Author's response to reviews

Title: The prevalence of nutritional anemia in pregnancy in an east Anatolian province, Turkey

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REVISION NOTE

Associate Editor Comments:

1. The multi-stage 30x30 cluster surveys with a sample size of 900 are defined as conventional methods most commonly used to assess a population’s nutritional status during emergencies. It is recommended for developing countries. In these surveys adjusted statistics do not generally needed since the sample size is than the optimum sample size 384. Below is a related reference. We used this sample size with the PPS sampling method. We put 2 references [13,14] for sampling method in the references section in the text.

References:

Emergency Health and Nutrition


2. In Malatya about 10 000 live births occur every year. According to Malatya Health Directorate’ unpublished data antenatal coverage rate was more than 80%. However we put the recent Turkey demographic and health survey finding about East Anatolia as reference which the coverage rate was 76.3%.

3. At the time the survey was conducted there were no ethics commission in Malatya. We took permission from University rector, Malatya Governor and Malatya Health Directorate. We also informed women and took their permission. This was stated in the methods section.

4. This paper presented the findings related to anaemia in pregnancy which was a component of a comprehensive research project on the health of pregnant women in Malatya. Findings related to violence, rubella seroprevalence and iodine deficiency in
the same sample had already been published as separate articles. The published articles in PubMed are below:


Sentences in red were stated in the revised acknowledgments section.

Reviewer 1:

1. There were no statistically significant differences between anaemic and nonanaemic women in terms of average age, family income, etc. However when the data categorized anemia prevalence was different in some income groups. Below sentences were added in the results section. In table 1, sizes for anaemia presented.

“The mean ages of anaemic and nonanemic women were similar, 26.9 and 26.4 years respectively (p>0.05)”.

“The average monthly income for anemic and nonanemic women was similar (p>0.05)”.

2. Percentages were corrected (33.7%, 37.6%, etc). Hb<11.0g/dl was written instead of 110g/dl.

3. Two cc, 8 cc were replaced with ml.

4. Serum sample kept in refrigerator at -20 centigrade for six months, this was stated in the “laboratory analysis” section.

5. The WHO’s document “The prevalence of anaemia in women” was the reference for cutoff level for serum iron, it was <50µg/dl for pregnant women.
6. This study was conducted in a big province including the counties (districts). Some clusters were 2 hours away from the research center. Serious effort and time was spent for the survey. We believe it is appropriate to be considered as an original research.

Reviewer 2:
1. We classified anaemia as microcytic-hypochromic, macrocytic, normocytic-normochromic.
2. The term “cluster” was defined in the “sampling” section. “Health houses were assigned as clusters (sampling units)”
3. Instead of the term “CBP” CBC was used. The mean blood indices were presented both in Table 1 and Table 3 which were entered as variables in the dataset. Red cell count, platelets, white cell count were not entered in database.
4. Information on prevalence in primigravidas and primipars were given in “results” section. “Of the participants, 278 (33.8%) were primigravidas, 318 were nullipars (38.6%) and 230 (27.9%) were primipars. Anaemia prevalences were 25.9%, 24.8% and 27.0% among them, respectively”.
5. Table 2 modified.
6. Some more discussion was done for the reduce in the anaemia prevalence in 1970. “As a matter of fact, the reduction in anaemia prevalence from that projected earlier in 1970s is expectable since there was a rapid socio-economic growth of the Turkish population over the past two-three decades which had a major impact on both health status and disease patterns throughout the country and particularly in east Anatolia (Eastern Anatolian Project). Since 1985, governments in collaboration with international organizations (UNICEF) conducted programs related to mother and child health such as safe motherhood, antenatal care, nutrition education of the public and food aid to the the low income families. Human resources, education, industry, agriculture and health sector was improved through national development plans and, Eastern Anatolian Project including Malatya since 1997 [19-21]”.


7. Folate deficiency was really rampant and it was stated in “results” and “discussion” section as below.

“In analyzing the red blood cell count, significant differences were observed in the mean values for MCV, MCH, MCHC and RDW by soil eating and in the mean value for RDW by current use of iron treatment (p<0.05). The mean RDW values was higher among women with PICA (15.5%) and among those women who were under iron medication (15.5%). The mean value for MCV was close to the lower limit (81.1) among anaemics (minimum: 57.9, maximum: 101.5). Among women with three children the mean value for MCV was 83.9±10.1 and, the proportions of B12 vitamin and folate deficiencies were also higher in this category indicating the presence of mixed anaemia (Table 3). Of the anaemic pregnant, 38.1% had a microcytic-hypochromic anaemia (MCV<80 & MCH<27), 56.5% had a normocytic-normochromic (MCV and MCH within normal range), 0.9% had a macrocytic (>98.0 fl) anaemia and 4.5% had combined morphologic type of anaemia. Iron deficiency was the most prevalent micronutrient deficiency among microcytic-hypochromic anaemia (p<0.05) and, folate deficiency was common in all morphologic types (p>0.05) (Table 4).”

8. The manuscript rechecked for language and edited. Some references deleted and some new references added.

9. We deleted the figure and added a new table (Table 4)