Letter to Editor

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Correspondence: Overweight/Obesity: An Emerging Epidemic in India

Public Health Section

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Dear Editor,

We read with interest the article on the prevalence of overweight/obesity in India [1]. This study reinforces the fact that obesity is an emerging pandemic and warrants urgent action. However, there are certain points we would like to highlight which might bring more clarity to this issue.

1.) The cut-off of Body Mass Index (BMI) used in the study doesn't hold true for Indians. Various studies have shown that Asians have a higher percentage of body fat than Caucasian people of the same age, sex, and BMI. Even the occurrence of Type 2 diabetes in Asians is more in lower BMI than the WHO cut-off limit of 25 kg/m^2. So, for Asians (including Indians) the revised cut-off (Underweight <18.5, Normal 18.5-22.9, Overweight 23-24.9 and Obese ≥25) should be used [2]. Therefore, reanalysis of the data using revised cut-offs will depict the true prevalence of overweight/obesity.

2.) The categories used in the study don't take account of the whole population. For example; marital status is classified into currently married and never married categories. Prima facie it suggests that widows and divorced were not included in the analysis. Also, the word "never married" should be replaced with unmarried. Similarly, working status is classified into currently working and current non-working. Here, the definition of working is not clear. Everyone is working to earn bread. So, a clear definition should be stated. Also, it will be more useful to look into the type of work (physical, sedentary etc.).

3.) The authors stated that the women from upper wealth quintiles also showed a significant change in mean BMI in 2015-16. However, the definition of the upper wealth quintile was not given. It leaves the reader to wonder. Similarly, the authors stated that "the risk of overweight/obesity was increased with the upper level of education among men and women", without defining the upper level of education.

4.) The statement "men belonging to richest wealth quintile were found 12 times and richer wealth quintile men were five times more likely to be overweight/obese compared to men in poorest wealth quintile" doesn't make any sense to the reader if the richest and richer are not clearly defined.

5.) The statement "Parity was found as a significant predictor of overweight/obesity among women but not among men" doesn't make any sense and must be removed.

6.) For most of the statements in results, the supporting data are lacking. For example "the increase in unadjusted prevalence of overweight/obesity was found more among illiterates and men and women with lower level of education, the adjusted effect of education demonstrated reverse results", "It was found that the risk of overweight/obesity was increased with the upper level of education among men and women" etc.

7.) The authors highlighted an important public health threat but a detailed critical analysis of risk factors, its association with other comorbidities like hypertension and diabetes and preventive measures need to be discussed.

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AUTHOR'S REPLY

The explanations are provided hereby below:

1.) The analysis was done in mentioned published article using three rounds of National Family Health Surveys (NFHS), NFHS-2, NFHS-3, and NFHS-4 conducted in 1998-99, 2005-06, and 2015-16 respectively. The National Family Health Survey (NFHS) is a large-scale, multi-round survey conducted in a representative sample of households throughout India. Each successive round of the NFHS has had two specific goals: a) to provide essential data on health and family welfare needed by the Ministry of Health and Family Welfare and other agencies for policy and programme purposes, and b) to provide information on important emerging health and family welfare issues.

The NFHS surveys are the Indian counter-part of Demographic and Health Surveys (DHS) which are nationally-representative household surveys that provide data for a wide range of monitoring and impact evaluation indicators in the areas of population, health, and nutrition in host countries (https://dhsprogram.com/What-We-Do/Survey-Types/DHS.cfm and http://rchiips.org/nfhs). Although there are studies which suggest the different cut-offs for obesity in Asian population, for the sake of uniformity and generalisation, same cut-offs and methodology have been used in NFHS and DHS data in other countries. We could have been used different cut-offs for obesity but the NFHS National report (http://rchiips.org/nfhs/NFHS-4 Report.shtml) published by IIPS and Ministry of Health and Family Welfare, Govt. of India, New Delhi is also based on NFHS data using the standard cut-offs, therefore to make it uniform and to extend the research, I had used the same cut-offs of BMI.

2.) We had given detailed description of NFHS data with the paper. There are some limitations in operational definitions of some variables. Since this is not primary data, so we had to stick to those definitions and categories provided in the data.

Some categories have been clubbed or merged in the analysis for the sake of normality assumption and to manage skewed frequency. Marital status had three categories (not married, currently married, and formally married) in the data but in there were very few numbers in formally married obese women and men which were giving absurd odds ratios in regression analysis. Therefore, only two categories were utilised. Same way different working profession was clubbed into working.

3.) This is also mentioned in detail in the methodology of NFHS survey report, which is available in public domain (http://rchiips.org/nfhs). Due to word limit, it could not be given in detail in the article.

4.) These are the interpretation of odds ratios by logistic regression analysis. Richest, richer, middle, poor and poorest are the standard terminology with wealth index used in NFHS. This is mentioned in detail in the methodology of NFHS survey report, which is available in public domain (http://rchiips.org/nfhs). Due to word limit, it could not be given in detail in the article.

5.) Parity literally does not belong to men but in here it means average number of children, since data was also given as couple file, so the objective to use this word here was to show that there was no effect of fertility on obesity among men.

6.) These are the conclusive statements made on the basis of tables but due to space shortage, tables and full interpretation of tables was not given.

7.) The aim and objective was to show and establish Overweight/Obesity as an emerging epidemic in India with current levels and trend analysis. The above said suggestions are well said and have been taken in consideration in other research papers which are under publications.

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