:

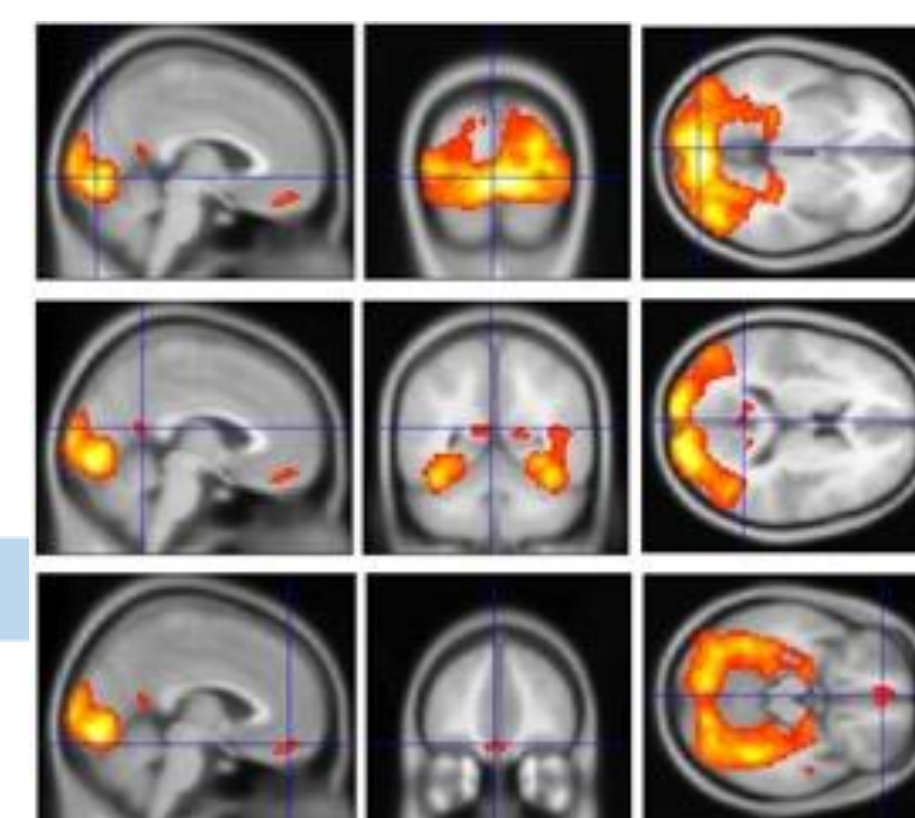
- Preliminary studies on 215 individuals to select alcohol categories, brands and warning message
- Creation of 288 ads (stimuli) for alcohol brands (neutral vs. attractive ads: party or sport contexts with no characters vs. characters vs. celebrities in the background) and for water ads (control group)
- Selection and recruitment of the 78 participants (male, aged 18–25, of ranging drinking status)
- The fMRI scanning session (2 hours)
- Image acquisition and processing
- Data analysis

Examples of neutral ad context n = 48	Examples of positive & attractive alcohol ad contexts (parties, sport) n = 144			Examples of water ads (control group) n = 96
Green (n = 24) or grey (n = 24) background	Without characters n = 48	With characters n = 48	With celebrities n = 48	Neutral (n = 24) or positive contexts (n = 72)

N.B.: These images were created by an advertising agency using real brands and celebrities but solely for the purposes of the study. The advertisements are not authentic and the brands were chosen as indicative only. Neither the brands or the celebrities participated in or endorsed the study, and there is no suggestion that the persons depicted endorse or sponsor these products.



- Exposure to 288 ads
- Measure of changes in blood flow and blood oxygenation by measuring the blood oxygen-level-dependent (BOLD) contrast response when visualising different ads



Contributions and limitations

- This research investigates the neural basis and behavioural effects of various alcohol advertising contents & warning formats
- This research combines declarative measurements with functional magnetic resonance imaging (fMRI)
- This study will support policy developments related to restriction of alcohol advertising and warnings
- **Limitations:** due to material constraints, the sample size is relatively “modest”; no follow-up of subjects is planned after the fMRI scanning session

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