Reviewer's report

Title: Trends and risk factors of hyperglycemia and diabetes among Kuwaiti Adults: National Nutrition Surveillance Data from 2002 to 2009

Version: 1 Date: 14 September 2012

Reviewer: Fatma Huffman

Reviewer's report:

Reviewers report

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- Major Compulsory Revisions

The author must respond to these before a decision on publication can be reached. For example, additional necessary experiments or controls, statistical mistakes, errors in interpretation.

1. Subjects and methods, Study population, second paragraph:
   was diabetes diagnosis self-reported?, Did you differentiate between type 1 and type 2 diabetes? Were subjects with high fasting plasma glucose categorized as diabetics even if they did not have a previous diagnosis? Did you control for diabetes medication? Is any information about income available? Was physical activity quantified in MET/hour?

2. Subjects and methods, data collection, second paragraph:
   Are the Accutrend GCT and Reflotron validated in this specific population? Were the measures conducted in duplicate? What was the coefficient of variation?

3. Statistical analysis, second paragraph: Did you test for interactions among variables? Was any interaction among gender and prevalence of IFG or diabetes found significant to justify the separate analysis by gender?

4. Results, first paragraph: indicate which percentages are significantly different among genders on each study period

5. Results, second paragraph, last sentence: what are the pvalues for the difference in prevalence among genders?

6. Results, third paragraph, last sentence: provide p-values for the difference among genders for each age decade

7. Results, sixth paragraph: did the unadjusted logistic regression models also follow the same trend?

8. Discussion, second paragraph: was the prevalence difference among genders significant? Discuss any interaction among variables (gender vs. %IFG, gender
vs. %diabetes, education vs. %IFG, etc.)

9. Discussion, seventh paragraph: smokers are less likely to have IFG. It should be noted that smoking may not be a protective factor for IFG. Since the study is cross sectional, no cause and effect could be determined. Were smokers also younger and that is the reason why they have less IFG? Did smokers have less incidence of obesity?

10. Discussion, second to last paragraph: emphasize why is it important to control for diabetes medications? It may be possible that subjects on medication have normal levels of fasting BG. In fact, this is the goal of the diabetes treatment.

- Minor Essential Revisions

11. The author can be trusted to make these. For example, missing labels on figures, the wrong use of a term, spelling mistakes.

12. Introduction, second paragraph: impaired fasting glucose is mentioned for the first time. Should be noted (IFG).

13. There are two periods at the end of the introduction. One should be deleted.

14. Results, third paragraph: prevalence is not 42.8%, according to table 2 is 42.4%

15. Results, sixth paragraph, last sentence: 0.49 should be replaced by 0.49

16. Discussion, third paragraph: should say “The odds of IFG and diabetes……”

17. Discussion, second to last paragraph: a word is missing here: “Further, we do not any information ……”

18. Table 1 is missing the **, *** on moderate and high hypercholesterolemia

- Discretionary Revisions

These are recommendations for improvement which the author can choose to ignore. For example clarifications, data that would be useful but not essential.

**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

'I declare that I have no competing interests'