

Effects of Food and Nutritional Behavior on Health Status of the Elderly Buddhists

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ABSTRACT

The study entitled "Effects of Food and Nutritional Behavior on Health Status of the Elderly Buddhists" was conducted in Kathmandu Valley. The main objective of this study was to analyze the existing food and nutritional behavior and its effects on health of elderly Buddhists. The study was based on descriptive design with quantitative nature. Convenient sampling method was applied to collect the data and altogether 640 elderly Buddhists including of 320 male and 320 female were selected as a sample for study. Structured interview schedule was used for data collection. Nearly 41% elders were in age Group 60-64 years. The highest sex ratio was 141. The mean age of male elders was 68 years and 67.36 years for female. Nearly 90.9% of male elders and 83.7% female elderly Buddhists had good knowledge on nutritious and preventive food elements. 42.3% of male elders and 47.5 female elders were vegetarian in their late elderly ages. Elderly Buddhists preferred cereals, seasonal fruits and vegetables as 70.4%, 57.7% and 63.5% respectively in their first priority during late elderly ages. Nearly 89% male and 82% female elderly Buddhists were in the favor of healthy food behavior for healthy being. It is concluded that the elderly age is very critical in terms of health and wellbeing. In this study, the proportion of elderly male and female Buddhists in age group above sixty years seems satisfactory in comparison of the national elderly population proportion and sex ratio. In fact behavior of healthy food habit of elderly Buddhists was so good because of their good socio-economic status, cultural norms and values, respect for the elders and urban life style. The elderly Buddhists themselves, family members, community and the government policy should be careful on food and nutrition practices and programs for promotion of elderly health and wellbeing longer.

Keywords: Elderly Buddhists, food behavior, nutritional practices, health status and care.

Background of the Study

Ageing is the process of changing physique and physical appearances with the speed of time or being old mentally and physically (Oxford Advanced Learner's Dictionary, 2007). Ageing which begins at conception and ends at death is a process of growing

older regardless of chronological age (Subedi, 1999). Ageing is a global problem not confined to any specific society while the problem is globally there are no such things as the global solution (UN, 2018).

Demographic figure around the world shows that the population of older person is increasing or growing faster (UN, 2017). The percentage of elderly population of Nepal was 5.8 % in 1991 which has increased to 6.5% in 2001 and now it has increased up to 8.3% in 2011 (CBS, 2011). The total population of elderly people (aged 60 years and above) is 2154410 out of which 1044673 (48.49%) are male and 1109737 (51.51%) are female. Almost 80% are Hindu and 10% are Buddhist population in Nepal (CBS, 2014).

Food refers to the things that people or animal eat, such as convenience food, fast food, health food, junk food, sea food, soul food, whole food etc. (Oxford Advanced Learners Dictionary, 2003). Food provides energy, protects our body from different types of illness and diseases and provides the essential materials to build our body (FIAN, 2011). Food is defined as anything solid, liquid or semisolid swallowed, digested and assimilated, nourishes the body (Devadas, 2007, as cited by Dhakal, 2018). Nutrition is the science that studies the foods that people grow, what type of food is used in the daily diet, and how the body breaks down different foods and used them (James, 2004).

Food is the "fuel" which supplies chemical energy to the body to support daily activity and synthesis of necessary chemicals within the body (Derek, 2015). The world nutrient or food factor is used for specific dietary constituents such as proteins, vitamins and minerals. Dietetics is the practical application of the principle of nutrition (Paulus, 2006). Food and nutrition is a major part of human health. The general perception is that 'eating healthfully' meant giving up part of their cultural heritage and trying to conform to the dominant culture (James, 2004).

Food is an essential thing for every human being. It is material, usually of plant or animal origin which contains essential body nutrients such as carbohydrates, protein, fat, vitamins and minerals instead (Adhikari, 1989). It is assimilated by an organism to produce energy, stimulate growth and maintain life. Similarly, proper nutrition is powerful goods. People who are well fed are generally healthy (Antal, 1999). Good nutrition means "maintaining a nutritional status that enables us to grow well and enjoy and health" (Park, 2007). The subject of nutrition is very extensive. Since the concern is with community aspects of nutrition the subject will be dealt with in five sections: dietary constituents, nutritional requirements (Baric, 2000).

