Protein Energy Malnutrition: The Heading Cause of Mortality in Country

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Abstract

Problem statement: "Assessment of Protein Energy Malnutrition Grade among toddlers residing in selected areas of Pune city."

Objectives:

- To assess Protein Energy Malnutrition Grade among toddlers
- To correlate of study findings with selected demographic variables

Keywords: Protein Energy Malnutrition; Toddler.

Introduction

According to WHO, 60% of all deaths, among children less than five years in developing countries, can be attributed to malnutrition,Malnutrition can often be very difficult to recognise, particularly in patients who have more weight than normal to start with. Malnutrition is slow progression it is difficult to recognize in early stage. Signs and symptoms of malnutrition are Loss of appetite

- Weight loss
- Fatigue
- Immobility
- Reduced physical performance
- Mood swing

- Poor concentration
- Poor growth in children

Background of Study

Mendez MA, Adair LS Severity and timing of stunting in first 2 years of life affect performance on cognitive tests in late childhood. Malnutrition can altered brain function to some degree after sometime.

Upadhyaya SK, Agarwal KN, Agarwal DK Influence of malnutrition on social maturity, visual motor coordination and memory in rural school children. Indian J Med Res A wide range of cognitive deficits has been observed in malnourished children in India. Malnutrition is the consequence of a combination of inadequate intake of protein, carbohydrates, micronutrients and frequent infections. In India malnutrition is rampant. WHO report states that for the years 1990–1997 52% of Indian children less than 5 years of age suffer from severe to moderate under nutrition. About 35% of preschool children in sub-Saharan Africa are reported to be stunted.

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Malnutrition is associated with both structural and functional pathology of the brain. Structurally malnutrition results in tissue damage, growth retardation, disorderly differentiation, reduction in synapses and synaptic neurotransmitters, delayed myelination and reduced overall development of dendritic arborisation of the developing brain. There are deviations in the temporal sequences of brain maturation, which in turn disturb the formation of neuronal circuits. Long term alterations in brain function have been reported which could be related to long lasting cognitive impairments associated with malnutrition

Research approach

Quantitative Research Approach

Research design

Quantitative Non experimental Descriptive Research design was used for the study.

Setting of the study

In selected areas in the district of Pune to ensure the availability of required samples.

Sample

The sample for the present study was comprised of 100 Toddlers residing in selected areas of Pune.

Sampling technique

Non-Probability convenient sampling technique was used in the study to collect subjects.

Development and description of tool

The tools for the study are

- *Section I:* Demographic data
- *Section II:* Modified Anthropometric measurement scale

Pilot study

The pilot study was conducted on 10 subjects.

Validity

Tool validity was done from 13 experts.

Ethical consideration

Prior to data collection

- Formal permission was obtained from authorities
- Informed consent was taken from samples before study

Period of Data Collection

The data collection period was from 08th Dec 2021 to 8th Jan 2022

Plan for Statistical Analysis

The data will be entered into the master sheet. Keeping the objectives of the main study in view, the descriptive and inferential statistics are done.

Table 1: By overall, analysis frequency and percentage distribution of the samples according to IAP Scale to assess the PEM among study samples.

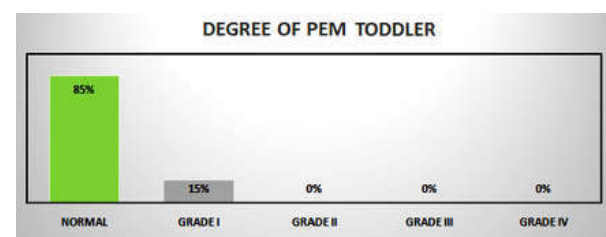| Grading	Score	Frequency {f}	Percentage %
Normal	>80	85	85
Grade-I	71-80	15	15
Grade-II	61-70	0	0
Grade-III	51-60	0	0
Grade-IV	<50	0	0
	Total	**100**	**100**

Fig. 1: Distribution of the subjects according to IAP PEM Degree

Figure no. 1 shows the distribution of subjects according to IAP PEM Degree. Majority of 85% of subjects belong to Normal, 15% of subjects belong to Grade I.

Conclusion

After the details analysis, and based on the findings of this study the following conclusion can be drawn: Out of 100 samples under the study 85% of samples belongs to Normal Grade and 15% samples belongs to Grade I and 0% samples for Grade II, Grade II, Grade IV of Protein energy malnutrition

References

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