Knowledge, Attitude and Practices of Elderly People regarding Prevention of Malnutritional Diseases

[1]Amira Mahmoud Mohamed Abd El- Raouf, [2] Howyida Sadek Abd El-Hameed and [3] Amina Abd El- Razek Mahmoud [3]

(1) B.Sc. Nursing (2018), (2) Professor of Community Health Nursing, Faculty of Nursing-Benha University, and (3) Assistant Professor of Community Health Nursing, Faculty of Nursing-Benha University.

Abstract

Background: Elderly people are vulnerable to malnutrition due to age-related physiological decline, so the knowledge, attitude and practices of them are necessary for the prevention of malnutrition diseases. **Aim of the study:** To assess knowledge, attitude and practices of elderly people regarding prevention of malnutrition diseases. **Research design**: A descriptive research design was used. **Setting**: This study was conducted at Medical Out-patients Clinic in Benha University Hospital. **Study subjects**: Simple random sample of elderly people including 264 elderly people. **Tools of data collection**: Two tools were used: **Tool (I):** A structured interviewing questionnaire sheet which include 3 parts. **First part:** which included two section; (**A**): Socio demographic characteristics of elderly people, (**B**): Current medical health history, **Second part:** Knowledge of elderly people about healthy nutrition and malnutrition diseases & **Third part:** Reported practices of elderly people regarding prevention of malnutrition diseases. **Tool (II):** Likert scale to measure elderly attitude regarding prevention of malnutrition diseases. **Results**: 38.3% of the elderly people aged from $65 > 70$ years old with Mean ±SD (70.51±4.12), 58.7% had poor total knowledge level, 58.3% had satisfactory total practices level and 56.8% had positive total attitude level toward prevention of malnutrition diseases. **Conclusion:** There was a highly statistically significant correlation between total attitude level of the studied elderly people, their knowledge and their total practices level regarding malnutrition diseases ($p<0.001$). **Recommendations**: Conducting health education programs to improve knowledge, attitude and practices about malnutrition diseases and its preventive measures.

Keywords: Attitude, Elderly people, Knowledge, Malnutrition, Nutrition, Practices, Prevention.

Introduction

Old age is defined as people aged 65 years or above. In fact, ageing is an irreversible biological phenomenon. Particularly, older adults are highly vulnerable to malnutrition. Globally, about 13–78% of the older adults are suffering from malnutrition. If it is not prevented or treated in time, it could increase morbidity and mortality rates, thus becoming a problem of great personal, family and socio-health significance (**Abate et al., 2020).**

Malnutrition is a state of energy, protein, or nutrient excess or deficiency, resulting in adverse effects on body composition and function, and clinical outcomes. Malnutrition is one of the most commonly unrecognized and under-treated health conditions worldwide. Malnutrition is an increasing

problem in older adults, particularly those over 65 years of age. Elderly people with malnutrition often suffer from muscle weakness, altered immune function, decreased functionality, and increased risk of infection, which can lead to increased mortality risk (**Mathewson et al., 2021**).

Globally, the prevalence of malnutrition among older adults ranges from 23 to 46%. According to the Health and Nutrition Survey data, 16% of community-dwelling Americans over the age of 65 consume fewer than 1000 cal per day, putting them at a high risk of malnutrition. In sub-Saharan Africa, the prevalence of malnutrition among older adults ranges from 6 to 48%. In Ethiopia, malnutrition is a common health problem, affecting 21.9% of the population (**Ferede et al., 2022**).

Community health nurses have a central role in providing appropriate nutritional care in their everyday work to the growing number of older adults in their care who are malnourished or at risk for malnutrition. Surely, nutritional-related activities are an essential aspect of nursing care. Nurses are the first point of contact for older adults, they spend most time interacting with older adults, and they ensure continuity and coordination of nutritional care. In this way, nurses can make a major contribution to multidisciplinary nutritional care in older adults as recommended by guidelines (**Ten Cate et al., 2021**).

