

Sexual orientation, brain structures and cognition

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Little is known about differences in human brain structures relating to sexual orientation. We can find sexual orientation differences among men and women in terms of function, human exhibit sex differences in reproduction, gonadotropin secretion, cognitive abilities and others.

Research show strong similarities of gay man with brains of heterosexual women in hemisphere dominance and in many other respects; also brains of lesbian woman show similarities to those of heterosexual men.

Our study will focus on differences in cognitive abilities among studied groups, which will be linked with theory of differences in brain structures and sexual dimorphism. In our study there will be included several heterosexually and homosexually oriented participants. First, to define sexual orientation our subjects will have to complete questionnaire. To determine the brain sex of participants we will give them a questionnaire relating to their brain dominance.

For testing the differences in cognition we will use two tests. One for measuring spatial ability and other for testing the verbal fluency in tests subjects. English version is called COWAT – Controlled Oral word Association test, but we will use our own variation of it. The test will include words starting with letters N, O and S, because they are most frequent in Slovene.

With given different sexual orientations in combination with known brain sex of every single subject we will test our hypothesis on how our subject will perform in different cognitive ability tasks.

Hypothesis:

1. Heterosexual men will perform better than homosexual men and heterosexual women on test of spatial abilities.
2. On the verbal fluency test heterosexual women will perform better than homosexual women and heterosexual men.
3. Heterosexual woman will have equal results as homosexual men on questionnaire relating to the brain dominance.
4. Homosexual men will have equal results as heterosexual women on the questionnaire.

Keywords: sexual orientation, brain structures, cognition, homosexual, heterosexual, sexual dimorphism

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