

Effectivity of Aroma, Light, and Al'Quran Therapy to Enhance Driver's Level of Awareness in Malaysia

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The effectiveness of fatigue therapy toward drivers was measured with three treatments using an aroma therapy (the odor of lemon, cananga and stinking egg), sparkling lights therapy and Al 'Quran therapy. This repetitive experiment design was done in a driving simulator. The level of fatigue was measured using a fatigue questionnaire. The drivers ($N = 20$ males) were asked to stop their driving when they got tired, and the result shows that the driving duration was shorter when the stinking egg therapy was given compared to the other therapy treatments. Driving period by using Quran therapy was longer than aroma therapy and the sparkling light therapy. The therapy of stinking odor strongly stimulates the sleepy driver to awaken compared to the other treatments. The therapy of listening to Al 'Quran passages increased persistence and keep the drivers to be awake when they took a long drive compared to the other treatments.

Keyword : aroma therapy, lemon, cananga, stinking egg, sparkling lights, Quran passages, driving fatigue

Efektivitas terapi kelelahan pada pengemudi diukur dengan tiga jenis perlakuan, berupa terapi aroma (bau limau, kenanga, dan bau telur busuk), terapi lampu kerlip, dan terapi bacaan Al 'Quran. Penelitian dengan desain eksperimen berulang ini dilakukan dalam simulator mengemudi. Tingkat keletihan subjektif diukur dengan angket keletihan. Para pengemudi ($N = 20$ pria) diminta berhenti bila telah merasa lelah. Hasil menunjukkan waktu mengemudi lebih singkat bila diberi bau telur busuk dibanding bau limau, kenanga, dan kerlipan lampu, serta bacaan Al 'Quran. Waktu mengemudi dengan terapi bacaan Al'Quran lebih lama dibandingkan ketika mendapat terapi aroma dan terapi lampu kerlip. Perlakuan bau busuk lebih cepat menyadarkan pengemudi yang mengantuk dibandingkan perlakuan bau limau, bau kenanga, lampu kerlip, dan bacaan Al'Quran. Perlakuan bacaan Al'Quran dapat meningkatkan ketahanan dan menjaga kesadaran pengemudi ketika mengemudi dalam waktu lama dibandingkan perlakuan bau limau, bau kenanga, bau busuk, dan perlakuan lampu kerlip.

Kata kunci: terapi aroma, limau, kenanga, telur busuk, lampu kerlip, bacaan Al'Quran, lelah mengemudi

Traffic accidents are one of the most crucial problems faced by a lot of countries especially in a developing country such as Malaysia. The World Health Organization (WHO) presumes that traffic accidents stand at the sixth level of the world mortality causes, and assumed to be the second factor of human disabilities in developing countries in 2020 (Murray & Lopez 1996). The mortal accident in some developing countries since 1975 until 1998 showed that there is a 44% increase (Elisabeth & Cropper 2003) and the highest mortality was caused by traffic accidents.

In 1999, there were approximately 750,000-880,000 people died because of traffic accidents worldwide, and the damage caused by those accidents was US\$ 5 billions (Jacobs, Aeron-Thomas, & Astrop, 2000). For instance,

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almost every year United States government spent US\$ 100 billions to overcome traffic jams, and US\$ 70 billions to overcome the traffic accidents (IVHS 1992).

Malaysia is one of the Asian countries which has very high rate of traffic accidents. There are some causes of Malaysian traffic accidents as reported by the Polis Diraja Malaysia (PDRM). Some of the causes are the pedestrian fault, careless driving, high speed driving, moving to another line on the street without any signs, crossing the junction carelessly, following another vehicle in very close distance, less awareness while driving, driving against the flow of the traffic, drunken drivers, driving under influence of psychotropic drugs, using mobile phone or even texting messages while driving, overload freight, drowsy driving, and so on. Beside of these human factors, the environmental factors are also significantly causing the accidents such as the dangerous road, less illumination or even dark road, heavy rain, and car machine damage.