Reviewer's report

Title: An International Comparative Study of Blood Pressure in Populations of European vs. African Descent

Version: 1 Date: 6 September 2004

Reviewer: Francesco Cappuccio

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General

1. Is the question posed by the authors new and well designed?

The authors set out to address a very important question which is currently involving many research groups around the world with perhaps disproportionate deployment of public funding. In particular they use an inexpensive methodology of pooled analysis of well conducted population studies around the world to guide to the understanding of the likelihood that the difference in the burden of hypertension between 'whites' and 'blacks' maybe genetically determined. Dr Cooper has been at the forefront of the research of hypertension in black African populations and has developed clear arguments in favour of the ‘environmental’ hypothesis vs the ‘genetic’ one. On this background the present paper represent yet another tile in his mosaic.

The design is a very simple and clever one. Rather than proving the point, though, this approach helps generate hypotheses on more detailed and complex study designs to answer his question thoroughly.

2. Are the methods appropriate and well described, and are sufficient details provided to replicate the work?

Whilst the design of a pooled comparative analysis is adequate, its quality is necessarily dependent on the quality of the studies used and on the appropriateness to combined potentially heterogeneous methodologies.

The authors discuss these points but refer to the original studies for details. Given there is no restrain on space and some original papers are published in journals not readily available to all (reff 12,13,15), I would suggest the expansion of the section on Methods with a basic description of each of the studies included (beyond what is presented in the Appendix Table).

I wonder why only Nigeria and Jamaica have been used from the ICSHIB study. Surely data are available on Cameroon, St Lucia and Barbados that could enrich the samples from populations of black African descent.

I also wonder whether the authors have considered contacting researchers from the INTERSALT Study to obtain other population samples. Although there would be a substantial difference in recruitment strategies, in that INTERSALT did not have national representative samples, nevertheless the separate analysis of those samples, if confirmatory, might provide external validity to their conclusions.

Finally, I would be interested in some discussion on the use of the Dinamap in the Health Survey for England. This device has been shown to systematically under read systolic and over read diastolic blood pressure with potential bias when assessing prevalence of hypertension based on pre-set
cut-off points.

3. Are the data sound and well controlled?
Depending on my previous comments, the data are sound and well controlled.

4. Does the manuscript adhere to the relevant standards for reporting and data deposition?
Yes

5. Are the discussion and conclusions well balanced and adequately supported by the data?
The discussion is cogent and highly relevant. It would be useful to move forward by suggesting how the limitations of the present analysis could be overcome by a ‘new’ study addressing the question ‘prospectively’.

6. Do the title and abstract accurately convey what has been found?
The title is appropriate. The abstract could include data on blood pressures and rates of treatment.

7. Is the writing acceptable?
The manuscript is well written and easy to follow.

8. Minor errors
Mis-typing in ref. 26: Cook rather than Cooj

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

Points raised under n.2

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

Points raised under points 5, 6 and 8

Discretionary Revisions (which the author can choose to ignore)

**What next?:** Accept after minor essential revisions

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

**Quality of written English:** Acceptable

**Statistical review:** No
Declaration of competing interests:

None