

Studying the knowledge, attitude and practice on healthy eating habits of the dispensers' in the training at NITM

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ABSTRACT

Nutritional status of an individual is generally depend on two factors such as external factors such as food safety, social economical and internal factors which include age, sex, nutrition, disease of the person etc. Objective of this study was to evaluate the knowledge, attitude and practice of the healthy eating habits among Dispensers'. This study was a community based descriptive cross sectional study. There were 61.5% (16) of the respondents were having good knowledge and 19.2% of them were having satisfactory knowledge and the poor knowledge representing as a similar percentage of it. Overall the respondents had a positive attitude of healthy eating habits with mean score and standard deviation of 6.46 ± 1.47 . There were 88.5% of the respondents were having the positive view of healthy eating habits. There was a significant differences among the nutritional status and the practice status of healthy eating habits among Dispensers' following $p = 0.056$. It shows that there was a relationship between practical status and the nutritional status of the Dispensers'

Key words : Healthy eating habits, Dispensers'

BACKGROUND

Nutritional status of an individual is generally depend on two factors such as external factors such as food safety, social economical and internal factors which include age, sex, nutrition, disease of the person etc. The importance of proper nutrition as one of the enhancing the nutrition attitude, knowledge and important aspects of lifestyle were emphasized in the practices of students have high importance, because recent years and the trend towards healthier diets has this subsequently will lead to more food –conscious increased (Margetts, B.M., R.L. Thempson at el). Researchers have identified that prevalence of diabetes has gradually increased over the last two decades. One in five adults in Sri Lanka has pre diabetes or diabetes, and one third of them were found to be undiagnosed (Katulanda et al, 2008). According to evidence of Epidemiology indicate that are changes in lifestyle in recent years increased incidence of major diseases such as cardiovascular disease, cancer, osteoporosis and obesity etc. Not only that but also they found out change in nutrition habits can be noted as an important on the nutritional education as one of the important practical aspect of nutritional knowledge (Hervey-Bernio at el, 1997). Non communicable disease including diabetes, cancer and heart disease are increasing in both developed and developing countries. It has estimated that nearly 38 million deaths from NCDs occur annually and low –and middle income countries are the most affected by these deaths (WHO, 2011). A study has showed that the dietary pattern is directly related to nutritional status and it may results in the occurrence of Non-communicable disease (Ferreira MPdn el at, 2017). It has proved by a study on diabetic prevalence rate in Sri Lanka in 2005 presenting the percentages respectively 13.9% and 14.1% for diabetes and pre-diabetes covering four provinces. (Wijewadene et al, 2005)

Unhealthy food could be defined as foods that contain high –salt content, high-sugar content, high Trans –fatty acids and saturated fat. High consumption of fruits and vegetable is strongly associated with better health outcomes. Researches point out that the eating unhealthy diets, physical inactivity, excessive alcohol intake and tobacco use among other lifestyles, are modifiable risk factors for non- communicable disease (Issaka A, Paradies Y et al, 2018). Understanding the dietary habits of an individual of any age group is essential to the evaluation of their nutritional status. Even though healthy eating is general a prime concern for women, more educated people, elderly people and those with good economic (Anttolainen M, Luoto R, 2001 et al.). It has

identified that eating behavior learned early in life are maintained in adulthood (Nana Lien., 2002 et al). In Sri Lanka people have them their own traditional food patterns which will keep the healthiness. Traditional meal patterns such as breakfast, lunch and dinner have given way to a more individualistic meal pattern. Parallel to this, more children are becoming overweight and obese (WHO, 2003). However socio – demographic and economic factors such as age, gender, education and occupational status remain central differentiating principals in eating habits and socio demographic discrepancies in food behavior and nutrition have far from varnished (Blaxter M. et al 1990). By understanding the relationship between nutrition and health knowledge, skills, attitudes and behaviors in the general community raises the attention of public health nutrition to focus on promoting good health and well-being through healthy eating lifestyles (Tan AKG, Dunn RA, et al, 2011).