Significance of the study:

According to Central Agency health for Public Mobilization and Statistics (CAPMS), the number of elderly people in Egypt is estimated as 6 million elderly people and is expected to rise to 12% in 2030. The prevalence of and risk for malnutrition in older adults across settings varies considerably to affect up to 30% in older adults in the community, 56-63% of older community dwelling adults who receive home care, 48-76% of older adults in hospitals and up to 78% of older adults in nursing homes and institutional long-term care (**Mo'awad, 2019**).

Nutrition knowledge, Attitudes, and good Practices (KAPs) are essential for preventing malnutrition and ensuring good health. Good nutrition knowledge is positively correlated with good nutritional status. A desire for healthy and balanced consumption may not entirely translate into behavior modification. The continuous consumption of unhealthy foods leads to serious health problems. Achieving desired behavior changes in health and nutrition depends on acquiring sufficient knowledge, attitudes, good practices, and self-efficacy (**Hammouh et al., 2023**). So, the present study aimed to assess the knowledge, attitude and practices of elderly people regarding prevention of malnutritional diseases.

Aim of the study:

This study aimed to assess knowledge, attitude and practices of elderly people regarding prevention of malnutrition diseases.

Research Questions:

1. What are the studied elderly people' knowledge regarding prevention of malnutrition diseases?

2. What are the studied elderly people' reported practices regarding prevention of malnutrition diseases?

3. What are the studied elderly people' attitudes toward prevention of malnutrition diseases?

4. Is there a correlation between the studied elderly people' knowledge, attitudes and reported practices regarding prevention of malnutrition diseases?

Subjects and Method:

Research design:

A descriptive research design was utilized to conduct the study.

Setting:

This study was conducted at Medical Outpatient Clinic in Benha University Hospital. This clinic was located at the ground floor of the outpatient which includes a single room in basement with a doctor office and a bed for examining the patient. As well as, waiting area where the researcher interviewed the elderly. This clinic provides free services for the largest number of patients who seeking medical services and nursing care and also it has a high frequency of patients.

Study Subjects:

Simple random sample of elderly people (aged 60 years and above). The total number of elderly people attended the previously mentioned setting during the year 2022 was 777, which can be choosen according the following criteria:

1- Elderly people's age is 60 years or above,

2- Male and female.

3- Accepted to be involved in the study.

4- Independent.

5- Having chronic disease or not.

The sample size was calculated using the following formula

$$n = \frac{N}{1 + N(e)^2}$$

Where 'n' is sample size

'N' is total Number of all elderly people attended previously mentioned setting

'e' is coefficient factor =0.05

Sample size = 264 elderly people

Tools of data collection:

Two tools were used to collect the necessary data:

Tool I: A structured interviewing questionnaire: It was developed by the researcher and revised by the supervisor staff based on reviewing related literature and it was written in simple clear Arabic language: It composed of three parts:

The first part: divided into two sections:

A. Concerned with the socio- demographic characteristics of the studied elderly people involved 8 closed ended questions in the study such as (age, sex, marital status, education level, residence level, living, occupation and income.

B. Concerned with current medical history of the studied elderly people involved 8 closed ended questions in the study such as (digestive problems, cardiovascular problems, oral problems, endocrine problems, skeletal problems, respiratory problems, psychological problems and nervous system problems.

The second part: **It consisted of two sections:**

Section A: It was designed to assess the studied elderly people's knowledge about healthy nutrition which included 5 questions divided into 30 items about meaning of proper nutrition, the importance of food, components of healthy food, the number of daily meals required for the elderly and basics of healthy nutrition.

Section B: It was designed to assess the studied elderly people's knowledge about malnutrition diseases which included 8 questions divided into 58 items about meaning, signs and symptoms, risk factors,

causes, complications, diagnosis, treatment and preventive methods.

Scoring system:

The scoring system for the studied elderly people's knowledge was calculated as follows (2) scores for correct and complete knowledge, while (1) score for correct and incomplete knowledge, and (0) for don't know for each question of knowledge. The total scores of items were summed up and the total was divided by the number of the items, these scores were converted into percent score. The total score of knowledge = 26 points. Total knowledge score was categorized as follows:

- Good ≥75% (≥19 scores),
- Average 50-75% (13-19 scores)
- Poor less than 50% (<13 scores).

