Author’s response to reviews

Title: Tehran Eye Study: research design and eye examination protocol

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Version: 2 Date: 4 May 2003

PDF covering letter
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Date: May 3, 2003

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Dear Editor,

You will find the revision of our manuscript attached. It has been edited and rewritten for language errors, along with other changes in regard to the reviewers’ suggestions. We appreciate their invaluable comments for the great improvement they have brought in the manuscript.

A discussion has been added to the manuscript. The statistical analyses have been rewritten for which two new references have also been added. A point-by-point response regarding the reviewers’ suggestions is listed below.

Thank you very much for your consideration.

Sincerely,

Akbar Fotouhi
Response to Reviewer 1:

This interesting paper describes the design of the Tehran Eye Study. The authors are implementing a very important project. On page 5, is the precision of the study 0.005? Or is it 0.05? Even though there are no results to publish, I would recommend a conclusion to the abstract to tell the reader what he or she will learn by reading the design paper, and what the results in the future could tell us.

As mentioned in the manuscript the precision is 0.005. We agree with the reviewer’s comment and have added a conclusion to the manuscript and abstract.

Response to Reviewer 2:

The paper is an outline of a population survey of visual impairment in Tehran, Iran. It correctly computes the required sample size to determine a prevalence of 0.02 with a s. e. of 0.005, and makes a reasonably founded correction for the design effect and possible nonparticipation. A minor point would be to define the symbols that are used in the formula for sample size calculation. It is not possible with my background to evaluate the description of the ophthalmological procedures proposed.

The definition of the symbols used in the mentioned formula has been added to the revision.

Response to Reviewer 3:

a) Discretionary revisions

1. It would have been helpful if specific justification was given for the selection of 2% for sample size calculation. It is likely that blindness (The prevalence of visual impairment (blindness and low vision) is estimated to be around 2% in Iran using WHO criteria on the basis of best-corrected vision. However, the prevalence can be higher if we consider other criteria or the presenting vision. The study might have some limitations in estimating the prevalence in age and sex subgroups.

2. It would be helpful if the authors provided a better justification for specific aspects of the study. For example, why test color vision? Why was iris color measured?

Some data are to be collected as determinant variables for some outcomes. For example iris color is measured as a probable determinant for IOP. However, we
agree that some variables in our study are not related to the general purpose of the study, but as a population based eye study we are looking forward to the opportunity to collect more data in the community. Of course we should be concerned about the overload of the data collection process and the quality of the data.

3. Was only one IOP measurement done or were multiple measures taken? (page 9)

Only one IOP measurement is taken.

4. Visual impairment is defined according to WHO standards; what cut-off does Iran use for blindness? (In order to compare the results with other studies, we have used the WHO criteria for visual impairment. These criteria are accepted in Iran.

5. It appears that some socio-demographic questions were also included although this is not clear. Is there going to be any information on previous history of cataract surgery? Or other treatment?

This part of the protocol has not been discussed in detail. We ask the participants about their age, education, occupation, ethnicity, and religion to highlight the more affected portions of the population. Any history of cataract surgery or other eye surgery are inquired about and recorded.

b) Compulsory revisions

1. It is not clear how clusters were selected within each district. In particular, how was the index house selected? How were subsequent houses selected? How was a "household member" defined? Since this is an urban area, how will flats be selected?

We added some points to the “Sampling plan” section of the manuscript to clarify it further.

2. Non response (for the examination) was not addressed. What was done if a person failed to come for examination? Was there follow up?

It has been clarified in the revision.

3. It would be helpful to know the exclusion criteria for the different tests to be undertaken; for example (page 7) would refraction with an autorefractor be attempted on someone with a corneal opacity? Would the LOCS grading of lens opacities be undertaken on all patients? (page 9) Is there a visual acuity cut-off?
It states that all patients would undergo a retinal examination (page 10). Does this include children?

Answers to these questions can be found in the revision.

4. Analytic procedures were not described. Please include what analysis is intended. For example, how will familial aggregation be analysed?

The “Statistical analysis” section has been rewritten. We hope you find it as clear as we do.