Influence of the Scent of Peppermint on Concentration

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Essential oils have been widely applied for a variety of purposes of getting relaxation or comfort, or of antimicrobial effect. Some essential oils have the effect of refreshing or increased concentration\(^1,2\). The Psychomotor Vigilance Test (PVT) is a widely used assay of behavioral alertness sensitive to the effects of sleep loss misalignment\(^3,4\). This study was designed to clarify whether the scent of peppermint has the effect of enhancing the concentration.

± 0.8 yrs.). PVT was applied to the participants for 10 minutes in the room with peppermint oil and without the odor (control). These experiments were performed in different room and the order of measurement was at random. Some drops of peppermint oils were dripped on the thick filter paper in the diffuser and the oil was warmed by a miniature bulb from the bottom of the filter paper. The fragrance of peppermint was allowed to fill the room 10 minutes before the start of the measurement. The participants were asked to press a response button, located on the right side of the device, as soon as the visual stimuli appeared at random from 2 to 10 sec interval. Visual Analogue Scale (VAS) was also used for subjective sensation (0, no concentrate at all; 100, concentrate very much). Reaction time (RT) to visual stimulation was measured for evaluation of concentration using PVT. The significance of difference between control and peppermint was evaluated by applying Student’s test and were considered statistical at p<0.05. This study was submitted to and approved by Ethics Committee of Ehime University Graduate School of Medicine under protocol no.28-12.

Median of RT was 253.2 ± 34.9 msec or 240.3 ± 33.6 msec in control or in peppermint oil, respectively, and Median RT of peppermint oil was significantly smaller. Subjective sensation by VAS showed 46.1 ± 17.8 for control and 69.0 ± 21.5 for peppermint, there was a significant difference between two groups. There was no significant correlation between RT and subjective sensation. Namely, there were some participants who despite saying that they could not concentrate at all under the scent of peppermint, RT for peppermint was faster than control. Furthermore, there was no difference in “Lapse” which means more than 500 msec of reaction time, between two groups.

These results indicate that the concentration must increase by smelling the fragrance of peppermint oil. Many nurses working in the hospital have to work at night. When nurses work at night and get tired, the scent of peppermint may be effective for nursing practice.

Title:
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Keywords:
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References:


Abstract Summary:

This study was designed to clarify whether the scent of peppermint has the effect of enhancing the concentration. The result showed the concentration must increase by smelling the fragrance of peppermint oil.

Content Outline:

Some essential oils have the effect of refreshing or increased concentration. The purpose of this study was to clarify whether the scent of peppermint has the effect of enhancing the concentration using Psychomotor Vigilance Test (PVT).

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