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WINAI SAYORWAN: EFFECTS OF SELECTED VOLATILE OILS COMMONLY USED IN THAILAND ON PHYSIOLOGICAL ACTIVITIES AND EMOTIONS. ADVISOR : ASSOC. PROF. NIJSIRI RUANGRUNGSI, Ph.D., CO-ADVISOR ASSOC. PROF. NAIPHINICH KOTCHABHAKDI., Ph.D., ASSOC. PROF. TAPANEE HONGRATANAWORAKIT, Dr.rer.nat., 132 pp.

Nowadays, Volatile oils have been widely used in Thailand without much supporting scientific evidence. The objective of this study is was to investigate the effects of the commonly use volatile oil in Thailand, such as lavender oil, rosemary oil, jasmine oil and citronella oil on the nervous system, i.e. central nervous system (CNS), autonomic nervous system (ANS) as well as on emotional response after inhalation. Twenty subjects were tested for each essential oil. Totally eighty subjects were participated in this study. ANS parameters, i.e. blood pressure, heart rate, respiratory rate, and skin temperature were recorded. CNS was monitored by recording of brain electrical activities. Data were collected including frequency, Fast Fourier Transform value and topographical mapping. In addition, emotional responses were evaluated by visual analog scales. The effects of oils on the nervous system and emotional responses were determined by comparing the mean values between the oil and sweet almond oil. The paired t- test was used in this study. Correlation analyses between the nervous system and emotional responses were performed by Spearman rank-order correlation coefficient. Results demonstrate that lavender odor and citronella odor decreased the function of ANS. Lavender odor increased theta and alpha waves whereas citronella odor increased both alpha and beta waves. In contrast, rosemary odor and jasmine odor activated the function of ANS. Rosemary odor decreased alpha level and increased beta wave whereas jasmine odor increased beta wave. For emotional responses, subjects felt very good after inhalation all odors. The oils caused significant increases of enthusiasm, freshness and relaxation, when compared with sweet almond oil. Correlation between emotional responses and ANS showed a positive correlation between freshness and the increase of ANS function. In contrast, emotion of good, calm, drowsy had a negative correlation with ANS function. The correlation between emotional responses and brain wave showed both a positive correlation (relaxation and alpha brain wave) and a negative correlation (beta brain wave and relaxation). In terms of freshness, the correlation has been observed in opposite direction. Results from this study are able to be scientific knowledge of the effects of volatile oil on human body and emotion.

Field of Study : Public Health Sciences

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