The Academics in National Family Health Surveys

The recent release of the National Family Health Survey-5 report has attracted attention from all quarters including the print media. The media has reported on morbidity profiles based on the finding of this report. To be fair, I am in favour of health attracting media attention. Health breaking headlines is welcome. At the same time, a critical appraisal by academics of these reports breaking headlines in media should also be welcome. That brings me to the point as to how much academics goes into the conduct and reporting such surveys. Appraisal is also needed to understand as to how much of utility these reports finally have for the academic medicine in this country.

As per the report, four survey schedules - household, woman’s, man’s and biomarker - were used for collection of data. For the biomarker schedule, measurements of height, weight and hemoglobin levels for children were completed. Similarly, measurements of height, weight, waist and hip circumference, and hemoglobin levels for women age 15-49 years and men age 15-54 years were completed. In addition, blood pressure and random blood glucose levels for women and men aged 15 years and over were obtained as part of the biomarker schedule. For all practical purposes, age 15-49 has been taken as adults. This is precisely where my academic concerns lie with regard to this report.

Firstly, for classifying blood sugar levels, the criteria used are not standard. Random blood glucose level >140 mg/dL is classified as high and those >160 mg/dL as very high. The criteria used for the defining of diabetes and hypertension have not been detailed and the cut-offs used appear arbitrary. As per the WHO recommendations for the diagnostic criteria for diabetes and intermediate hyperglycemia, diabetes is fasting plasma glucose ≥126 mg/dL or 2-hour plasma glucose ≥200 mg/dL. Prediabetes is often referred as either impaired fasting glucose (110-125) or impaired glucose tolerance (≥140 to <200 mg/dL), based on whether it is fasting plasma glucose or 2-hour plasma glucose respectively There is no classification as high or very high blood sugar in any guidelines as is mentioned in the NFHS report.

Similarly, for hypertension, the report mentions mildly, moderately or severely elevated blood pressure which again is not the standard classification. As per JNC 7 guidelines, its stage 1 and stage 2 hypertension if BP >140/90 and 160/100 mm of Hg respectively.

Secondly, the criteria used for definition of overweight/obesity are the standard World Health Organization criteria of using Body Mass Index (BMI) or Quetelet index. My concern lies in the age group considered for the BMI calculations i.e., 15-49 years. As per the WHO, the criteria stand corrected for the adults aged >20 years of age. For children between 5-19 years of age, overweight is BMI-for-age greater than 1 standard deviation above the WHO Growth Reference median; and obesity is greater than 2 standard deviations above the WHO Growth Reference median. Under the section, “Nutritional status of adults”, the age mentioned is 15-49 years but the cut offs used for overweight/obese are for women and men. Even if we go by the ICMR-National Institute of Nutrition (NIN) redefinition of the ideal or reference Indian adult man and woman, instead of 20-39 years, the age is between 19-39 years which is nowhere in concordance with the cut offs of age taken by NFHS-5 report.

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