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OBJECTIVES

To assess the knowledge, attitude and practice on healthy eating habits of the Ayurvedic Dispensers’

SPECIFIC OBJECTIVES

- To evaluate the knowledge healthy eating habits of Dispensers’
- To evaluate attitude on healthy eating habits of Dispensers’
- To evaluate the practice healthy eating habits of Dispensers’
- To update the knowledge and practical skill of Ayurvedic Dispensers’ on healthy eating habits

METHODOLOGY

- **Sample and Measures**

Descriptive study was conducted among the Ayurvedic Dispensers' at the National institute of Traditional Medicine to assess the knowledge, attitude and practice on healthy eating habits. The questionnaire on healthy eating habits is which consist of 10 on knowledge, 8 on attitude and 9 on practice of themselves. Most of the information was described using distributions. The consents of the participants were also obtained through the questionnaire. Data collection was carried out by the principal investigator during the period of their training conducted at the NITM. The questionnaires were collected after ensuring their completeness. Data were entered directly from the pre-coded questionnaire. The statistical analysis was performed using SPSS for Windows 16.0. Descriptive statistics such as frequencies, means, ratios, standard deviations and percentages were used to describe the variables. Scoring system was developed to assess the KP. Correct answer was given score 1 and incorrect answer, uncertain answer 0. The grading of KAP was done

Inclusion criteria

- Ayurvedic Dispensers'
- Age limit 25- 30

Exclusion criteria

- Not qualified to training program
- Absentees of the program due to various situations

- **Statistical Analysis**

Answers were marked as correctly or incorrect. Each correctly followed item was given one mark. The total score was turned in to percentage and was categorized as given follow. The total score was turned into a percentage and was categorized as given below

Score (%)	Category
0-40	Poor
41-60	Satisfactory
61-100	Good

Knowledge Score

Each question on knowledge was given score mark as following,

Correct answer = 01

Incorrect answer = 0

The total score was calculated by adding all individual scores. The mean and standard deviation was calculate and the knowledge score

Attitude Score

Answers were marked as negative or positive response. Each positive response marked as 01 & the negative response marked as 0. The total score was turned into percentage and was categorized as given below.

Score (%)	Category
0-50	Negative response
5-100	Positive response

Practical Score

Answers were marked as Good practice or Bad practice. Each good practice marked as 01 & the bad practice marked as 0. The total score was turned into percentage and was categorized as given below.

Score (%)	Category
0 - 50	Bad practice
50 - 100	Good practice

RESULTS

This study was done among Dispensers’ who are working at the Dispensaries. A cross sectional study carried out in order to describe Knowledge, Attitude and Practice on healthy eating habits. The total numbers of the participants were 26 who were attended to the training program and the response rate was 100%.

Table: 1 shows the distribution on selected socio- demographic characteristics among respondents.

Table: 1 Socio-Demographic characteristics of the Dispensers.

Socio –Demographic characteristics	Frequency	Percentage %
Gender		
Male	8	30.8
Female	18	69.2
Marital Status		
Married	20	76.9
Unmarried	6	23.1
Residence		
Urban	10	38.5
Semi urban	2	7.7
Rural	14	53.8
Religion		
Buddhist	25	96.2
Hindu	1	3.8
Educational level		
Ordinary Level	20	76.9
Advance Level	6	23.1

69.2% of the respondents were female, 76.9% of them were married and 96.2% of them were Buddhist. 76.9% of them were passed only Ordinary level exam. The mean age and the standard deviation of the respondents were 35.85 ± 7.96 .

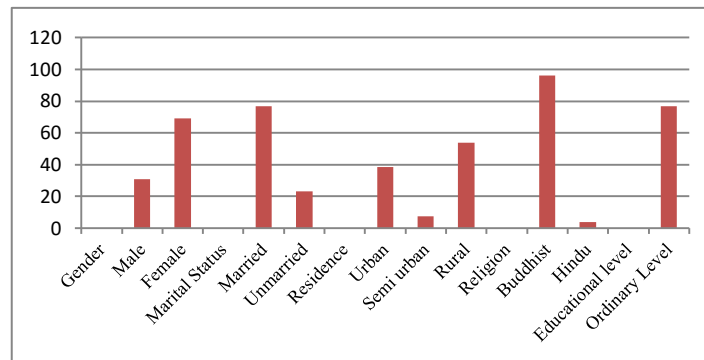


Figure 1

Knowledge of healthy eating habits

Knowledge assessed through a self-administered questionnaire. Table 2 shows the correct responses given to each question.

Table 2: Responses given to each question on knowledge

Knowledge area	Responses	
	Frequency	Percentage (%)
Knowledge 1- What is a Balance Diet		
Incorrect answer	3	11.5
Correct answer	23	88.5
Knowledge 2- Name a starch food		
Incorrect answer	1	3.8
Correct answer	25	96.2
Knowledge 3- Nutrition of green leaves		
Incorrect answer	3	11.5
Correct answer	23	88.5
Knowledge 4 - Nutrition of yellow vegetables		
Incorrect answer	6	23.1
Vit. A	19	73.1
Knowledge 5 - Micro nutrients of milk		
Incorrect answer	13	50.0
Correct answer	13	50.0
Knowledge 6 – Name fruits contain Vit.C		
Correct answer	26	100.0
Knowledge 7 – Name protein contain vegetables		
Incorrect answer	8	9.4
Correct answer	77	90.6
Knowledge 8- Name traditional rice type		
Incorrect answer	1	3.8
Correct answer	25	96.2
Knowledge 9- 3 components of Hathmalu		
Incorrect answer	4	15.4
Correct answer	22	84.6
Knowledge 10- What is the best diet in a day		
Incorrect answer	3	11.5
Correct answer	23	88.5

Knowledge assess questions regarding what is balance diet, starch food types, nutrition of green leaves, traditional rice types, Vit. C contains fruits and protein contains vegetables having correct answers more than 85%. 50% of the respondents only know the main nutritional component of the milk.

