NUTRITION EDUCATION CURRICULUM FOR TRAINING PHYSICIANS IN MEDICAL COLLEGES OF PAKISTAN

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ABSTRACT

Objective: This study was designed to critically examine the place and extent of the nutrition education component in undergraduate medical curriculum.

Study Design: We have employed two-phase, sequential mixed methods approach in which we based our knowledge claims on problem centered pragmatic grounds.

Place and Duration of Study: Nutrition education for training physicians (NEP 2013 survey) was administered for six months from February 2013 till July 2013 through email to Dean/Principal, Head of department of Biochemistry in all medical colleges of Pakistan. Recipients had the option of filling out and returning the survey via email or fax.

Material and Methods: Single-stage sampling procedure was used for survey. Non-probability convenience sampling technique was used for interviews. Research questions addressed the course information, organization and implementation of the nutrition curriculum in medical institutions of Pakistan. We tried to enhance the reliability of the survey information where possible by gathering data directly from individuals involved in the development and/or implementation of the nutrition curriculum.

Results: On average, in fourteen of the 15 schools students received 10.6 contact hours of nutrition instruction during medical school (range: 2–30 hours). Only 1 school received the required minimum 25-30 hours as recommended by the American National Academy of Sciences. Ninety three percent expressed the need for additional nutrition instruction at their institutions.

Conclusion: With the involvement and oversight of faculty with training an interest in nutrition, integration of nutrition education can be successfully accomplished.

Keywords: Competencies, Curriculum, Nutrition education.

INTRODUCTION

Nutrition has a very important role in individual and society's health and disease; it has not yet received adequate attention in the curriculum for training physicians in medical colleges of Pakistan[1]. Pakistan is a country that is facing burden of nutrition related disorders. The results of national nutritional survey of Pakistan 2012-2013 indicated that 50% of women and children are malnourished and 49% of mothers are anemic. Stunting among children is found to be a major problem in Pakistan[2,3]. The incidence of chronic diseases such as type 2 diabetes mellitus and cardio-vascular heart diseases are reported to be on increase[2]. With this recognition comes the demand that physicians' nutritional knowledge should be enhanced as they have a great role in population health[3,4].

Studies on nutritional knowledge of physicians and medical students of Pakistan indicated serious gaps in their nutritional knowledge[4]. It must be stressed to the medical students that "patient education is now one of their principal tasks and, indeed, our most effective weapon in retarding the burden of chronic degenerative and neoplastic diseases. It appears that integration of nutrition education in medical curriculum of medical institution can be an effective method to increase medical graduate professional competence according to the needs of society[5-7]. To strengthen the nutritional knowledge of physicians there is a need to assess and improve the nutrition component in the curriculum[4].

This study was designed to critically examine the place and extent of the nutrition education component in undergraduate medical curriculum and to discuss the ways of including nutrition into training programs for

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physicians.

MATERIAL AND METHODS

In this study we have employed two-phase, sequential mixed methods approach in which we based our knowledge claims on problem centered pragmatic grounds[8,9]. Nutrition education for training physicians (NEP 2013 survey) was administered for six months from February 2013 till July 2013 through email to Dean/Principal, Head of department of Biochemistry in all medical colleges of Pakistan. Recipients had the option of filling out and returning the survey via email or fax. The survey was followed up via contacts by email, phone and fax in an attempt to obtain survey from each medical college. Survey was designed to capture and quantify the instruction that occurs in different types of courses across the five years of undergraduate medical curriculum of Pakistan (Pretested survey questionnaire from Nutrition Education in U.S. Medical Schools selected and attached in appendices). The results obtained through utilizing this questionnaire will be compared with minimum requirement set by international nutrition curriculum guidelines for training physicians[10,11]. In interview the participants were asked how the faculty feels about the current position of nutrition curriculum at their institution related to community needs. How they have compared the current situation of nutrition education for doctors with minimum requirement set by international nutrition curriculum guidelines for training physicians[10, 11]? How they can relate this mismatch? How they can implement desirable developments in curriculum for future? Single-stage sampling procedure was used for survey[8]. Non-probability convenience sampling technique was used for interviews[8,9]. Statistical data was analyzed using SPSS version 17.0.

Ethical approval for this study was taken by institutional review board (IRB) of Shifa College of medicine and College of physicians and surgeons-Health professional education department (CPSP-HPE). Informed consent was obtained from the head of institution and person who was actually involved in training physicians about nutrition in that institution.

RESULTS

A total of 15 surveys were returned for a response rate of 20%. Fourteen of the 15 medical colleges responded that some form of nutrition education was given to the students; however, only 1 school (7%) is running a separate nutrition course. On average, students received 10.6 contact hours of nutrition instruction during their curriculum (range: 2–30 hours). Only 1 college received the required minimum 25-30 hours as recommended by the American National Academy of Sciences. Most instructors (93%) expressed the need for additional nutrition instruction at their institutions. Few portions of the total nutrition instruction are occurring in Biochemistry and Community Medicine.

