

# Nutritional Knowledge of Primary health Care Physicians in Al Madinah, KSA

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**Abstract:** This study was done to evaluate the nutritional Knowledge of Primary Care Physicians in Al Madinah, 2012. It was across sectional descriptive study using validated questionnaire was conducted between march-july 2012, among all physicians working in primary health care centers in Madinah city almost was 146 doctor. The questionnaire consisted of two main parts socio-demographic data and sixteen multiple-choice questions. Data were analyzed using SPSS statistical software version 18. Completed questionnaire were recollected from 116 of total 146 with a response rate of 79.5%. The majority physicians 87.1% reported they are deficient in nutritional knowledge (poor) & among the result of the possible reasons for deficiency in their knowledge 81.9% attributed that due to lack of continuous medical education taken in nutrition. The highest correct percentage 93.1% & 71.6% for the two questions which Nutrient strongly associated with the prevention of neural tube defects & which nutrient deficiency in alcoholics. Whereas the lowest percentage 30.2% for test question about the relation of protein Excess and body calcium loss.

## Conclusion:

This study results showed that physicians need more training on nutrition. As approximately two-third primary care physicians described their nutritional knowledge as 'poor'. Recommend nutritional knowledge to be integrated into the medical school curriculum and continuing medical education for physicians.

## 1. Introduction

Primary care physicians can play a role in decreasing morbidity and mortality with proper nutrition counseling. Nutrition knowledge is one of the factors that affect the nutritional habits of individuals, families and communities. Nutrition is the growth and development, being resistant to disease and living long and healthy life by keeping the mind and body function at the highest level. The role of nutrition in health promotion, disease

prevention and treatment of chronic disease is well recognized.<sup>1,2</sup>

Nutrition is an important aspect of medical care and is a contributing factor to 8 of the 10 leading causes of death in the United State.<sup>3</sup> Although factors such as genetic heritage, environment, life styles and culture are relevant for health, physical activities and nutrition are of great importance.<sup>4</sup> so they must be aware of reliable sources of continuing education and information appropriate for their practice and patients care.<sup>5,6</sup> as Nutritional knowledge plays an important role in public health. However physicians' knowledge on this issue is unsatisfactory, several survey studies revealed that physicians are hesitant to provide nutritional information to patients due to low level of confidence resulting from a lack of education and knowledge in this field.<sup>7</sup> Several studies have been conducted around the world to assess the nutritional knowledge care of physicians. In Saudi Arabia, two studies were conducted to assess nutrition knowledge among primary care physicians in Riyadh<sup>8</sup> and Jeddah<sup>9</sup> in 2004, 2006 respectively. The mean mark for correctly answered questions was 51.7% in Riyadh and 52.1% in Jeddah. The majority of physicians in both studies described their knowledge of the nutrition as "poor".<sup>8,9</sup> a study of physicians revealed that most of the physicians of England rated their nutrition knowledge as "poor" or "very poor".<sup>10</sup> In a Canadian study, Temple<sup>11</sup> observed that 42% of the physicians had weak knowledge of nutrition. Due to inadequate nutritional knowledge, Physicians who are considered to be the main reliable source of nutrition information and education for many patients do not pay attention to nutrition-related problems of the patients.<sup>12</sup>

To the best knowledge of researcher there are no dietitians in PHCs in Al Madinah city, so the physician may be the only and the most important one regarding nutrition education and counseling. Since there are no published data in knowledge of nutrition among physicians of Al Madinah, and there are only few published data about nutritional knowledge of physicians in Saudi Arabia, the purpose of the present study is to assess the knowledge of nutrition of physicians working at Al Madinah city.

## 2. Methodology:

A cross sectional descriptive study was conducted in al-Madina from april –may 2012,

It is a very famous city in the world for many reasons; it has 'The Mosque of The Prophet' among other numerous Mosques (Quiblatain, Qubaa etc.) and the battle grounds of Ohad and Khandaq. Madina currently has a population of more than 1,675,731 people.<sup>13</sup>

The study included all general practitioner and family physicians working in ministry of health primary health care centers in Medina city around 146 doctors and Dentists was excluded. The researcher used a validated questionnaire adopted from Temple study<sup>14</sup> it consisted of two main parts; socio-demographic data and 16 multiple-choice questions, each with 4 possible answers, The correct answers were scored from 100, and the mean mark for correctly answered questions has been calculated. The author added three questions which are how the physicians rate their nutrition knowledge, how many hours of continues medical education on nutrition they received and what is the reasons for deficiency in nutrition knowledge among primary care physicians. Collected data coded and entered into SPSS software statistical program version 18 and analyzed. The level of mean correct knowledge was obtained by dividing the number of correct responses by the total number of questions and reported as the mean percentage of correct knowledge. Categorical data has been analyzed using chi square test and t-test for numerical data. The result is considered to be statistically significant if the p value is less than 0.05. Ethical consideration was taken through written permission from ethical committee and obtained consent from every subject of the research. Confidentiality of data was confirmed as it was distributed and collected by the researcher.

