



DIETARY ASSESSMENT METHODS- A LITERATURE REVIEW.

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ABSTRACT

The goal of dietary assessment is to identify appropriate and actionable areas of change in the patient's diet and lifestyle and to improve patient health and wellbeing. Patients with complex dietary concerns should receive a comprehensive assessment by a dietitian. Specific dietary and nutritional counseling recommendations will depend on the patient's comorbidities. Diet records, diet-history questionnaires, 24-h recalls, or food-frequency questionnaires (FFQs) are the most common methods to get individual dietary intakes.

KEYWORDS : Dietary Assessment.

INTRODUCTION:

Dietary assessment encompasses food supply and production at the national level, food purchases at the household level, and food consumption at the individual level. This review focuses only on individual-level food intake. It is intended to serve as a resource for those who wish to assess diet in a research study, for example, to describe the intakes of a population, using individual measurements for group level analysis. In order to produce better evidence for formulating effective nutrition projects, policies and programmes, the most appropriate dietary assessment method first needs to be selected.

OBJECTIVES:

To obtain quantitative information on the amounts of energy and nutrients available for metabolism.

Methods:**Dietary Assessment Methods:**

The common methods to assess dietary intake at various levels are:

A) Quantitative survey (24 hours dietary and recall method by oral questionnaire).

- i. In this method of diet survey, a set of standardized cups, utilized by family are used.
- ii. Information on the total amount of each prepared is noted in terms of standardized cups.
- iii. The intake of each food item by specific individual in family such as preschool child adolescent girl, pregnant lady or lactating mother is assessed by using the cups.
- iv. We should remember while doing 24 hours recall, each and every ingredient used in cooking of recipe should be involve.
- v. In case of milk/curd/buttermilk and extend to which these are diluted should be found.
- vi. In case of bread, the number of slice per loaf should be assessed.
- vii. In case of Chapati, the number should be recorded.
- viii. The important step is to convert the individual cooked intake into raw amount of each food, the formula is :

Raw Intake :

$$\frac{\text{Total raw amount of each food (g)} \times \text{Individual cooked intake (Vol)}}{\text{Total cooked amount of preparation}}$$

B) Qualitative survey (food frequency questionnaire method)

- i. The method consist of asking individual how often specific food is eaten.
- ii. This can be assessing diet pattern of specific gravid.
- iii. Food frequency method is primary method for measuring dietary intake in epidemiological studies.
- iv. It consist of two components:- Food list and frequency response section for subject to report how often each food is taken.

C) Other methods of dietary intake assessment:-

- a) Household diet survey.
- b) Weighment method.
- c) Food record.
- d) Diet history
- e) Institutional diet survey.
- f) Food balance sheet.
- g) Chemical analysis.
- h) Dietary score.
- i) Estimated food records
- j) Weighed food records
- k) Duplicate meal method

a) Household diet survey:-

- i) It called information an diet consumed at household level.
- ii) The results are expressed as per capita or per consumption unit.

b) Weighment method:-

- i. In this method, the food either cooked or raw is actually, weighed using accurate balance.
- ii. It is conducted for seven consecutive days to know the true picture of diet consumption.
- iii. Every raw food is weighed in morning and evening before actual cooking done by housewife. Only edible portion is weighed.
- iv. Survey is not done in festive days.
- v. This method is time consuming and needs cooperation of housewives.

c) Expenditure method:-

- i. In this method, the money spend on food as well as non food items is assessed by administering specially designed questionnaire.
- ii. The reference period could be either a previous month or

week.

iii. This is simple method than weighing method.

d) Food diary:-

- i. It involves maintains of diary records of weighed of food consumed by individual or family according to number of days of survey.
- ii. In this method a large sample can be covered in short time.

e) Diet history:-

- i. This method is useful for obtaining qualitative details of diet and studying the pattern of food consumption at household level.
- ii. The process includes assessment of frequency of different categories of food daily or the number of times in a week or fortnight or occasionally.
- iii. This method is used to assess diet compstion pattern, dietary habits individual food preference and avoidance during pathophysiological conditions like pregnancy, lection, sickness etc.

f) Institutional diet survey:-

- i. This method is used in survey in hostel, army kitchen and orphanages home for aged etc.
- ii. The homogenous people take their meals from common kitchen.
- iii. In this method the amount of food stuff issued to kitchen as per records maintained is taken into consideration.

g) Food balance sheet method:-

Food balance is employed when information regarding availability of food is needed of macro level country region.

Per capita availability per day = Stocks at beginning – stocks at end of year + stocks at the end of year food + total food exports + seeds + cattle/poultry produced + import.

Mid year population x 364 days.

h) Chemical analysis:-

- i. In this method the individual is required to save sample of each type of food eaten by him during day.
- ii. This sample is taken and sent to laboratory for chemical analysis.
- iii. This is most accurate method but costly and needs laboratory support.

i) Dietary score:-

This method is used where investigator is trying to assess the dietary intake of specific nutrient for example.

Iron content of diet. Depending upon content of iron, a food item is given score.

Brief Dietary Assessment Instruments:

- Characterizing a population's median intakes;
- Discriminating among individuals or populations with regard to higher vs. lower intakes;
- Examining interrelationships between diet and other variables; and
- Comparing findings from a smaller study to a larger population study

CONCLUSION:

The benefits of developing healthy dietary and lifestyle patterns from an early age onwards can positively impact on people's nutrition and health throughout their adult lives, and enhance the productivity of individuals and nations.

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