

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

In the name of **ALLAH**
the most Beneficent and the most merciful

ALLAH IS THE MOST MERCIFUL
AND THE MOST BENEFICENT



NUTRITION AND HEALTH-8

ASSESSMENT OF NUTRITIONAL STATUS

ASSESSMENT OF NUTRITIONAL STATUS

GENERAL CONSIDERATIONS

- The nutritional status of an individual is often the result of many interrelated factors
- It is influenced by the adequacy of food intake both in terms of quantity and quality and physical health of the individual

ASSESSMENT OF NUTRITIONAL STATUS

- The nutritional status of a community is the sum of nutritional status of the individuals who form that community
- The main *objective* of a comprehensive nutritional survey is to obtain precise information on the prevalence and geographical distribution of nutritional problems of a given community

ASSESSMENT OF NUTRITIONAL STATUS

- By this we can identify the individuals or populations at risk
- Thus problems can be defined and policies formulated for their solution
- We can develop a health care program that meets the defined needs

ASSESSMENT OF NUTRITIONAL STATUS

- In nutritional survey, examination of a random and representative sample of the population, covering all ages and both sexes in different socioeconomic groups is sufficient to be able to draw valid conclusions

ASSESSMENT OF NUTRITIONAL STATUS

ASSESSMENT METHODS of nutritional status are as follows. These methods are complimentary and not mutually exclusive

1. Clinical examination
2. Anthropometry
3. Biochemical evaluation

ASSESSMENT OF NUTRITIONAL STATUS

(ASSESSMENT METHODS)

4. Functional assessment
5. Assessment of dietary intake
6. Vital and health statistics
7. Ecological studies

ASSESSMENT OF NUTRITIONAL STATUS

1. CLINICAL EXAMINATION

- Clinical examination is essential feature of all nutritional surveys
- Ultimate objective of clinical examination is to assess level of health of individuals or of population groups
- There are a number of signs associated with states of malnutrition

ASSESSMENT OF NUTRITIONAL STATUS

(CLINICAL EXAMINATION)

- Signs known to be of value are:
muscle wasting, oedema, Bitot's spots, xerosis, angular stomatitis, pigeon's chest, bow legs, swollen & bleeding gums, absence of knee and ankle jerks, goiter and anaemia

ASSESSMENT OF NUTRITIONAL STATUS

(CLINICAL EXAMINATION)

- When two or more signs of a deficiency disease are present simultaneously, their diagnostic significance is greatly enhanced

ASSESSMENT OF NUTRITIONAL STATUS

2. ANTHROPOMETRY

- Measurements, such as height, weight, skin fold thickness and arm circumference are valuable indicators of nutritional status

ASSESSMENT OF NUTRITIONAL STATUS

- In younger children, measurements of head and chest circumference are made
- If anthropometric measurements are recorded over a period of time, these reflect the patterns of growth and development

ASSESSMENT OF NUTRITIONAL STATUS

3. LABORATORY AND BIOCHEMICAL ASSESSMENT

- Haemoglobin estimation
- RBC count and morphology
- Haematocrit
- Stools test

ASSESSMENT OF NUTRITIONAL STATUS

(LABORATORY AND BIOCHEMICAL ASSESSMENT)

- Urine test
- Serum retinol
- Serum iron
- Urinary iodine

ASSESSMENT OF NUTRITIONAL STATUS

4. FUNCTIONAL INDICATORS

Functional indices of nutritional status are emerging as an important class of diagnostic tests. Some of these are mentioned here:

ASSESSMENT OF NUTRITIONAL STATUS

(FUNCTIONAL INDICATORS)

- Prothrombin time
- Nerve conduction
- Dark adaptation
- Heart rate etc.

ASSESSMENT OF NUTRITIONAL STATUS

5. ASSESSMENT OF DIETARY INTAKE

- Assessment of food consumption involves dietary surveys, household inquiry or individual food consumption survey

ASSESSMENT OF NUTRITIONAL STATUS

(ASSESSMENT OF DIETARY INTAKE)

- Survey may be carried out by;
 1. Weighment of raw foods
 2. Weighment of cooked foods
 3. Oral questionnaire method (foods eaten during previous 24-48 hours)

ASSESSMENT OF NUTRITIONAL STATUS

(ASSESSMENT OF DIETARY INTAKE)

- Survey may include data collection about dietary habits and practices
- Data has to be translated into mean intake of food in terms of cereals, pulses, vegetables, fruits, milk, meat, eggs and fish

ASSESSMENT OF NUTRITIONAL STATUS

(ASSESSMENT OF DIETARY INTAKE)

- A dietary survey provides information about 'dietary intake patterns', 'specific foods consumed' and 'estimated nutrient intakes'
- Such information is needed for health education activities and changes to be made in food industry and agriculture sector

ASSESSMENT OF NUTRITIONAL STATUS

6. VITAL STATISTICS

- Mortality and morbidity data will identify 'high risk groups' and indicate the extent of risk to the community
- Mortality in the age group 1-4 years is particularly related to malnutrition

ASSESSMENT OF NUTRITIONAL STATUS

(VITAL STATISTICS)

- The other rates commonly used for this purpose are Infant Mortality Rate, 2nd year mortality rate, rate of LBW babies and life expectancy. All these may be indices of nutritional status

ASSESSMENT OF NUTRITIONAL STATUS

(VITAL STATISTICS)

- Morbidity data, particularly in relation to PEM, anaemia, goiter, xerophthalmia and other vitamin deficiencies, diarrhoea, measles and worm infestations can be of value

ASSESSMENT OF NUTRITIONAL STATUS

7. ASSESSMENT OF ECOLOGICAL FACTORS

- Malnutrition is the end result of many interacting ecological factors
- A study of the ecological factors comprise the following:

ASSESSMENT OF NUTRITIONAL STATUS

(ASSESSMENT OF ECOLOGICAL FACTORS)

- a) Food Balance Sheet; This is indirect method of assessing food consumption, in which supplies are related to census population to derive per capita supply availability

ASSESSMENT OF NUTRITIONAL STATUS

(ASSESSMENT OF ECOLOGICAL FACTORS)

b) Socio-economic factors; e.g. socioeconomic groups, family size, occupation, income, education, customs, cultural patterns and feeding practices

ASSESSMENT OF NUTRITIONAL STATUS

(ASSESSMENT OF ECOLOGICAL FACTORS)

- c) Health and Educational services; e.g. Primary Health Care services, feeding & immunization programs

ASSESSMENT OF NUTRITIONAL STATUS

(ASSESSMENT OF ECOLOGICAL FACTORS)

d) Conditioning influences; These include parasitic, bacterial and viral infections, which precipitate malnutrition. 'Ecological diagnosis' is necessary to put into effect measures for the prevention and control of malnutrition

Thank you

