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HEMODYNAMIC BRAIN RESPONSE TO VISUAL SEXUAL STIMULI IS DIFFERENT BETWEEN HOMOSEXUAL AND HETEROSEXUAL MEN

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Many studies showed the differences in subjective response to sexual stimuli between heterosexual and homosexual men. However, the underlying neurobiological factors of sexual orientation are largely unknown. We addressed the question what is the major attribution of the expected differences in brain activation, i.e. neural circuits or different cognitive process. Twenty-eight healthy male volunteers, 14 heterosexuals and 14 homosexuals, were scanned by functional Magnetic Resonance Imaging while subjects were viewing different types of stimuli, i.e. heterosexual couple stimuli (HCS), gay couple stimuli (GCS), lesbian couple stimuli (LCS) and neutral stimuli (NS). SPM02 was used for data analysis. Rating of sexual attractiveness was assessed. Subjective sexual arousal was induced by HCS and GCS in heterosexual and homosexual men, respectively. And sexual disgust was induced by GCS and LCS in heterosexual and homosexual men, respectively. As compared to viewing NS, viewing sexual stimuli induced significant different brain activations most of which had characteristic for cognitive process. These observations suggested that different cognitive pattern was major attribution of different subjective response to sexual stimuli between heterosexual and homosexual men.

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