Human health and food practices are the close entities. Food practice and habit has a positive impact on the health and hygiene of an individual (Worsley, 1993). Health is the most vital factor for the fulfillment of human needs and quality of life (Ahmed, 1998). Poor economic status, lack of health education, negative influence of traditional feeding

practice, social values, norms and rituals, and customs are the main determinants of food habit and feeding practices (James, 2004).

Elderly people are similar and vulnerable to physical, social, emotional and socio-economic problems by their age, castes, religion and place of residence in Nepal (NEPAN, 2006). Very few studies have been conducted on food and nutritional behavior of elderly Buddhist population. It is necessary to study their health status to promote and maintain their status and to make future health status better. In the context of Nepal, there are many kinds of health problem facing by elders (Khanal, 1998). So this study intends to find out the solution of following research questions. What are the existing food and nutritional behavior of the elderly Buddhists? What extent the elders cared by self as health care management through food and nutritional practice?

Objective of the Study

The main objective of this study was to analyze the existing food and nutritional behavior and its effects on health of elderly Buddhists population in Kathmandu Valley.

Methods and Procedures

The study was based on descriptive design as well as quantitative in nature. The elderly Buddhist population in the Kathmandu Valley was the population of the study. In this study, the convenient method under non-probability sampling technique was used. The six study areas were selected for sampling. Altogether 640 elderly people including 320 male and 320 female from eight Buddhist communities were selected as sample. An interview schedule was used for data collection. I constructed an interview schedule with some open and close ended questions and then applied on sampled elderly Buddhist population. The respondents were pre-informed about the purpose of study and their consent was taken before interaction and question by maintaining ethical consideration. The collected data was analyzed by mathematical and statistical techniques.

Results

The study has conducted with a view to make this effective and meaningful analysis and interpretation of the obtained data. They were presented with the help of data table. Data were discussed here with the food and nutritional behavior related thoughts and behaviors. In this section, the age and sex composition, Knowledge on nutritious and preventive food elements, daily food behavior, and consumption of food commodities behavior of healthy food were analyzed and discussed.

Age and Sex Composition of Elderly Buddhists: Age and sex composition of population is an important part of demography (Singh, 2011). It helps the planners and

policy makers in formulation effective plans and policies for the population of different age groups (Chaudhary, 2004). Age is the number that people live in the world and sex is the biological structure of living being (CBS, 2011). In this study, both age and sex were included for the analysis of existing health condition of the elderly Buddhist population.

Table 1: Age and Sex Composition of the Elderly Buddhists

Sex Age group	Buddhist Elders						Sex Ratio (M/F x K)
	Male		Female		Total		
	No.	%	No.	%	No.	%	
60-64	124	38.75	133	41.56	257	40.16	093.23
65-69	086	26.88	079	24.69	165	25.78	108.86
70-74	063	19.69	068	21.25	131	20.47	092.65
75-79	024	07.50	017	05.31	041	06.41	141.17
80-84	015	04.68	013	04.06	028	04.37	115.38
85 & above	008	02.50	010	03.13	018	02.81	080.00
Total	320	100.0	320	100.0	640	100.0	100.00
Mean age: For male- 68.0 years. For female- 67.36 years							
Overall sex ratio: 100							

Above table reveals the age and sex composition of the elderly Buddhists. Out of total nearly the highest 40.1% elders were in age group 60-64 years and the lowest 2.8% in age group 85 and above. Likewise, the mean age group for male elders was 68 years and 67.36 years was for female elders. Similarly, the highest sex ratio was found in 75-79 age groups and that was 141.17 it means more male Buddhist elders rather than female elders in this group. Likewise, the lowest sex ratio was found in 85 years and above age group and that was 80; it means more female Buddhist elders rather than male elders in this age group.

Knowledge on Nutritious and Protective Food Nutrients by Sex: Nutrition is the foundation of health. Optimum nutrition is essential for the maintenance of good health (Antal, 1999). Elderly people should be provided various types of fruits, vegetables and food having a lot of fluid than fried and spicy foods and food with a lot of fat (FIAN, 2011). Nutritious food is essential for the body structure and function of the body. Without nutritious food, the organs of the body cannot work regularly (Maharjan, 2005). The carbohydrates, proteins, fat, minerals and vitamins are the major nutrient elements for human body needs. Likewise fruits, vegetables, milk products, meat and poultry items, food grain and cereals are the major protective food commodities for living being (Sterling, 1978).

