Reviewer's report

Title: Screening of Depression In Primary Care Setting - Prevalence and Instrument

Version: 2 Date: 11 November 2013

Reviewer: Mark Haddad

Reviewer's report:

The paper 'Adult Depression Screening in Saudi Primary Care: Prevalence, Instrument and Cost' addresses an important topic. Estimating depression prevalence is crucial for mental health policy and practice; and understanding and improving its recognition is likewise an issue of key importance for the organisation and delivery of services.

Despite addressing an important topic with generally adequate design and methods, the current submission has a number of weaknesses.

Major Compulsory Revisions

Background - general accuracy and style:

There are problems with the accuracy, interpretation and communication of key materials.

The initial (first paragraph) description of the clinical features of depression would be improved by a more accurate representation of the diagnostic features; the reference to somatic symptoms appears inaccurate and requires further explanation if it is to be included – the paper cited (Simon et al, 1999) notes several differing definition of somatic/somatization, that with the highest overall prevalence (patients reporting only somatic symptoms as the reason for visiting the physician) was 69%.

The background material concerning depression prevalence makes no distinction between estimates reached with a range of differing self-report measures and those using diagnostic instruments; there is limited sense of critical appraisal of sources, and a lack of reference to either systematic reviews of prevalence data. Making some clear reference to the variation in prevalence rates that may result from differing instruments is necessary, as is a more critical use of sources of evidence. Systematic review data indicate point and 1-year prevalence rates for depression to vary between 1% to 10%; the world-wide pooled estimate (Waraich et al 2004) of around 4% appears based on robust sources and methods (though prevalence in primary care estimates ranged from 2% to 14%).

The initial part of this background material (paragraph 2) notes the incidence of depression in primary care – but it is most likely that this is prevalence data (the references noted do not appear appropriate sources).

The reporting of the benefits of screening over-simplifies some of the material
cited – Whooley (2009) is noted find ‘..screening to be cost effective if it done in
primary care setting (41)’. whereas – in her editorial on depression and
cardiovascular disease she clearly notes that routine screening of patients who
are not otherwise suspected to have depression has no proven benefit outside of
a collaborative care treatment program.

Similarly guidance from the U.S. Preventive Services Task Force is reduced to
simple support for depression screening , whereas the guidance notes that
benefits are likely only if staff-assisted depression care supports are available,
and that clinical benefits are unlikely for screening in the absence of this.

Similarly the noted suicide rate among people with depression of 15% (‘…Over
15% of patients with major depression end their lives in suicide.’) - though widely
evident in the popular literature, is clearly impossible, given the known
prevalence of depression and the known rates for suicide. A life-time suicide
prevalence for mixed inpatient/outpatient populations with affective disorders of
2% (Bostwick and Pankratz, 2000) to 4% (Hawton and van Heeringen, 2009)
appears more accurate.

The notion that depression prevalence is increasing is not clear; and not evident
in several robust analyses of relevant findings (e.g. Costello et al 2006).

Overall, it may be better to consider the quality of the sources cited, and rather
than may (57) references of variable quality, identify robust studies and
systematic reviews that provide accurate and reliable evidence.

Design:
A cross-sectional study design is appropriate for the study aims, and the
approach for obtaining a random sample of primary care attendees seems
appropriate.

Major Compulsory Revisions Measures:
Although the PHQ-9 has been examined in many studies, and evaluations show
acceptable sensitivity and specificity compared with independent diagnoses, its
use provides provisional diagnoses of major and sub-threshold depression. The
authors should clearly note as a study limitation that a ‘gold standard’ diagnostic
instrument - such as the Structured Clinical Interview for DSM Disorders (SCID)
or the Composite International Diagnostic Interview (CIDI) or the revised clinical
interview schedule (CIS-R) – was not used. And ideally the importance of such
measures for accurate estimates should be clarified in the introductory materials.

Why was the PHQ-9 diagnostic algorithm not used to identify major depression?
The choice of cut-point 10 rather than algorithm for major depression should be
considered and noted.

The cost analysis considerations seem appropriate (although the suicide element
should be considered).

Major Compulsory Revisions Procedure:
Why were patients who had pre-existing depression or were on anti-depression
medication excluded’? If the study is designed to identify depression prevalence, this is inappropriate and will provide an inaccurate value. If the study purpose was to examine the diagnostic accuracy of the PHQ compared to a gold standard measure as a screening measure ie in detecting previously unrecognised cases of depression, then this exclusion would be appropriate – but the stated aim and rationale is on estimating depression prevalence in this setting.

It is also unclear how patients were excluded on the basis of the reported procedure (‘..Each day, the nursing staff distributed questionnaires to 5 patients in each center..’).

Major Compulsory Revisions Results:

The number and proportion of excluded patients is not reported; this is important in terms of representativeness of the sample and selection bias. If 5 patients were approached for study recruitment from each of 3 centres each day for 3 months, the final response of 477 might be much less than half of those randomly selected. This should be reported and discussed, and where possible comparison of the characteristics of recruited participants and those refusing provided to identify potential bias.

The prevalence of depression by PHQ-9 score is usually based upon a designated cut-point on the scale – usually 10 and above. It would be useful to consider this and report findings accordingly. The PHQ-9 categorisation of mild depression (scores 5-9) makes little logical sense as this falls below this measure’s standard cut-point for the presence of depression (#10) – so reporting that the prevalence of depression was found to be 49.9% among the adult visitors to primary healthcare may be confusing – in relation both to standard depression criteria and the way that the PHQ and related instruments are generally used. Finding that a large proportion of people have sub-threshold ‘depressive symptoms’ does not relate clearly to the aim of the study or the related literature concerning depressive disorder/ major depression.

Major Compulsory Revisions The discussion and conclusions should more clearly identify study weaknesses and limitations (as well as strengths). The rationale for conducting the study and for selecting the PHQ-9 are appropriate – but a more considered, balanced and accurate article is needed to adequately communicate this study.

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

Quality of written English: Not suitable for publication unless extensively edited

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:

'I declare that I have no competing interests'