Table 2 summarizers scoring of marks allocated to answers given by the Dispensers’. The scoring range of the questionnaire was 10 (maximum) to 0 (minimum). The maximum possible score for nutrition was 10. The dispensers’ knowledge ranges were 3-10. The total score was turned in to percentage and was categorized as given follow. According to the knowledge was categorized as given in Table 3.

Table 3: Categorization of Knowledge on prevention of Dispensers’

	Frequency	Percentage (%)	Mean	Standard deviation
Poor knowledge	5	19.2	7.58	2.43
Satisfactory knowledge	5	19.2		
Good knowledge	16	61.5		
Total	26	100.0		



Figure 2: Distribution of the knowledge level

There were 61.5% (16) of the respondents were having good knowledge and 19.2% of them were having satisfactory knowledge and the poor knowledge representing as a similar percentage of it. Mean of the knowledge score and the standard deviation are 7.58 ± 2.43 .

Attitude on Healthy eating habits

Attitude of healthy eating habits of the Dispensers’ were assessed by using 8 questions regarding healthy diet of Dispensers’. Table 4 shows the correct responses given to each questions.

Table 3: Responses given to each question on Attitude

Attitude area	Responses	
	Frequency	Percentage (%)
Attitude 1- Idea about intake of Kola - kanda		
No time to prepare	5	19.2
Accept as a healthy diet	21	80.8
Attitude 2- Kola-kanda as a morning drink		
Once a month/ Rarely	2	7.7
Use at least once in two weeks	24	92.3
Attitude 3- Using herbal drinks		
Negative response	1	3.8
Positive response	24	92.3
Attitude 4- Ushna and Sheetha guna food		
Negative response	4	15.4
Positive response	22	84.6
Attitude 5- Selection of food regarding Pathyapathya		
Negative response	12	46.2
Positive response	14	53.8
Attitude 6- Health effect of fresh milk		
Negative response	6	23.1
Positive response	20	76.9
Attitude 7- Natural Food preservatives		
Negative response	5	19.2
Positive response	21	80.8
Attitude 8 – pay attention allergic food		
No	7	26.9
Yes	19	73.1

Dispensers’ were assessed, questions regarding the attitudes on healthy eating habits by 8 questions. Questions such as Kola-kanda for morning drink, Using herbal drinks, Consider *ushna* and *seetha guna* of food and health effect of fresh milk having more than 80% of dispensers’ having positive response. But only paying attention on Pathyaapathy when selecting food, dispensers’ are having positive response around 50% of it.

Table 4 summarizes scoring of marks to answer given by the Dispensers'. The scoring range of the questionnaire was 8 (maximum) to 0 (minimum). The maximum possible score for nutrition was 8. The total score was turned in to percentage and was categorized as given below.

Table 4: Categorization of Attitudes on healthy eating habits

	Frequency	Percentage(%)	Mean	Standard deviation
Negative response	3	11.5	6.46	1.47
Positive response	23	88.5		
Total	26	100.0		

According to the table 4, there were 88.5% of the respondents were having the positive view of healthy eating habits. Overall the respondents had a positive attitude of healthy eating habits with mean score and standard deviation of 6.46 ± 1.47 .

Practice on healthy eating habits

Practice on healthy eating habits of Dispensers’ were assessed by using 8 questions regarding healthy diet practice of the Dispensers’. Table 5 shows the correct responses given to each questions.