Table 2: Distribution of Knowledge on Nutritious and Protective Food Nutrients by Sex

Sex Knowledge	Male		Female		Total	
	No.	Percent	No.	Percent	No.	Percent
Yes	291	90.9	268	83.7	559	87.3
No	029	09.1	052	16.3	081	12.7
Total	320	100.0	320	100.0	640	100.0
Knowledge on nutrient elements of food (M=291, F=268 and T=559)						
Carbohydrates	186	63.9	175	65.3	361	64.6
Proteins	192	66.0	187	69.8	379	67.8
Fats	167	57.4	181	67.5	348	62.2
Minerals	122	41.9	131	48.9	253	45.3
Vitamins	153	52.6	146	54.5	299	53.5
Knowledge on protective foods (M = 291, F = 268 and T = 559)						
Fruits	189	64.9	165	61.6	354	63.3
Vegetables	211	72.5	237	88.4	438	78.4
Milk items	136	46.7	148	55.2	284	50.8
Meat items	129	44.3	114	42.5	243	43.5
Food grains	179	61.5	169	63.1	348	62.2

(Note: * The percentage may exceed 100 due to multiple responses.)

Above table reveals that 90.9% male elderly Buddhists had good knowledge on nutritious and preventive food nutrients. Similarly, 83.7% female elderly Buddhists had good knowledge in the same issues. Only 12.7% with both sexes had no knowledge on nutritious and preventive food elements. Among the total known percent Buddhist elders, male elders had good knowledge on carbohydrate, protein with 63.95 and 66.0% respectively and female had good knowledge on carbohydrate, protein and fat with 65.3%, 69.8% and 67.5% respectively. Similarly, the male elders reported that fruits, vegetables and food grains as a protective foods with 64.95, 72.5% and 61.5% respectively and female elders had reported the same fruits, vegetables and food grains with 61.6%, 88.4% and 63.1% respectively.

Daily Food Behavior of Elderly Buddhists by Age: The daily food behavior is directly related with the food practice taken by the people in their food habits (Boneu, 1994). Generally the people have vegetarian and non-vegetarian nature based food behavior. Some practiced both food behaviors according to the situation and some are in the favor of vegetarian food at day time and non-vegetarian food at the night (Medeley, 2002). People follow the several food behaviors according to the age, sex, castes, educational status,

economic status, health conditions and environmental situation (Saltman, 2004). The following data table presents the existing food behavior of elderly Buddhist population.

Table 3: Distribution of Daily Food Behavior of Elderly Buddhists by Age

Habits	Pure vegetarian				Non-vegetarian				Total				Total
	Male		Female		Male		Female		Male		Female		
Age	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	
60-64	027	20.0	034	22.4	097	52.4	099	58.9	124	38.7	133	41.6	257
65-69	031	22.9	042	27.6	055	29.7	037	22.0	086	26.9	079	24.7	165
70-74	042	31.1	046	30.3	021	11.4	022	13.1	063	19.7	068	21.2	131
75-79	018	13.3	014	09.2	006	03.2	003	01.8	024	07.5	017	05.3	041
80-84	012	08.8	009	05.9	003	01.6	004	02.4	015	04.7	013	04.1	028
85+	005	03.7	007	04.6	003	01.6	003	01.8	008	02.5	010	03.1	018
Total	135	100	152	100	185	100	168	100	320	100	320	100	640

According to the data mentioned in the above table only 42.2% male elderly Buddhists were vegetarian and 57.8% with non-vegetarian food behavior. Similarly, only 47.5% female elders were vegetarian and 52.5% were with non-vegetarian food behavior. The highest 31.1% male elders were vegetarian in 70-74 age group followed by 65-69 age group and the highest 30.3% female elders were vegetarian in the same age group 70-74 and followed by 65-69 age group. Similarly, the highest 52.4% male elders were non-vegetarian in 60-64 age group followed by 65-69 age group and the highest 58.9% female elders were non-vegetarian in the same 60-64 age group and followed by 65-69 age group.

