Prevailing practices, attitudes & awareness regarding micronutrients among health professionals in Telangana

Aleem Mohammad¹, G Nagaiah², Akshay S³, Jitendra⁴
¹Post Graduate, ²Professor and HOD, ³,⁴Assistant Professor, Dept of Community Medicine, MNR Medical College, Telangana

Abstract

Introduction: Micronutrients play a very important role in both promoting health and curing disease by health professionals. They play a central part in metabolism and in the maintenance of tissue function. It is important that doctors and other health professionals are aware of the evidence for the nutritional essentiality of these substances, and for the situations where an increased intake may lead to clinical benefit. Objectives: 1. To assess the knowledge of health professionals micronutrients and practices in prescribing in treatment. 2. To determine the measures followed by the health professionals in including micronutrients in their own diet. Materials and Methods: A pre-designed and pre-tested anonymous self administered questionnaire was used in a cross sectional study. Results: 70% of doctors said that they had enough knowledge about prescribing and counseling to patients regarding micronutrients. On comparing the knowledge of specialists about micronutrients with the general practitioners we didn’t find any significant increase in knowledge with specialization. A large section of doctors 95% of agreed that nutrition plays an important role in treatment and prescription and counseling of micronutrients is needed. But 82% of doctors are not sure and 8% even strongly disagreed if their patients will follow a diet plan even if given. Most of the study participants felt they were not up-to-date about micronutrients. Majority of them attributed this to lack of time and being unaware of any structured resource. Conclusion There is a need to restructure about imparting micronutrients education among doctors. Greater efforts should be aimed towards imparting updates about micronutrients in doctors and other health professionals enable them to contribute positively towards a healthy society. More Studies should be carried out in healthcare professionals.

Key Words

Micronutrients; Diet; Doctors; Health Professionals

Introduction

Micronutrients play a very important role in both promoting health and curing disease by health professionals. They play a central part in metabolism and in the maintenance of tissue function. There is growing interest in the role of the micronutrients in optimising health, and in prevention or treatment of disease. Patients are availed micronutrients by broadly two ways other than the normal diet. One in which the Govt provides through national schemes and the other by doctors in treatment. It is important that doctors and other health professionals are aware of the evidence for the nutritional essentiality of these substances, and for the situations where an increased intake may lead to clinical benefit (1). Innovative strategies need to be developed and tested not only to improve knowledge and attitudes but practices as well. Behavioural modification modules are also needed (2).

Rationale: Although Doctors and nurses are considered epitome of treatment in our society there is still a lacuna in knowledge gained and prescribing practices and following the same in one’s own diet. Doctors should be torchbearers of healthy lifestyle. There are very few studies which have...
captured the practices of prescribing micronutrients and its education to patients.

**Aims & Objectives**

1. To assess the knowledge of health professionals micronutrients and practices in prescribing in treatment.
2. To determine the measures followed by the health professionals of micronutrients in their own diet.

**Material and Methods**

A pre-designed and pre-tested anonymous self-administered questionnaire was used in a cross-sectional study. A convenient time and date was fixed with prior permission from Principal of the Institution and respective faculty. Confidentiality aspects was explained to the doctors and consent obtained. Specialists and post graduates data was obtained from a medical college and General practitioners data was obtained from Practicing GPs in Telangana. Data was entered into MS-Excel sheet. Chi-square test was used to determine the significance in comparison and percentages and proportions was used for analysis of data.

**Results**

**Demographics:** The study participants consisted of which 102 doctors of which 58 were males and 44 were females.

Regarding educational qualifications Specialists comprised 36%, Post graduates were 41% and General practitioners were 23%. 68% of the doctors said that they had enough knowledge about nutrition.

A similar proportion of doctors 70% said that they had enough knowledge about prescribing and counseling to patients regarding micronutrients.

On comparing the knowledge of specialists about micronutrients with the general practitioners we didn’t find any significant increase in knowledge with specialization. Chi-Square= 1.69 Df=1 P=0.19

So the extra knowledge earned during specialization had no added dividends or we need to work on them equally regarding micronutrients. **Practices:** About 74% of study participants said that they counsel their patients about nutrition. More than 80% of the doctors were prescribing micronutrients generally with almost same number 82% prescribing in specific diseases in their treatment plans. Multivitamins were the most commonly prescribed micronutrients.