The third part: It was designed to assess the reported practices of elderly people regarding prevention of malnutrition diseases. It included 3 items about healthy nutrition divided into 15 questions, general healthy practices divided into 7 questions and treatment and follow up divided into 6 questions.

Scoring system:

The scoring system for the studied elderly people's practices was calculated as follows. (1) score if done, and (0) if not done. The scores of items were summed up and the total was divided by the number of the items, given mean score the part. These scores were converted into percent score.

The total score of practices = 28 points.

The total practices scores were categorized as follows:

- Satisfactory: if the score of the total practices ≥ 80% (≥ 22 score)
- Unsatisfactory: if it is ≤ 80% (≤ 22 score)

Tool II: It was designed to assess the studied elderly people's attitude regarding prevention of malnutrition diseases. Based on the Likert scale adapted from **(Kumar et al., 2017)** which was modified by the researcher to assess attitude. It included 17 items.

Scoring system:

The scoring system for the studied elderly people's attitude was calculated as follows. (2) for always, while (1) sometimes and (0) for never. The total score of attitude = 34 points. The total attitude score was categorized as follows:

- Positive ≥ 60% (≥20 scores)
- Negative ≤ 60% (≤ 20 scores).

Administrative approval:

Official letter was obtained and delivered from Dean of Faculty of Nursing, Benha University directed to the Director of Medical out-patient clinic where the study was conducted concerned the title, objectives, tools and study technique was illustrated to the administrators of the previously mentioned setting to gain their cooperation which was needed to allow the investigator to meet the elderly in the selected setting

Content validity:

Content validity refers to the extent that the test measures what is supposed to measure. The tools validity was done by five experts of the faculty's staff nursing from Community Health Nursing Specialties, who reviewed the tools for clarity, relevance, comprehensiveness, and applicability.

Reliability:

Reliability of the tools was applied by the investigator for testing the internal consistency of the tool by administration of the same tools to the same subjects under similar condition on one or more occasion.

Answers from repeated testing were compared. Reliability for knowledge was 0.774 and for practice was 0.880 and for attitude was 0.786.

Ethical considerations:

All ethical issues were assured; oral informed consent has been obtained from each elderly people before conducting the interview and given them a brief orientation to the purpose of study. They were also reassured that all information gathered would be treated confidentiality and used only for the purpose of the study. The elderly people had right to withdraw from the study at any time without giving any reasons.

Pilot study:

The pilot study was carried out on 26 elderly people which represented 10% of the sample size (264), The pilot study was aimed to assess the tools clarity, applicability and time needed to fit each sheet, completing the sheet consumed about 10-20 minutes. No modifications were done, so the pilot study sample was included to the total sample of the study.

Preparatory phase:

Preparation of the data collection tools was based on reviewing the current and past available national and international related literatures, and the theoretical knowledge of various aspects of the study using a journal, text books and internet research. This was necessary for the researcher to be acquainted with and oriented about aspects of the research problem as well as to assist in the development of data collection tools.

Field work:

The actual field work was carried out in period from the beginning of June 2022 to the end of November 2022 covering six months. The study conducted by the researcher for the studied sample in the selected setting. The researcher visits the selected setting for 3days/weeks (Sunday, Wednesday and Thursday) from 9 am to12 pm in these days. The researcher explained the purpose and importance of the study to the elderly people. The researcher collected data from the elderly people. The average number of the studied elderly was between 3-4 elderly/ day depending on their response to the interviewers, each interviewed elderly takes about 10 to 20 minutes to fill the sheet depending upon their understanding and response.

Statistical analysis:

Computerized data entry and statistical analysis were fulfilling scored using statistical package for Social Science (SPSS), version (25). Descriptive statistics were first applied (percentage) then other statistical test such as, chi-square and using mean.

Statistical significance was considered:

- Highly significant result when p-value < 0.001.
- Significant result when p-value < 0.05.
- Non-significant result when p-value > 0.05.

Results:

Table (1): Shows that; 38.3% of the elderly people aged from 65 > 70 years old with Mean ±SD (70.51±4.12) and 50.4% of them were female and 63.6% of them were married and 35.2% had basic education. Regarding residence 53.8% of the elderly people were lived in urban areas and 92.4% of them were lived with family. In addition to, 92.9% of them weren't worked and 53.8% had sufficient income.

