Reviewer's report

Title: The publics' understanding of daily caloric recommendations and their perceptions of calorie posting in chain restaurants

Version: 1 Date: 13 October 2009

Reviewer: Carl Lachat

Reviewer's report:

MAJOR COMPULSORY REVISIONS

The study is a descriptive study describing how Americans perceive calorie label and aims to provide a representative picture for the US population. The strength of the study is its national representative character or the United States. It is a timely contribution to the evidence base on the ongoing debates with regard to labeling. In general, this is a well written and focused manuscript but there are a number of important sections (in particular with regard to the Ethics, design) that need to be clarified. The result section should be written more succinctly and the discussion needs to elaborate on a number of weaknesses and potential biases. The quality of the paper would be improved a lot when the data analysis was conducted differently, avoiding multiple testing and internal correlation of variables.

Abstract

Results: Since eating and selection of food was not observed directly, the authors should rephrase and refer to reported behavior instead.

Conclusion: Please restate the conclusion more critically. This study did not assess effectiveness and the findings consequently do provide evidence that the labeling is an effective tool for better dietary choices. (Similar remark for the closing paragraph of the manuscript)

Background

The body of literature regarding consumer understanding and labeling/nutrient profiling is extensive. Important studies on this topic have been neglected. It would be good to compare the findings of this study with these. E.g. Consumer understanding and use of nutrition labeling: a systematic review by Gill Cowburn and Lynn Stockley in Public Health Nutrition: 8(1), 21–28 DOI: 10.1079/PHN2004666

One of the main nutritional issues when eating out is energy density of the meals. Unfortunately, this has not been picked up in the manuscript. (eg Obesity reviews 2003 Fast foods, energy density and obesity: a possible mechanistic link by Prentice & Jebb)
The manuscript refers to “Fast food restaurants”; how were these defined?

Methods

How were the questions with regard to the perceived caloric knowledge obtained? What was the rationale to select these questions?

Was there no “I don’t know” or “other” option in the questions. If so, how were these answers treated in the analysis?

Ethical approval is unclear. The authors need to detail the How was ethical consent obtained, how were the participants informed and to what extent this study was carried out according to the Helsinki Declaration. Was this study approved by an Ethical committee?

What measures were taken to minimize potential interview bias?

The national representative character of the study is an important asset. More details on the sampling are needed to give the reader insight in how the sampling was carried out.

Please discuss selection bias. The authors state that there is “no response rate for this study”. It is not clear why this is. This is an important limitation of the study and needs to be discussed better. What happened if respondents refused to participate in the survey? How may this have affected the results? It is important to know who refused to participate, who could not be contacted (not registered or no phones) and if this might have introduced a socio-economic bias in the results.

Discuss how the self reported BMI may have biased the results

The study reports on blacks, white and Hispanics. What happened if other ethnic groups (e.g. Asians, mixed) participated?

It is unclear why Chi square tests were used and how multiple testing was accounted for. Why not use stronger statistical methods to avoid obvious problems of internal correlation (the household income or education or employment status are potentially highly correlated) or potential confounding variables in the associations between variables? The paper would gain in strength if the analysis was conducted using a stronger analysis framework. A different analysis framework would help to focus the result section.

Results

The result section is too lengthy need to be focused on the main objectives of the study.

Table 1. Why was the political affiliation asked? What was the rationale for this? The results for this variable are not presented in the results section or the methods.
Table 2 and 3 contain only some of the socio economic variables, why were other variables such as household income, employment status etc.. not tabulated?

Discussion

A number of limitations of the study are correctly acknowledged. Nevertheless, it is important to discuss the direction of the potential bias resulting from these.

Inequalities in diet and health are a challenging problem for nutrition scientists and policy makers; this study potentially sheds light on an important factor why certain population groups eat differently compared too others. Unfortunately however, apart from ethnic differences, this has not been elaborated in the text. It would be interesting if the authors could elaborate on this specifically (eg household income, employment status..).

MINOR ESSENTIAL REVISIONS

The methods section does not state when a finding was considered statistically significant.

Please justify sample size calculation

Rephrase “caloric requirements” into “energy requirements” (same for calorie choices and the similar statements)

Please check following sentence for grammar: “Therefore, mandatory calorie posting be more effective among women and racial/ethnic groups at higher risk for obesity but less effective among individuals with lower education.”

Wording

- Americans or US citizens?
- What is meant with “more education individuals (page 10 )

DISCRETIONARY REVISIONS

Last sentence. I am not convinced that this is a relatively low cost policy tool. Mandatory caloric labeling could logistically be quite challenging for smaller operators or eating out establishments that offer ‘à la carte’ menus with recipes that may changes often.

Carl Lachat

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

**Quality of written English:** Acceptable
**Statistical review:** Yes, and I have assessed the statistics in my report.

**Declaration of competing interests:**

I declare that I have no competing interests