**Discussion**

Very few studies have been conducted to capture the perceptions and practices of doctors regarding micronutrients. The rapid urbanization and changing lifestyles on the general population has contributed towards increased prevalence of both communicable and non-communicable diseases. Unfortunately we have not kept abreast with these changes and most of our resources are directed towards the curing the disease neglecting the non-
Pharmacological part catered by nutrition which plays a big role. Positively 68% of doctors said they had enough knowledge about nutrition and a similar number conveyed about micronutrients. The finding that specialists and General practitioners had no major difference in knowledge of micronutrient is worrying. Though the sample size is small this aspect needs to be probed further. This can be due to lack of emphasis on micronutrients in academic curricula. This also gives us an opportunity to work on them about micronutrients on the same grounds. About 74% of study participants said that they counsel their patients about nutrition. This is consistent with a study by Elsa et al which showed 70% medical students find nutritional counseling more relevant. (3,4,5) Multivitamins were the most commonly prescribed micronutrients. Of the 18% who were not prescribing any supplements majority of them said they had not enough time to prescribe micronutrients similar to Hiddink et al (9). About 60% of doctors were involving a nutritionist in treatment (18). Mostly nutritionist was involved in DM, HTN by Physicians and in PEM, Postop care by Pediatricians and Surgeons respectively. A large section of doctors 95% of agreed that nutrition plays an important role in treatment and prescription and counseling of micronutrients is needed. But 82% of doctors are not sure and 8% even strongly disagreed if their patients will follow a diet plan even if given similar to Buttris JL (7,8). This is a startling finding which lays emphasis for a stronger nutrition counseling and a follow up if necessary. This could be also an explanation of the gap between supplements provided by our national programmes providing the desired results. 60% of doctors are aware of diet plan but only 31% of doctors followed a diet plan regularly similar to Wallace et al (6). This was attributed to lack of time which needs to be addressed and they should be emphasized about the same (20). Surprisingly 50% of doctors who had co morbidities like DM, HTN etc were themselves not following any dietary plan. This is a serious concern and needs to be dealt urgently. Most of the study participants are not updated about micronutrients similar to Van et al (10). Majority who said no attributed to a lack of time (11, 12) and unawareness of any structured resource. But all the doctors who participated in the study want to improve their knowledge and nutrition counseling skills (19). Most of the study participants wanted to improve nutrition part by having frequent updates through CMEs and good administrative support. A considerable section wanted motivation to be instilled too. An integrated approach horizontally and vertically should be initiated not limiting to the regular curricula but a more holistic approach is needed to improve nutrition (13, 14) more so micronutrients in our management (15). Emphasis about nutrition and micronutrients should be laid right from Undergraduate curricula and should be carried to the top with the same enthusiasm. It should be made a regular part of our management in all diseases. There is a need also to make general public aware of Micronutrients and its importance and availing the same

**Conclusion**

There is a need to restructure about imparting micronutrients knowledge among doctors. Greater efforts should be aimed towards imparting updates about micronutrients in doctors and other health professionals enable them to contribute positively towards a healthy society. More Studies should be carried out in healthcare professionals.

**Recommendation**

An integrated approach horizontally and vertically should be initiated not limiting to the regular curricula but a more holistic approach in Healthcare Professionals is needed to improve nutritional more so micronutrients in our management.

**Limitation of the study**

The sample size is not very big but considering the limitation of resources and time and encompassment of all major specialties it brings a broad view. Nutritional practices of subjects were assessed only by means of self-report, potentially rendering our results less reliable. Because the survey was anonymous and completely voluntary, one can assume that results were reliably captured.

**Relevance of the study**

The Current study captures an overview about Micronutrients in Healthcare professionals. Clinical practices and attitudes of patients towards micronutrients is studied.

**Authors Contribution**

AS & J: Data Collection; GN: Compilation of Data; AM: Drafting of manuscript
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Figures

FIGURE 1 IMPROVE NUTRITION PART OF TREATMENT
FIGURE 2 PATIENT WILL FOLLOW A DIET PLAN WITH MICRONUTRIENTS IF GIVEN

- Strongly Disagree
- Not Sure
- Needed
- Strongly Agree

Options: 0, 10, 20, 30, 40, 50, 60, 70, 80, 90