Suggested faculty guiding principles for the future

Few plans which were suggested by concerned faculty members regarding the ways to improve nutrition related training of physicians in Pakistan were as follows:

- To initiate awareness among faculty regarding the importance of subject.
- Review of the existing undergraduate curriculum on nutrition taking care of international guidelines.
- It should be taught according to the diseases that are commonly encountered by the physicians.
- Nutrition training should be more structured.
- Students should be given a teaching and assessment plan at the onset of program so that there is realization regarding importance of the subject.
- Time spent in training of physicians regarding nutrition is not effectively managed because content for training regarding nutrition is haphazardly distributed between different departments. So content should be organized.
- Students of MBBS can be attracted to topic of nutrition by offering

opportunities to do small research projects.

- Periodic CME, lectures and workshops should be carried out for students (MBBS), postgraduate fellows and general physicians on nutrition and its role in health and disease prevention.
- Biochemistry department should run a separate module of metabolism and nutrition.

DISCUSSION

Advances in science increasingly provide robust evidence documenting the centrality of good nutrition and healthy lifestyle practices in the prevention of chronic diseases to benefit all patients in health care system. The recent report of the American College of Cardiology/ American Heart Association Task Force on practice guidelines includes specific recommendations for diet and lifestyle changes that require fundamental knowledge and understanding of nutrition and physical activity for effective implementation[12]. There are initiatives ongoing around the world to improve and enhance nutrition knowledge and training of health care professionals[13]. Nutrition education in medical/professional schools needs to be delivered in the context of the most up-to-date approaches for curriculum design by using a longitudinal, integrated approach rather than focusing on single courses or a discrete discipline. These approaches move the focus away from rote memorization and towards more meaningful integration of new construct with existing knowledge. Based on the reality that there is a need to conduct research to critically examine the place and extent of nutrition education component in undergraduate medical curriculum and to provide recommendations for improving medical nutrition education "Nutrition education curriculum for training physicians in Pakistan survey (NEP 2013)" was developed, in which most faculty members (93%) expressed the need for additional nutrition instruction at their institutions. Fourteen of the 15 schools responding required some form of nutrition education, however only 1 school (7%) is running a separate nutrition course. Although this number of medical schools (15) is small yet adequate to see the trend of training physicians in Pakistan regarding nutrition. In Southeast Asia, the data on nutrition instruction is yet inadequate as not much work has been done. On average, students received 10.6 contact hours of nutrition instruction during medical school (range: 2–30 hours). Only 1 school received the required minimum 25-30 hours as recommended by the American National Academy of Sciences. Despite global efforts regarding nutrition training of health care professionals, a most recent survey of accredited medical schools of United States of America showed that most curricula of nutrition for training physicians fall short of the 1985 National Academy of science recommendation of at least 25 hours of nutrition education or the 37-44 hours recommended by the American society of clinical nutrition in 1989[14,15]. On average, medical schools included only 19.6 hours of nutrition instruction, and 30 schools provided < 13 hours of instruction[16].

Faculty strongly emphasized the need that we should have a comprehensive nutrition training program for physicians encompassing preclinical instruction; regular lectures and ward rounds, clinical nutrition electives, series of lectures for the health professionals in the community; and postgraduate continuing education courses. There are initiatives ongoing around the world to improve nutrition training of health care professionals. In Pakistan, the need for Nutrition Education Program (NEP) was developed to increase awareness among medical/health care professionals with regard to the importance of training of physicians in clinical and public health nutrition for the prevention of non-communicable diseases. In interviews we found that there was strong consensus among faculty members that current nutrition curriculum in our institutions for doctors is not meeting the minimum requirement set by international nutrition curriculum guidelines for training physicians.ie., minimum 25-30 hours as recommended by the American National Academy of Sciences. To stem the surging tide of chronic illness in the Pakistan, physicians

should become a part of the solution by working on the development of structured nutrition training curriculum, because many chronic diseases in the Pakistan are related to poor nutrition and unhealthy lifestyle choices. Faculty members strongly emphasized the need that we should have a comprehensive nutrition training program for physicians. Efforts are ongoing in few institutions to transform medical education from course-based didactic instruction to competency-based learning in health care teams. These efforts offer the opportunity to teach medical students about dietary problems in the clinical and outpatient settings in which such issues arise and can best be addressed. We are optimistic that desirable curriculum changes can be achieved by creating interest among faculty members for development of structured training programme.

CONCLUSION

Patients routinely seek physicians' guidance about diet, and the relation of nutrition to the prevention and treatment of disease. It is surprising that ninety three percent of colleges reported that the time dedicated for nutrition instruction for training physicians was inadequate. With the involvement and oversight of faculty with training an interest in nutrition, integration of nutrition education can be successfully accomplished. With support of accrediting organizations, such as Pakistan medical and dental council (PMDC), specific competencies must be developed and implemented into the curricula of training physicians.

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CONFLICT OF INTEREST

This study has no conflict of interest to declare by any author.

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