Table 4: Responses given to each question on Practice of healthy eating habits

Practical area	Responses	
	Frequency	Percentage (%)
Practice1- Usual place intake of breakfast		
home	6	23.1%
at work	20	76.9%
Practice 2- Diet pattern		
Meat/fish/egg diet	4	15.4%
Vegetarian diet	2	7.70%
Balance diet	20	76.9%
Practice 3- Intake of Kola kanda		
never	16	61.6%
daily	2	7.7%
once a week	8	30.8%
Practice 4- Skill of Traditional food preparation		
yes	25	96.2%
No	1	3.8%
Practice 5- Meal out from restaurant		
Daily	4	15.5%
Once in a week	8	30.76%
Once in a month	5	19.2%
Rarely	9	34.6%
Practice 6- Spices use in cooking		
Natural spices	25	96.2%
Artificial spices	1	3.8%
Practice 7- way of preparing coconut milk		
By hand	18	69.2%
By blender	8	30.8%
Practice 8 – Intake of green leaves		
Daily	12	46.15%
Once a week	10	38.46%
Once in two weeks	4	15.39%

According to the table 4 , results shows that 76.9% of them were taking their breakfast at their working place. This will shows that how much they busy in the morning with their duties and 90% of them were eating rice and curry as their breakfast. 76.9% of them were taking balance diet in their healthy dietary pattern. 96.2% of them have skill in traditional food preparation.

Table 5 summaries scoring of marks to answer given by the Dispensers'. The scoring range of the questionnaires was 8 (maximum) to 0 (minimum). The maximum possible score for nutrition was 22. The total score was turned in to percentage and was categorized as given below.

Table 5: Categorization of Practice on healthy eating habits

	Frequency	Percentage	Mean	Standard deviation
Good practice	22	84.6%	17.42	3.16
Bad practice	4	15.4%		

According to the table 4, there were 88.5% of the respondents were having the positive view of healthy eating habits. Overall the respondents had a positive attitude of healthy eating habits with mean score and standard deviation of 6.46 ± 1.47 .

Comparing the relationship between nutritional status and the knowledge status of the Dispensers'

Table 6: Relationship between nutritional status and the Knowledge status

	Under nutrition	Normal weight	Overweight
Poor knowledge	.0%	15.4% (4)	3.8% (1)
Satisfactory knowledge	.0% (0)	11.5% (3)	7.7% (2)
Good knowledge	3.8% (1)	30.8% (8)	26.9% (7)

There was not significant differences among the nutritional status and the knowledge status of these Dispensers' following the $X^2(4, N=26) = 0.775, p = 0.599$.

Comparing the relationship between nutritional status and the Attitude status of the Dispensers’

Table 7: Relationship between nutritional status and the Attitude status

	Under nutrition	Normal weight	overweight
Negative attitude	.0%	7.7% (2)	3.8% (1)
positive attitude	3.8% (1)	50.0%(13)	34.6% (9)

There was not significant differences among the nutritional status and the attitude status of these Dispensers’ following the $X^2(2, N=26) = 0.904, p = 0.966$.

Comparing the relationship between nutritional status and the Practical status of the Dispensers’

Table 7: Relationship between nutritional status and the Practical status

	Under nutrition	Normal weight	overweight
Bad practice	3.8% (1)	7.7% (2)	3.8% (1)
Good practice	.0%	50.0% (13)	34.6%(9)

There was a significant differences among the nutritional status and the practice status of healthy eating habits among Dispensers’ following the $X^2(2, N=26) = 0.180, p = 0.056$. It shows that there was a relationship between practical status and the nutritional status of the Dispenses’

Discussion

The majority Dispensers' were women, married, Buddhist with a mean age of 35.77 ± 7.8 years and could be considered as middle age. 76.9% of them were only passed the G.C.E. O/L. 53.8% of them was from rural areas. According to the study done by Deo (2004), has shown that 20% of the women refuse breakfast. But in my study all of them were taken breakfast at the house or at the work station. Among 76.9% were taking their breakfast at the work place. And also 88.5% of them were known that the most important diet is the breakfast. In the study of Pollitt E (1996) reported that his evidence has proved that the breakfast consumption and food habits have on cognitive function and school performance among school children. In this study 53.8% of them were from rural area. But considering overall results though they come from rural they have good knowledge, positive attitudes and good practice on healthy eating habits presenting the evidence opposite to the study done by Aperc, U, Cameroun (1996). Similar to the study of Gates (1998) Dispensers' who were having good knowledge, positive attitude and good practice were with normal weight presenting respectively 30.8%, 50% and 50%.

Conclusions

Most of the dispensers' who came from the rural areas, they have good practice in healthy eating habits. Dispensers' who are having the good knowledge and good practice, there was no relationship with their nutritional status presenting p value less than 0.05. But those who were having well practice there is a relationship with their nutritional status presenting p value is 0.056. Though they having good knowledge and positive attitude on healthy eating habits that was not effect to maintain their normal weight though they not followed the good practice on healthy eating habits specially being health care providers.

Suggestions

- 1) To advise them to maintain healthy eating habits in the prevention of diseases.
- 2) They should motivate to follow the good healthy eating in their diet habits.
- 3) Whatever the trainings conducting should conduct awareness on healthy eating habit especially for health care providers.

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