Reviewer's report

Title: A longitudinal assessment of alcohol intake and incident depression: The SUN Project

Version: 1 Date: 16 July 2012

Reviewer: Sharon Samet

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Major Compulsory Revisions

2. Are the methods appropriate and well described?

The recruitment period is not clearly stated: “Up to February 2008, 19,576 subjects were recruited.” When did recruitment begin?

The way retention was measured is not clearly described: “Of these, 17,462 were successfully followed-up, achieving a retention rate of 89.2%.” How was “successfully followed-up” defined? At least one follow-up? More than one?

Alcohol consumption was assessed at baseline by questions on type of alcohol and quantity per day. What is the time period for baseline alcohol consumption? Past week? Past month? How was episodic drinking defined? For example, how were participants who drank large quantities once per week classified?

Incident cases of depression were identified by a positive response to the question, “Have you ever been diagnosed of depression by a medical doctor?” or a positive report after 4 or more years of follow-up habitual use of antidepressant drugs.” Research suggests first treatment for depression typically occurs several years following the onset with the median time from onset of depression to first treatment reported as 8 years in the U.S. population (Wang et al., Arch Gen Psychiatry. 2005;62:603–613). Long lags in first contact for depression treatment have also been reported in other countries (Olfson et al., Med Care. 2012 Mar;50(3):227-32). Thus, identifying incident cases of depression by having received a diagnosis or prescribed medication by a medical doctor may result in missed cases. This is especially true for cases recruited later in the study who were followed up for a shorter period of time than case recruited earlier in the study.

3. Are the data sound?

The authors considered a number of potential confounders in their adjusted model: smoking, physical activity, total energy intake, body mass index, adherence to the MDP, marital status, and employment status. They did not consider illicit drug use or abuse of medications, which is strongly associated with depression.

In the sensitivity analyses, prevalent cases of other psychiatric disorders and
conditions (insomnia, schizophrenia, anxiety, anorexia and bulimia, stress, obsessive compulsive disorder, bipolar disorder, phobias) at baseline were excluded. Prevalent cases of drug dependence, which is also strongly associated with depression, were not excluded.

6. Are limitations of the work clearly stated?

If data on illicit drug use or abuse of prescribed medication was not collected in the SUN study, this should be stated.

The issues related to measurement of alcohol use and depression stated above in #2 may be limitations. If so, this should be stated.

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Needs some language corrections before being published

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I declare that I have no competing interests.