Reviewer's report

Title: Heritability of Cardiovascular Risk Factors in a Brazilian Population: Baependi Heart Study

Version: 1 Date: 19 November 2007

Reviewer: Manfred J Müller

Reviewer's report:

General

Recommendation, accept with minor revisions

Comment, this is a formal genetic and descriptive approach to the heritability of cardiovascular risk factors. The data are worthwhile but they do not extend our present knowledge. The ms could be improved by (i) adding further data and (ii) providing more sophisticated data analyses. E.g., the heritability of MSX can be calculated in addition to heritabilities of individual risk factors. In addition, the risk factors are interrelated (e.g., BMI is associated with plasma triglyceride levels) and part of the heritabilities may be interrelated. I feel that this is not only a problem of adjustments (which is still incomplete and not easily to understand in the current version of the ms) but of modeling. Shared heritabilities should be estimated. Modeling is also necessary to address the problem of different cut-offs used for the individual risk factors. The cut-offs differ in different populations. I wonder if the cut-offs generated in western societies can be used all over the world. Clearly using alternative cut-offs would lead to other heritabilities. This should be discussed in more detail. The cut-offs used (see p7, last para) should be explained. There is some need for text editing (e.g., p8, 2nd para, what is altered percentage of fasting glucose or altered waist circumference etc?).

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

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

Discretionary Revisions (which the author can choose to ignore)