Table (2): Shows that; 77.7% of the studied elderly people suffering from health problems. 25.9% of them had indigestion, 74.6% of them had uncontrolled blood

pressure, 33.2% of the elderly studied people had tooth loss and 41% of them had diabetes. Also, 69.3% of the studied elderly people had arthritis and 41.5% of them had chest sensitivity. In addition to; 35.6% of the studied elderly people had stress and anxiety and 68.3% of them had headache

Figure (1); Shows that 58.7% of the studied elderly people had poor total knowledge level regarding malnutrition diseases, while 22.7% of them had average total knowledge level and 18.6% of them had good total knowledge level regarding malnutrition diseases.

Figure (2): Shows that; 58.3% of the studied elderly people had satisfactory total practices level regarding malnutrition disease, while 41.7% of them had unsatisfactory total practices level regarding malnutrition diseases.

Figure (3): Shows that; 56.8% of the studied elderly people had positive total attitude level regarding malnutrition diseases, while 43.2% of them had negative total attitude level regarding malnutrition diseases.

Table (3): Shows that; there was a highly statistically significant correlation between total attitude level of the studied elderly people and their total practices level regarding malnutrition diseases ($p<0.001$). While, there was statistically significant relationship between total knowledge level of the studied elderly people and total attitude level regarding malnutrition diseases ($p<0.05$).

Amira Mahmoud Mohamed, Howyida Sadek Abd El-Hameed and Amina Abd El- Razek

Table (1): Frequency distribution of the studied elderly people regarding their socio-demographic characteristics (n=264).

Socio-demographic characteristics	No.	%
Age /Years		
60 : > 65	94	35.6
65 : > 70	101	38.3
≥ 70	69	26.1
Mean ±SD	**70.51±4.12**	
Sex		
Male	131	49.6
Female	133	50.4
Marital status		
Widow	86	32.6
Divorced	10	3.8
Married	168	63.6
Education level		
Can't read and write	84	31.8
Basic education	93	35.2
Secondary education	46	17.4
High education	41	15.5
Residence place		
Urban	142	53.8
Ruler	122	46.2
Living		
Alone	20	7.6
With the family	244	92.4
Occupation		
Working	98	37.1
Not work	166	62.9
Income		
In sufficient	15	5.7
Sufficient	142	53.8
Sufficient and save	107	40.5

Knowledge, Attitude and Practices of Elderly People regarding Prevention of Malnutritional Diseases

Table (2): Frequency distribution of the studied elderly people regarding their medical history (n=264).

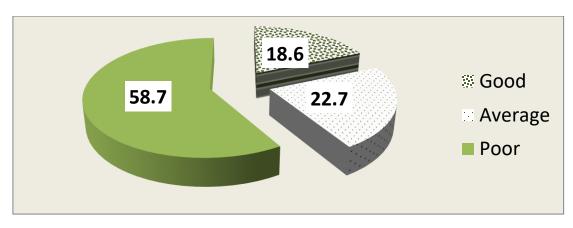| Current medical history	No.	%
Suffering from any health problems		
Yes	205	77.7
No	59	22.3
Digestive problems (n=205)		
Constipation	49	23.9
Diarrhea	16	7.8
Indigestion	53	25.9
Stomach ulcer	41	20.0
Liver problems	16	7.8
Colon cancer	5	2.4
Irritable bowel syndrome	25	12.2
Cardiovascular problems (n=205)		
Uncontrolled blood pressure	153	74.6
Heart and artery diseases	26	12.7
Angina	26	12.7
Oral problems (n=205)		
Gum infections	65	31.7
Tooth loss	68	33.2
Inflammation of the tongue / hypertrophy of the tongue	5	2.4
Persistent sore throat	37	18.0
Untreated tooth decay	30	14.6
Endocrine problems (n=205)		
Diabetes	84	41.0
Disorders of the thyroid gland	36	17.6
High cholesterol in the blood	49	23.9
Obesity	36	17.6
Skeletal system problems (n=205)		
Arthritis	142	69.3
Osteoporosis	21	10.2
Having fractures	22	10.7
Back and neck disorder	20	9.8
Respiratory problems (n=205)		
Pulmonary obstruction	5	2.4
Chest sensitivity	85	41.5
Lung cancer	5	2.4
Difficulty breathing	54	26.3
Chronic bronchitis	56	27.3
Psychological problems (n=205)		
Depression	22	10.7
Stress and anxiety	73	35.6
Intense grief over the death of a family member	22	10.7
Psychological pressure and behavioral disorder	37	18.0
Problems of retirement from work, such as lack of self- confidence	26	12.7
Isolation	25	12.2
Nervous system problems (n=205)		
Stroke	6	2.9
Parkinson's disease	17	8.3
Alzheimer's	42	20.5
Headache	140	68.3

