Author response to GGI.14267 (letter to the Editor by Alain Braillon)

Author Reply: The relationship between alcohol intake and falls

Phyo Kyaw Myint[1], Maw Pin Tan[2,3,4], Kay-Tee Khaw[5]

[1]Ageing Clinical & Experimental Research (ACER) Team, Institute of Applied Health Sciences, University of Aberdeen, Aberdeen, UK

[2]Department of Medicine, Faculty of Medicine, University of Malaya, Kuala Lumpur, Malaysia

[3]Ageing and Age-Associated Disorders Research Group, Faculty of Medicine, University of Malaya, Kuala Lumpur, Malaysia

[4]Department of Medical Sciences, Faculty of Healthcare and Medical Sciences, Sunway University, Bandar Sunway, Malaysia

[5]Gonville and Caius College, University of Cambridge, Cambridge, UK

- *Professor Phyo Kyaw Myint*
  Professor of Medicine of Old Age

- *Professor Maw Pin Tan*
  Professor of Geriatric Medicine

- *Professor Kay-Tee Khaw*
  Professor of Clinical Gerontology

Correspondence address

Professor Phyo Kyaw Myint
Room 4.013, Polwarth Building,
University of Aberdeen,
Foresterhill, Aberdeen, AB25 2ZD
Mail to: phyo.myint@abdn.ac.uk
Tel: +44 (0) 1224 437841
Fax:+44 (0) 1224 437199

Braillon has highlighted harms associated with alcohol misuse in their letter to the editor (1) in response to our recent article (2). One of the points being made was the retrospective nature of the study. It is perhaps worthwhile highlighting the fact that EPIC-Norfolk is a prospective population-based study. Despite their limitations, such cohort studies are fundamental in furthering science for several reasons; notably that they can answer research questions which cannot be addressed by randomized control trials, which are considered the gold standard, and also provide preliminary findings to inform further intervention studies to confirm observed relationships.

The longitudinal nature of the cohort implies that data are collected prospectively with participants followed-up over several years. Our results had indeed identified the adverse effect if alcohol consumption exceeds the recommended limits. The falls hospitalisation risk was relatively higher in those who consumed alcohol >28 units/week by 40% compared to those who did not drink.

We completely agree with Braillon that alcohol is an addictive substance and have no intention of promoting alcohol drinking. However, while there is general agreement that high levels of alcohol consumption are harmful for health, there is substantial debate around the dose response relationship of alcohol to health outcomes at lower levels of intake. To date, few studies have examined the relationship between habitual consumption of alcohol and falls in this age group. Therefore, our study adds to the existing body of evidence and promotes debate and discussion around risks and benefits of alcohol consumption.

Our findings are consistent with the literature and as Braillon has pointed out, the U shaped relationship could be due to several other plausible mechanisms. Our finding that moderate

alcohol consumption may have health benefits is consistent with our previous work (3,4). Of note, EPIC-Norfolk participants are apparently healthy population. We have acknowledged the limitations of the study in our paper including possibilities of healthy responder bias, as well as the possibility of residual confounding and inability to control for known or unknown confounders.

Conflict of interest statement

All authors declare no conflict of interest.

References

(1) Braillon A. The relationship between alcohol intake and falls: Alcohol use only benefits those who sell it! Geriatr Gerontol Int. 2021 Sep 8. doi: 10.1111/ggi.14267.

(2) Tan GJ, Tan MP, Luben RN, Wareham NJ, Khaw KT, Myint PK. The relationship between alcohol intake and falls hospitalization: Results from the EPIC-Norfolk. Geriatr Gerontol Int. 2021 Aug;21(8):657-663.

(3) Myint PK, Luben RN, Wareham NJ, Bingham SA, Khaw KT. Combined effect of health behaviours and risk of first ever stroke in 20,040 men and women over 11 years' follow-up in Norfolk cohort of European Prospective Investigation of Cancer (EPIC Norfolk): prospective population study. BMJ. 2009 Feb 19;338:b349.

(4) Khaw KT, Wareham N, Bingham S, Welch A, Luben R, Day N. Combined impact of health behaviours and mortality in men and women: the EPIC-Norfolk prospective population study. PLoS Med. 2008 Jan 8;5(1):e12.