Consumption of Food Commodities by the Elderly Buddhists: The consumption of food commodities refer to taking different type of food items, raw food materials and food ingredients in daily basis (WCRD, 1996). Generally every people take different types of food such as food grain, green leafy vegetables, fish, meat, milk, ghee, fruits, street foods, tea/coffee etc. according to need and desire of body and health situation (Worsley, 1993). Food commodities are essential for human body growth and development, survival and to keep the body healthy and active. We take some food commodities in daily basis, some food commodities occasionally and some food commodities we left or never get according to age, health and need of body (Park, 2005).

Table 4: Distribution of Consumption of Food Commodities by Elderly Buddhists

Consumption Commodities	Every day				Occasionally				Never			
	Male		Female		Male		Female		Male		Female	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Cereals	238	74.4	208	65.0	076	23.7	101	31.6	006	01.9	011	03.4
Milk products	143	44.7	171	22.2	162	50.6	135	42.2	015	04.7	014	04.4
Seasonal fruits	169	52.8	211	65.9	138	43.1	097	30.3	013	04.1	012	03.8
Seasonal veg.	206	64.4	202	63.1	103	32.2	111	34.7	011	03.4	007	02.2
Meat items	037	11.6	058	18.1	148	46.3	131	40.9	135	42.2	152	47.5
Spicy/oily food	027	08.4	052	16.2	172	53.8	163	50.9	121	37.8	105	32.8
Street foods	004	01.2	009	02.8	124	38.8	158	49.4	192	60.0	153	47.8
Tea and coffee	168	52.5	192	60.0	133	41.6	112	35.0	019	05.9	016	05.0

(Note: * The percentage may exceed 100 due to multiple responses.)

It is stated in the table that the majority of the male elderly Buddhists consumed cereals (74.4%), seasonal vegetables (64.4%), seasonal fruits (52.8%), tea/coffee (52.5%) and milk products (44.7%) as main food commodities in the daily basis and the majority of female elderly Buddhists consumed seasonal fruits (65.9%), cereals (65.0%), seasonal vegetables (63.1%) and tea/coffee (60.0%) as main food commodities in the daily basis. Similarly, the majority of male elderly Buddhists consumed spicy/oily food (53.8%), milk products (50.65) and meat items (46.3%) as a main food commodities in sometimes or occasionally and the majority of female elderly Buddhists consumed spicy/oily food (50.9%), street foods (49.4%), milk products (42.2%) and meat items (40.9%) as a main food commodities in sometimes or occasionally. Likewise, the majority 60% of male elderly Buddhists never consumed street foods, 42.2% never consumed meat items and the majority 47.8% female elderly Buddhists never consumed street foods and 47.5 % never consumed the meat items as food commodities.

Behavior of Healthy Foods and Reasons among Elderly Buddhists Population:

Prevention is better than cure' the statement deals on healthy food behavior (Boneu, 1994). Healthy food behaviors are supportive behavior to promote the health and prevent some of health problems and diseases. So, it is better to use healthy food behavior (Derek, 2015).

Table 5: Behavior of Healthy Foods and Reasons among Elderly Buddhists

Sex	Male		Female		Total	
	No.	Percent	No.	Percent	No.	Percent
Healthy food						
Yes	286	89.4	262	81.9	548	85.6
No	023	07.2	044	13.7	067	10.5
Don't know	011	03.4	014	04.4	025	03.9
Total	320	100.0	320	100.0	640	100
Reasons for taking healthy foods among elders (M = 286, F = 262 and T = 548)						
Being healthy	259	90.6	243	92.7	502	91.6
Being fit and fine	214	74.8	221	84.3	435	79.4
Getting energy	267	93.4	239	91.2	506	92.3
Being younger	226	79.0	205	78.2	431	78.6
For longevity	247	86.4	229	87.4	476	86.9

(Note: * The percentage may exceed 100 due to multiple responses.)

Above table shows that 89.4% male elderly Buddhists respond 'Yes' and 81.9% female elderly Buddhists respond 'Yes' in the behavior of healthy food practices regularly. Similarly, 10.6% male elderly Buddhists respond 'No' and 18.1% female elderly Buddhists respond 'No' in healthy food behavior. The elderly Buddhists were asked about the reason of using healthy food behavior and they respond nearly 91.6% for healthy being followed by 79.4% for being fit and fine, 92.3% for getting energy, 78.6% for being younger and 86.9% for longevity.

