

# Pengukuran kelelahan aktivitas mengemudi mobil dengan pendekatan fisiologis, kognitif, dan subjektif = Fatigue measurement in car driving activity using physiological, cognitive, and subjective approaches / Andreas Aristides Simandjuntak

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## Abstrak

[Kecelakaan lalu lintas telah menjadi penyebab kematian ketiga terbanyak di dunia menurut WHO, sedangkan kelelahan pengemudi merupakan faktor kedua terbanyak penyebab kecelakaan lalu lintas setelah pelanggaran lalu lintas. Penelitian ini bertujuan untuk mendapatkan signifikansi dari tingkat kelelahan pengemudi dengan pendekatan fisiologis, kognitif, dan subjektif serta memperoleh perbandingan tingkat kelelahan antara pengemudi mobil pria dengan pengemudi mobil wanita, sehingga dapat menurunkan tingkat kecelakaan lalu lintas. Penelitian ini melibatkan dua belas orang responden, yang terdiri atas enam responden pria dan enam responden wanita berusia 17-25 tahun yang diukur tingkat kelelahannya menggunakan pendekatan fisiologis (tekanan darah dan detak jantung), kognitif (psychomotor vigilance test), dan subjektif (Karolinska Sleepiness Scale). Hasil dari penelitian ini didapatkan bahwa pendekatan fisiologis yaitu detak jantung merupakan variabel yang paling sensitif, namun semua variabel baik pada responden pria maupun wanita tidak terjadi hasil yang signifikan, dan tidak terlihat banyak perbedaan pada kelelahan pengemudi mobil pria maupun wanita. Kesimpulan dari penelitian ini adalah bahwa pendekatan yang dilakukan belum dapat dijadikan panduan untuk mengukur kelelahan pada pengemudi mobil pria maupun wanita.

;Traffic accidents are the third largest cause of death according to WHO, while driver fatigue is the second largest factor that cause traffic accidents after traffic violations. The purpose of this study is to find out the significance of driver fatigue using physiological, cognitive, and subjective approach and to get the comparison of fatigue between male and female driver. The study involved twelve respondents, which included six male respondents and six female respondents aged 17-25 years old measured by physiological (blood pressure and heart rate), cognitive (psychomotor vigilance test), and subjective (Karolinska Sleepiness Scale). The result of this study is that heart rate is the most sensitive variable, but all of the variables in male and female respondents don't have a significant result, and there is no big difference of fatigue in male and female car driver. The conclusion of the study is that the approaches that is done could not be a guidance to measure fatigue for male and female car driver.

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