Emotional empathy: A link to prefrontal cortex dysfunction?

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Emotional empathy has not been investigated in this population yet. In this study, we will distinguish AD patients according to the Cloninger subtypes of alcoholism (Cloninger et al., 1981). Type 1 AD patients are known to drink to avoid negative emotions whereas type 2 AD patients are acting in parallel to their excessive and impulsive way of drinking.

The form empathy relies to the related human abilities: mental perspective taking (cognitive empathy) and the vicarious sharing of emotions (emotional empathy). The linking of the two aspects of empathy has localized around one aspect of cognitive empathy: the capacity to infer an emotional state, and that essentially on the basis of emotional facial expression (EFE) recognition. However, researchers have shown that different inferences in the investigation of the other aspects of cognitive empathy, the capacity to infer interpersonal intentions. As documented by the research on EFE decoding, AD patients show deficits in cognitive empathy (review in Uhermann and Daum, 2008). Emotional empathy has not been examined in AD patients according to this study, we will study if AD patients, according to the Cloninger subtypes of alcoholism (Cloninger et al., 1981). Type 1 AD patients are known to drink to avoid negative emotions whereas type 2 AD patients are looking for positive emotions.

Objects and hypotheses

To explore the emotional feeling state of AD patients in function of the EFE display by other people (emotional empathy): We hypothesized that the modulation in AD patients will be different from the one of healthy people in function of the Cloninger subtypes of alcoholism. This emotional reactivity will be more important in Type 1 alcoholism and less important in Type 2 alcoholism.

Methods

Participants

Seventeen men and 12 women type 1 AD patients, 15 men type 2 AD patients, 12 men and 8 women healthy subjects participated to the study. AD patients were abstinent for at least three weeks. Type 1 AD patients were compared to controls because of their sex ratio homogeneity, whereas type 2 AD patients were compared to men controls. The participants completed questionnaires assessing their usual quantity of alcohol consumption, and, for AD patients, their level of alcohol dependence (SADS, Stouten et al., 1985). Their capacity to recognize faces was evaluated by the Benton facial recognition test (Benton et al., 1983).

Measures

•Quality of interpersonal relationship: Questionnaire that investigated the quality of the relationship with the person with the cloest to you and the quality of the relationships with people from your entourage.

•Cognitive empathy: the participals had to evaluate the adequacy (in a 7-point Likert scale) between a film of a face changing from a neutral EFE to an emotional EFE of 70% accuracy (the photographic came from the nate of Matsumoto & Ekman, 1988) and an adjective descriptive of personality. The emotions investigated were anger, disgust, sadness, contempt, and joy. Each adjective was weighted on the interpersonal dimensions of reject, aggressiveness, dominance, and affiliation.

•Emotional empathy: The participals had to evaluate their own emotional feeling state (in a 7-point Likert scale; from very negative to very positive) after watching a series of films depicting EFE (same material as before). The level of emotional contagion for each emotion was calculated by subtracting the score on the 7-point Likert scale after watching the EFE from the absolute values of the scores of emotional reaction test (Benton et al., 1983).

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Results

•Cognitive empathy: The difference between AD patients and healthy subjects in terms of attribution of intentions are only apparent in men when distinguishing type 1 and type 2.

•Emotional empathy: The absence of difference between AD patients and healthy subjects in their emotional contagion to EFE could be due to the small number of participants or the methodology used. Indeed, the portray of the study is perhaps too obvious for the participants and thus reflect more social desirability.

Conclusions

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RESULTS

CONCLUSIONS

Emotion x Intention x Group: F = 1.56; p= .04

Emotion x intention x Group: F(6, 123) = 2.45; p= .03

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Emotions x intentions x Group: F = 2.33 p= .11

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