

Journal Pre-proof

Depression and Driving

Vagioula Tsoutsi, Maria Papadakaki, Dimitris Dikeos

DOI: <https://doi.org/10.22365/jpsych.2023.014>

To appear in: Psychiatriki Journal

Received date: 28 April 2023

Accepted date: 9 May 2023

Please cite this article as: Vagioula Tsoutsi, Maria Papadakaki, Dimitris Dikeos, Depression and Driving, Psychiatriki (2023), doi: <https://doi.org/10.22365/jpsych.2023.014>

This is a PDF file of an article that has undergone enhancements after acceptance, such as the addition of a cover page and metadata, and formatting for readability, but it is not yet the definitive version of record. This version will undergo additional copyediting, typesetting and review before it is published during the production process, errors, may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

LETTER TO THE EDITOR

Depression and Driving

To the Editors,

We have recently published an article in the International Journal of Environmental Research and Public Health presenting the results of our study on the driving behaviour of patients with depression.¹ This is the first study conducted on the Greek population assessing the fitness-to-drive of patients with psychiatric disorders through the use of questionnaires and driving simulator. Similar studies in Greece have only been performed among patients with neurological conditions such as Parkinson's disease and mild cognitive impairment.^{2,3} The aim of the present communication is to discuss our findings in the light of the Greek law and regulations on driving licensure and on the evaluation of driving ability.

The main findings of our study add evidence in this discussion by indicating that patients with depression (N=39) do not differ from controls (N=30) regarding their scores on the self-report questionnaires Driver Stress Inventory and Driver Behaviour Questionnaire. The DSI assesses the propensity to develop stress reactions while driving and consists of subscales for driving aggression, dislike of driving, hazard monitoring, thrill seeking, and proneness to fatigue. The DBQ assesses driving behaviour by the subscales of driving errors, traffic violations, and attention lapses. Driving simulator results showed very few differences between patients and controls in terms of their performance on the three selected driving scenarios. The sole difference found between patients and controls was that the former exhibited lower ability to maintain a stable track of the vehicle (measured as the standard deviation of lateral position) only in the rural road scenario. On the other hand, safety distance from the preceding vehicle was found to be higher in patients than in controls, indicating that patients, possibly aware of their somewhat impaired driving ability, tend to drive more carefully.¹ These findings provide a plausible explanation for existing conflicting study results, which do not clearly show depression to be associated with susceptibility to traffic accidents and increased crash risk.⁴⁻⁶

International guidelines do not suggest a blanket restriction on the driving licensure of individuals with psychiatric disorders. Instead, there are recommendations for an approach based on the severity of the disorder, insight, adherence to treatment, level of cognitive impairment, and period of stability.^{7,8} Regulations in Greece are more restrictive, guided by laws 148/08.08.2016 and 5703/09.12.2021, which define the minimum requirements for licensure in certain medical conditions. A psychiatric examination is requested by internists, upon suspicion of a mental health issue and the psychiatric diagnosis assigns a competence level to the patient ("competent" or "non-competent"). The condition can be re-evaluated upon the patient's request after the lapse of one year from the initial examination; in certain conditions, renewal of driving licensure is permitted after a three-year interval in euthymia for individuals manifesting good functionality and social adjustment, provided that no sedative medication is prescribed.

There is a need, therefore, for the Greek government to reconsider the minimum requirements for the licensure of patients with depression and the time intervals for evaluation of driving competence, which are not supported by research evidence. Setting a minimum time restriction of 1 year, unconditionally for all patients, does not seem to contribute to risk reduction, while on the contrary, it reduces patient autonomy and social connectivity, increases stigma, and may result in social exclusion, isolation, and the

development of depression.⁹ Thus, it is important for the law to introduce an individualised approach with pros and cons being weighed per case, based on the existing scientific knowledge regarding the contribution of each disease to the risk of road traffic collisions and the clinical status of the patient at the time of the assessment.

Vagioula Tsoutsis

*Sleep Research Unit, First Department of Psychiatry, Medical School, National & Kapodistrian University of Athens, Eginition Hospital, Athens, Greece
& Laboratory of Health and Road Safety, Department of Social Work, School of Health Sciences, Hellenic Mediterranean University, Heraklion, Crete, Greece
Email: vagia.ts@gmail.com*

Maria Papadakaki

Laboratory of Health and Road Safety, Department of Social Work, School of Health Sciences, Hellenic Mediterranean University, Heraklion, Crete, Greece

Dimitris Dikeos

Sleep Research Unit, First Department of Psychiatry, Medical School, National & Kapodistrian University of Athens, Eginition Hospital, Athens, Greece

<https://doi.org/10.22365/jpsych.2023.014>

Received 28 April 2023 / Published Online 12 May 2023

References

1. Tsoutsis V, Papadakaki M, Yannis G, Pavlou D, Basta M, Chliaoutakis J, Dikeos D. Driving behaviour in depression based on subjective evaluation and data from a driving simulator. *Int J Environ Res Public Health* 2023, 20, 5609, doi: 10.3390/ijerph20085609
2. Vardaki S, Devos H, Beratis I, Yannis G, Papageorgiou SG. Exploring the association between working memory and driving performance in Parkinson's disease. *Traffic Inj Prev* 2016; 17:359-66, doi: 10.1080/15389588.2015.1091926
3. Beratis IN, Pavlou D, Papadimitriou E, Andronas N, Kontaxopoulou D, Fragkiadaki S, et al. Mild cognitive impairment and driving: Does in-vehicle distraction affect driving performance? *Accid Anal Prev* 2017, 103:148-155, doi: 10.1016/j.aap.2017.03.014
4. Wickens CM, Smart RG, Mann RE. The impact of depression on driver performance. *Int J Ment Health Addict* 2014, 12, 524–537, doi: 10.1007/s11469-014-9487-0
5. Alavi SS, Mohammadi MR, Soori H, Ghanizadeh M. The cognitive and psychological factors (personality, driving behavior, and mental illnesses) as predictors in traffic violations. *Iran J Psychiatry* 2017, 12, 78–86, PMID: 28659979
6. Liang OS, Yang CC. Mental health conditions and unsafe driving behaviors: A naturalistic driving study on ADHD and depression. *J Safety Res* 2022, 82, 233–240, doi: 10.1016/j.jsr.2022.05.014
7. Charlton JL, Di Stefano M, Dow J, Rapoport MJ, O'Neill D, Odell M, et al. *Influence of Chronic Illness on Crash Involvement of Motor Vehicle Drivers*, 3rd ed. Monash University Accident Research Centre, Melbourne, Australia, 2021
8. UK Government. Guidance: Psychiatric Disorders: Assessing Fitness to Drive. Available from: www.gov.uk/guidance/psychiatric-disorders-assessing-fitness-to-drive (accessed on 5 February 2023)

9. Chihuri S, Mielenz TJ, DiMaggio CJ, Betz ME, DiGuseppi C, Jones VC, Li G. Driving cessation and health outcomes in older adults. *J Am Geriatr Soc* 2016, 64: 332-41, doi: 10.1111/jgs.13931

Journal Pre-proof