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LACK OF MENTAL FLEXIBILITY AS ENDOPHENOTYPE IN AUTISM SPECTRUM DISORDER AND OBSESSIVE COMULSIVE DISORDER FAMILIES

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**Introduction:** Results from clinical and molecular genetic studies suggest that autism spectrum disorder (ASD) and obsessive compulsive disorder (OCD) could have a shared pattern of heritability. Among a large number of clinical variables evaluated, obsessive compulsive/repetitive behaviors have been found to be highly correlated among autism probands and their relatives. Empirical evidence from neuropsychological studies suggest that an appropriate model for repetitive behaviours is a deficit of executive functions specifically flexibility. Given the lack of flexibility observed in ASD and OCD probands, we hypothesised that it could represent a shared endophenotype in both families.

**Methods:** Seven cognitive tests belonging to executive functions, central coherence and theory of mind were proposed to 58 unaffected first-degree relatives of probands with ASD and 61 unaffected first-degree relatives of OCD patients and compared with 34 healthy controls. A principal component analysis (PCA) was performed.

**Results:** ASD relatives - specifically mothers - performed significantly worse on all the tests than OCD relatives and controls. Moreover, inside the OCD group, female individuals performed significantly worse than males. Finally, the PCA indicate that the cognitive profiles of the ASD relatives and the OCD relatives were similar but distinct from controls.

**Conclusion:** Lack of cognitive flexibility is observed in ASD and OCD families and might constitute a shared intermediate cognitive phenotype. Our study constitutes an effort to clarify the relationship between ASD and OCD having implications for our nosological understanding of both disorders.