THE INFLUENCE OF CULTURAL BACKGROUND ON SOCIAL COGNITION IN GENETIC FTD

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INTRODUCTION

- Based on clinical observations and informant history, **social cognition** is a key impairment in bvFTD, even in early (presymptomatic and prodromal) disease stages.
- However, no significant decline in **social cognition** has been found in **global multicenter cohort studies** focusing on these early stages.
- One reason might be that the **cross-cultural validity** of traditional tests prevents reliable differentiation. Research has shown that facial expressions are not shown similarly across cultures.
- We examined the influence of cultural background on **Facial Emotion Recognition (FER)** in presymptomatic and symptomatic genetic FTD.

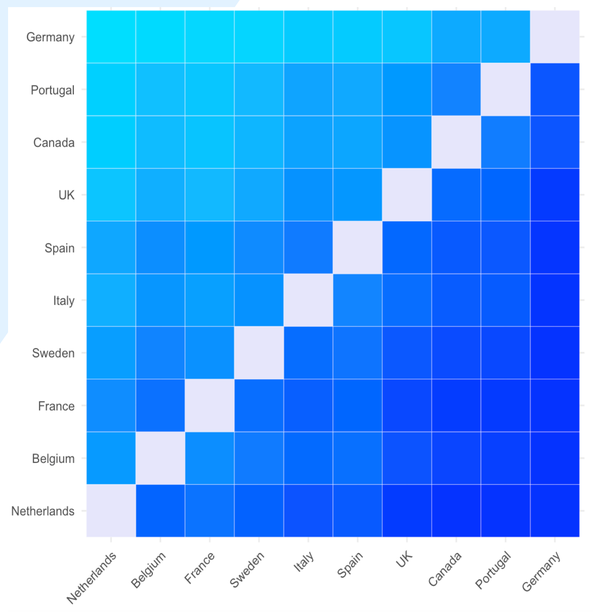
METHODS

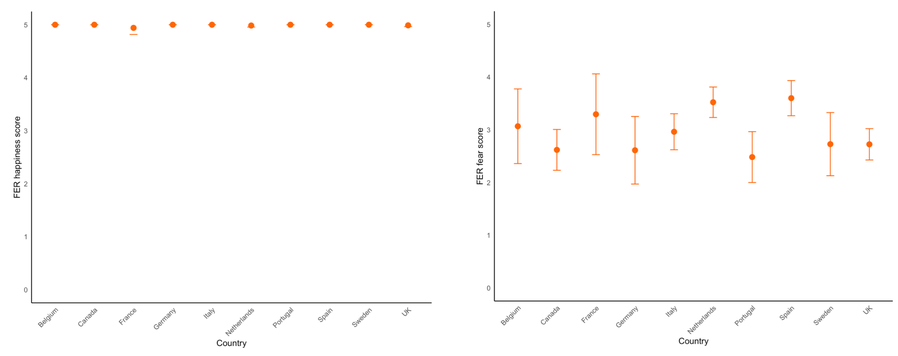
- Linear mixed models (FER as outcome variable) with age, sex, education, gene as fixed effects and country as random effect.
- **Variance Partitioning Coefficient (VPC)**: proportion of observed variation that is attributable to the effect of clustering by country, after controlling for all fixed effects.
- Explore differences in effect sizes between countries with **Hedge's g.**
- Voxel-based morphometry with T1 weighted MRI scans to investigate underlying neural correlates.

RESULTS

	Symptomatic bvFTD	Presymptomatic	Controls
n	159	421	583
Sex ratio (F)	0.41	0.59	0.63
Age (y)	63.79 (8.82)	44.30 (11.66)	51.42 (14.64)
Education (y)	12.77 (4.03)	14.73 (3.36)	14.35 (4.25)
Gene (C9/GRN/MAPT/none)	62/20/24/53	182/166/66	NA
VPC country*	**7.5%**	**18.7%**	**18.3%**

*after controlling for age, sex and education





DISCUSSION

- **Cultural background** does significantly contribute to **variation** in performance on a social cognition task in presymptomatic individuals and controls, but this variation strongly decreases in symptomatic individuals.
- **Disease severity** could attenuate the effect of country in the symptomatic group.
- This study highlights the necessity to take **cultural variability** into consideration in FTD research, particularly within **international study cohorts**.
- We hope initiatives will foster the development of more representative social cognitive tests in all its **diversity**.

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