Discussion

From the above results, the national sex ratio of elderly population was 94.13 (CBS, 2011), which was slightly different than this data. Elderly age is very critical in terms of health and wellbeing. The number of elderly population indicates the proportion of life expectancy in the community and the country as well. So, present data indicates that the percentage of elderly Buddhists in different age group above 60 years were satisfactory due to their good health condition and life expectancy in comparison of national data analyzed by CBS, 2011 in Nepal.

From the study it is found that male elderly Buddhists had more knowledge on nutrient elements and protective food items rather than female elderly Buddhists. It is obvious due to their education, social involvement and outside work in early ages. The male engaged extensively in outside of household activities, business, service, friend circles, meetings, seminars and different intellectual programs. So they receive more vital information about food and nutrition than female population (WCRD, 1996). Most of the elders both male and female had good knowledge on various nutrient elements and

protective food items for health and healthy being (Antal, 1999). It indicates that they are passing good health practices and healthy behavior. Balance diet is the mixture or the combination of different types of food in which all the nutrients substances can be found in proper amount for the proper functioning of the body (Derek, 2015). Balance diet is necessary for everyone. Need of the amount, quantity and quality of food differs person to person. It depends upon this age and occupation. The level of knowledge indicates about the consciousness of health and healthy life style (FIAN, 2011).

It is found that more elderly female Buddhists were vegetarian rather than elderly male Buddhists. Likewise, more elderly male Buddhists were non-vegetarian rather than elderly female Buddhists. According to the data, elderly Buddhists were practicing non-veg foods in their early elderly age and gradually they left the non-veg food behavior in late elderly age due to the health problems, digestion problems, chronic diseases etc. The most of the studies reveal that late elderly ages are not favorable non-veg food items habits. The behavior of vegetarian life style in elderly age is more significant for health and healthy life. Obviously they are passing healthy life style (Norman, 2007).

The result reveals that the both male and female elderly Buddhists consumed more food commodities in their everyday food habits except some food commodities such as street foods, spicy/oily foods and meat items. Similarly, they consumed some food commodities occasionally as per their need and availability. They never consumed some food commodities due to their health, digestion and diseases problems. The elderly include quality food commodities in their daily food behavior. They consumed some quality food commodities occasionally due to the ignorance of their importance and some economic problems and low income source (Saltman, 2004). Some elderly Buddhists are more ignorant on quality food commodities but their practices on quality food commodities are essential for the improvement of health and wellbeing.

It is found that most of the elderly Buddhists had healthy food behavior except few percentage and some were ignorant about the healthy food behavior. The male elderly Buddhists had good behavior rather female elderly Buddhists due to the respect of male members in the family. In fact behavior of healthy food habit of elderly was so good because of their good socio-economic status, cultural norms and values, respect to the elders and urban life style (Subedi, 1999). The reasons of having healthy food behavior respond by the elderly Buddhists were satisfactory. The responses clearly revealed that the more conscious about the healthy life and their behavior of healthy foods make them health and wellbeing (Sterling, 1978).

Conclusion

As conclusion, the elderly age is very critical in terms of health and wellbeing. In this study, the proportion of elderly male and female Buddhists in age group above sixty

years seems satisfactory in comparison of national elderly population proportion and sex ratio. Male elderly Buddhists had more knowledge than female elderly Buddhists in nutritious and protective food nutrients related issues. Elderly male Buddhists were more non-vegetarian rather than female elders in early elderly ages and elderly female Buddhists were more vegetarian rather than male elders in late elderly ages. Both male and female elderly Buddhists consumed more food commodities in their everyday food habits except some food commodities such as street foods, spicy/oily foods and meat items. Similarly, they consumed some food commodities occasionally as per their need and availability. They never consumed some food commodities due to their health, digestion and diseases problems. They consumed seasonal fruits, vegetables and cereals in their first priorities. Most of the elderly Buddhists had healthy food behavior except few percentage and some were ignorant about the healthy food behavior. The male elderly Buddhists had good behavior rather female elderly Buddhists due to the respect of male members in the family and community. In fact behavior of healthy food habit of elderly Buddhists was so good because of their good socio-economic status, cultural norms and values, respect to the elders and urban life style. The elderly Buddhists themselves, family members, community and the government policy should be careful on food and nutrition practices and programs for promotion of elderly health and wellbeing longer.

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