Reviewer's report

Title: The family as a determinant of stunting in children living in conditions of extreme poverty: a case-control study.

Version: 1 Date: 6 May 2004

Reviewer: ann hill

Reviewer's report:

General
The rationale for this study is that in communities where malnutrition is rife, some families raise well-nourished children whereas others in the same community do not. Hence this study in Mexico seeks to identify family-related risk factors for stunting in children aged 6-23m, and to compare the factors in rural/urban areas. The contribution of other variables (e.g. environment, LBW) was controlled by multiple logistic regression analysis.

Comments on design:
1. A census was undertaken to identify all children aged 6-23m. Those <-2SD height-for-age were the cases and those >-2SD were the controls. This resulted in unequal sized groups and the controls were significantly younger (by about 3m) than the cases. Some of the controls could have become stunted by the time they were of comparable age to the cases, so an age-matched case-control design would have been preferable.

2. The family characteristics that were studied are somewhat limited. For example there is no measure of food security, meal frequency, food variety.

3. Not enrolled were 24.2% of eligible rural children as the families had temporarily migrated. Their omission could have led to selection bias.

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

1. Interpretation of the data. The Discussion is weak, confusing and conflicting.
   a) p12. Family income is stated as having an important effect in the rural area. This conflicts with Table 4 (no significant association in the rural area).
   b) p12. In the urban area, the variable 'worked in same place for less than 2 years' is interpreted as reflecting instability of employment and low income. This seems inconsistent with the finding that neither income nor unemployment are risk factors.
   c) p14. Migrant status is described as no risk. This conflicts with the data in Tables 4 and 5 where migrant status is a risk factor in the urban area.

2. Limitations of the study: The Discussion needs to include weakness in the design (see 1 and 3 above).

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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)

1. Page 8: explain what is meant by 'integration of family'
2. Page 8: Define 'weaning'
3. Table 2: Remove decimals from SD of birthweight
4. Table 2: Change 'dirty floor' to 'dirt floor'

Discretionary Revisions (which the author can choose to ignore)
1. For the supervisory visits, indicate the degree of reliability of the data.
2. In Table 2, add sewerage.
3. In Table 2, report the housing characteristics in a consistent 'direction' (i.e. dirt floor, no indoor plumbing, no separate kitchen, overcrowded).
4. In the text of the Results, present the comparisons in a consistent order (e.g. cases always first) to help the reader assimilate the findings.

What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

Level of interest: An article of limited interest

Quality of written English: Acceptable

Statistical review: No

Declaration of competing interests: NONE