Figure (1): Percentage distribution of the studied elderly people according to total knowledge level about malnutriton diseases (n=264).
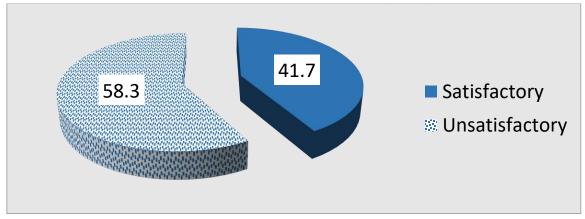

Figure (2): Percentage distribution of the studied elderly people according to total practices level toward malnutrition diseases (n=264).
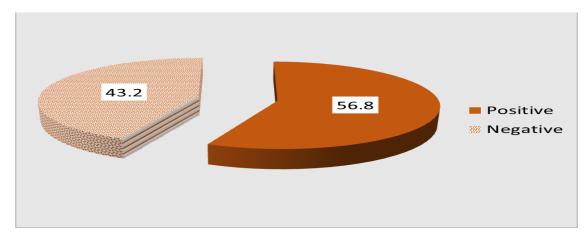

Figure (3): Percentage distribution of the studied elderly peoples according to total attitude level toward malnutriton diseases (n=264)

Knowledge, Attitude and Practices of Elderly People regarding Prevention of Malnutritional Diseases

Table (3): Correlation matrix between total knowledge, practices and attitude of elderly people regarding malnutrition diseases (n=264)

		Total knowledge	Total practices	Total attitude
Total knowledge	R	1	.114	.571
	P-value		.063	.025*
	N	264	264	264
Total practices	R	.114	1	.416
	P-value	.063		.000**
	N	264	264	264
Total attitude	R	.571	.416	1
	P-value	.025*	.000**	
	N	264	264	264

Discussion

Malnutrition is most common among elderly people, often occurs due to functional and physiological changes that come with old age, inadequate access to food, and lack of financial support. The functional status of the elderly is their capability to carry out their everyday activities, which consists of food preparation and intake thus, affecting their nutritional status. Numerous scientific evidence points out on the importance of an individual's dietary practices and nutritional status in the prevention and management of multiple diseases. A healthy diet helps to protect against malnutrition in all its forms, as well as Non-Communicable Diseases (NCDs) **(Kamwana et al., 2021).**

Regarding socio-demographic characteristics of elderly people, the results of the present study showed that; more than one third of the elderly people aged from 65: >70 years old with Mean ±SD (70.51±4.12) and half of them were female and less than two thirds of them were married and one third had primary education. Regarding residence; slightly more than half of the elderly people were lived in urban areas and the most of

them were lived with family. In addition to, the most of them weren't worked and slightly more than half had sufficient income.

According to age and gender, this result was in agreement with **Pellay et al., (2020)** who studied "Socio-Demographic Characteristics, Dietary, and Nutritional Intakes of French Elderly Community Dwellers According to Dairy Product Consumption" in three French cities (n=1584) and mentioned that the studied sample was 76.2 years old (SD 5.0 years) on average (ranging from 67.7 to 94.9 years), and 62% were female.

This result also is nearly in agreement with **Arthur et al., (2020)** who studied "Assessment of Dietary habits of the Aged in Nkawie in the Atwima Nwabiagya District of Ashanti Region" in Ghana (n=100) and found that the target population for the study were 60 years and above.

