

Abstract

Previous literature shows that preferred odours serve as powerful cues for information retrieval from autobiographic memory and that exposure to odours during sleep affects the emotional tone of dreams. In the present study, we sought to investigate how continuous stimulation with a preferred odour influences various dream characteristics, dream emotions, and post-sleep core affect during all-night exposure. Eighteen healthy adults were invited to visit the sleep laboratory three times in weekly intervals. The first visit served to adapt the participants to the laboratory environment. On the second visit, half of the participants were exposed to an odour they chose themselves or to the odourless control condition. On the third visit, they received control or exposure in a balanced order. On each visit, the participants were woken up from the rapid eye movement (REM) sleep stage. Dream pleasantness, emotional charge of the dream, positive and negative emotions experienced in the dream, and four dimensions of post-sleep core affect (valence, activation, pleasant activation-unpleasant deactivation, and unpleasant activation-pleasant deactivation) were assessed. Presented results are not consistent with previous studies, i.e. no statistically significant difference between the experimental and control conditions was found in any of the dependent variables. Findings suggest that exposure to preferred odour are unlikely to affect dream emotions and post-sleep core affect of the individual after waking.

Key words:

smell, chemical senses, core affect, mental sleep activity, REM dreaming, sleep