## 3. Result:

Of the 146 Primary care physicians 116 replies were received with a response rate of 79.5%. Demographical characteristics of respondents (Table-1) showing that 52.6% of responder were female their mean age of 37years, standard deviation SD 8.358. Most of them 74.1% were general practitioners (GPs), followed by 14.7% Family physicians (Board certified), 5.2% (diploma holder). the mean Occupational experience is 10.9 years SD 8.395, 37.1% were <6 years of experience followed by 20.7% physicians had 6-10 years of clinical experience. The figure about continuous medical education CME they received 86 doctor 74.1% mentioned that they don't had previous CME in nutrition whereas 12.9% of them had more than 20 Hrs. of CME in nutrition. For Reason of deficiency in nutritional knowledge of the study Physicians

21.6% had a misconception about the nutrition counseling and presume that it is a dietitian job and not related to primary health care physicians, The majority 81.9% reported that the deficiency in nutrition is due to lack of CME in nutrition. About the part of the survey that investigated the practicing knowledge of physicians in nutrition. For this purpose the concern and perception of the physicians, with the amount of attention they put on and their level of knowledge regarding nutrition were determined. The mean mark for correctly answered questions was 49.6%. the results of the current study indicated that physicians are aware of topics related to nutrient help in preventing thrombosis, and the protective effect of Potassium in hypertension, the preventive action of fruits and vegetables against cancer, the nutrient associated with the prevention of neural tube defects, common nutrient deficiency in alcoholism but they showed poor knowledge and scored <50% regarding other important topics in nutrition like the role of soluble fiber in lowering blood cholesterol level, the good source of vitamin B12 and biochemical structures of different types fat such as nature of fat as olive oil, nature of fat in unprocessed vegetable oil.

Lastly rate of Nutritional knowledge of the study Physicians 57.7% rated as had a 'moderate' knowledge in nutrition and 12.1% physicians described 'excellent' knowledge in nutrition. Thirty percent study physicians described their nutritional knowledge as 'poor'. Figure 1

There were significant relation between physician knowledge and professional experience specialty, and attended CME hours ( $p < 0.001$ )

## 4. Discussion:

The response rate in the current study was 79.5% which ranks it as the highest among other studies in the same field; the response rates were 56.2% in Al-Numair's study.<sup>8</sup> 16% Flynn study<sup>15</sup> 36% Canadian study,<sup>14</sup> 27% Taiwanin study a<sup>2</sup> lastly study in California showed the response rate of 40%,<sup>16</sup>. The mean mark for correctly answered questions in the current study was 49.6% which was more than reported from Shiraz-Iran study 32.1%,<sup>17</sup> Taiwan study 42%<sup>2</sup> and Turkey study 48.1%<sup>18</sup>. but less than reported by Al-Zahrani 52.1%<sup>[6]</sup>, and Al-Numair study 51.7%<sup>8</sup>, 55.2% in Bangladesh<sup>19</sup>, also lower than that achieved in the survey of nutritional knowledge of physicians in Canada 63%<sup>11</sup> In the current study 35 primary care physicians 30.2% described their nutritional knowledge as 'poor', which is lower than that reported by other studies; In shiraz- Iran study 86.9%<sup>17</sup>, Bangladesh 55%<sup>19</sup>, Canadian 42%<sup>14</sup>, Khalid study 75%<sup>8</sup> Al-Zahrani 81%<sup>6</sup> of study primary care physicians reported their nutritional knowledge as 'poor'. About

the Reasons of the deficiency in nutrition knowledge among primary care physicians, Lack of nutrition knowledge and counseling skills could be due to inadequate nutrition teaching at medical schools. Inadequate undergraduate training in clinical nutrition is the main cause of deficiency in the nutritional knowledge reported by 71.6% of the current study physicians. Kathryn Wynn 20 reported in a Canadian study showed that 82.3% have the same reason. Other cause for 32.8% of the study physicians' complaint about the lack of sources of information regarding clinical nutrition. Also Too busy clinic and lack of time were the main barriers for the nutritional counseling in this study was reported by 52.6% of study physicians which is less than reported by Wechsler H21 where 75% of them cited lack of time as the number one barrier to providing nutrition counseling to their patients whereas 68% of Dutch physicians according to Yarnall KSH study<sup>22</sup> perceived barriers to providing nutrition counseling is lack of time.

## 5. Conclusions:

This study results showed that physicians need more training on nutrition. In the current study approximately two-third primary care physicians described their nutritional knowledge as 'poor'. A majority of them 71.6% describes their inability in nutrition counseling is due to lack of nutrition knowledge counseling skill and 52.6% of them reported the main barriers for nutritional counseling are too busy clinic and lack of time. The evidence from this study clearly indicates that physicians in Primary Care Centers need more training in nutrition.

## 6. Recommendations:

- Nutrition needs to be properly integrated into the medical school curriculum.
- Nutrition should be an essential part of continuing medical education as, first, most physicians have a deficient knowledge, and, second, because the subject is rapidly evolving.

## 7. References:

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Figure1 Nutritional knowledge rate of the study population

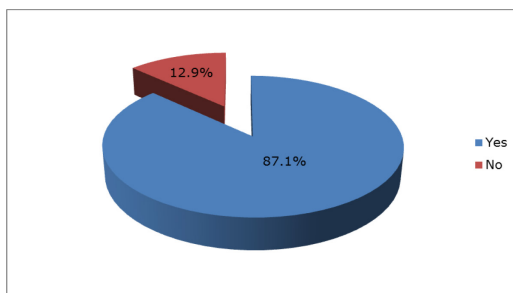
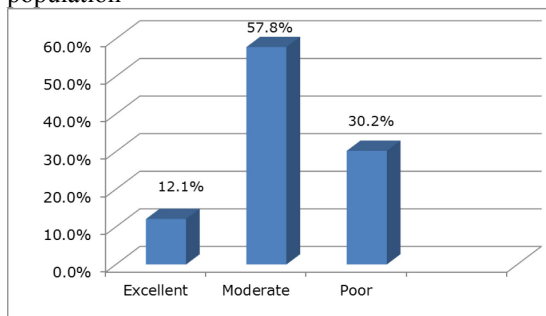


Figure -2 deficiency of the study population toward Nutrition knowledge