

March 31, 2023
International Chinese Statistical Association
Student Paper Committee 2023

Dear Members of the Student Award Committee,

I would like to submit for your review and consideration the enclosed paper, titled, “Detecting changes in pupil response to light associated with cannabis consumption”. In this paper, I use methods from the functional data analysis (FDA) literature to model pupil light response, a potential objective test to discern recent cannabis use. As the rate of cannabis use rises, with efforts to legalize cannabis consumption for medical and recreation use across the United States, the implications of legalization remain understudied but is of great interest to roadway and occupational safety specialists. Lack of an objective measure of cannabis use may be a reason for this gap, especially since many potential tests of use are prone to bias in frequent cannabis users which is known as a tolerance effect. However, the pupil light response may be robust to tolerance effects and when paired with FDA methods, as explored in the paper; it has the ability to discriminate between recent cannabis use and no use. Additionally, using FDA methods, I show statistically significant differences between occasional and no use groups as well as daily and no use groups in pupil light response.

I also confirm that I’m a Ph.D. student in the Department of Biostatistics and Informatics at the University of Colorado, Anschutz Medical Campus in Aurora, Colorado and am first author on the submitted manuscript.

Sincerely,

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