According to gender, education and marital status, this result supported by **Motadi et al., (2022)** who studied "the nutritional status and dietary patterns of the elderly in Thulamela municipality of Vhembe district, Limpopo province " (n= 300) and found that

Half of the study participants had ages within 60–69 years. 68.7% of participants were female, 38.6% had primary education, and half of them were married.

As regard to educational level, this finding was in the same line with **Machón, et al., (2018)** who studied "Dietary Patterns and Their Relationship with Frailty in Functionally Independent Older Adults. Nutrients" in Gipuzkoa (Spain) (n=527), and reported that (78%) had primary education.

Regarding to marital status and living, this result is confirmed by **Razon et al., (2022)** who studied "Assessment of dietary habits, nutritional status and common health complications of older people living in rural areas of Bangladesh" (n= 230) and reported that most of the study sample were married and the majority of the studied elderly lived in a joint family. This results were disagreed with **Whitelock & Ensaff, (2018)** who studied "On Your Own: Older Adults' Food Choice and Dietary Habits" in northern United Kingdom (n= 30) and found that the majority of them living alone and widowed.

According to residence place, income and occupational level, this result disagreed with **Gregorič et al., (2022)** who studied "Dietary Intakes of Slovenian Adults and Elderly: Design and Results of the National Dietary Study SI" in Slovenian (n=416) and reported that 55.1% of elderly people were categorized in the rural living area, (71.5%) had below average of socio-economic standard and (62.1%) were Employed.

According to health problems among studied elderly people, the results of the present study showed that; more than three quarters of the studied elderly people suffering from health problems. One quarter

of them had indigestion, less than three quarters had uncontrolled blood pressure, less than one third of them had tooth loss and more than one third had diabetes. Also, more than two third had arthritis and one third had chest sensitivity. In addition to; one third of the studied elderly people had stress and anxiety and more than two third of them had headache. From the researcher point of view this could be because ageing comes with an increase in disease burden and the decline in human organ and body functions.

Additionally, aging is a natural process defined by the gradual the gradual, time dependent decline of biological and behavioral functions, for which individuals of the same chronological age show variability. This result was in agreement with **Fouad et al., (2022)** who studied" Assessment of Knowledge Regarding Nutrition Among Elderly in Rural Area, Sharkia Governorate" in Zagazig (n=60) and showed that 76.7% of the studied elderly were having chronic diseases and the most common diseases were hypertension (46.7%) followed by arthritis (45.0%), 40% of them had diabetes, 3.3% had respiratory diseases, 3.3% had heart diseases, 6.7% had liver diseases and 6.7% had renal diseases.

These results in agreement with **Hefnawy, (2019)** who studied" Prevalence of Malnutrition in Community-Dwelling Egyptian Elderly" in El-Minia (n= 345) and showed that about two-thirds (64.6%) from elders with one chronic disease are malnourished it was found that 20% of them had hypertension, 17.1% had diabetes, 8.1% had hypertension & diabetes, and 3.2% had romantics diseases, while only 0.6% had Alzheimer's disease.

These results in the same line with **Aly et al., (2020)** who studied" Relation between Nutritional Status and Chronic Diseases among Elderly at Assiut City" (n=1033) and revealed that the majority of the elderly had chronic diseases, 36.5% of them had diabetes mellitus, 59.5% had hypertension, 24.3% had neurological diseases, 11.8% had liver diseases, 34.7% had respiratory diseases, 15.3% had cardiac diseases, 6.4% had kidney diseases, 1.4% had thyroid disorders and 37.4% had orthopedic diseases.

Also, these results acme harmony with **Alsaud et al., (2020)** who studied "Prevalence of cardiovascular diseases risk factors among Jordanians" (n=1449) and found that showed that more than two third of studied sample suffering from chronic diseases and there was a high prevalence of CVD risk factors among Jordanians, in particular 74.6% regarding dyslipidemia, 32.51%with obesity, 37.47%were with elevated blood pressure and 21.51% were with Diabetes.

The findings of this results showed that more than half of the studied elderly people had poor total knowledge level regarding malnutrition diseases, while less than one quarter of them had average total knowledge level and less than one quarter of them had good total knowledge level regarding malnutrition diseases. From the researcher point of view this might be attributable to a variety of factors as the current study was of the studied elderly had low education level and lived in rural area. In addition to, studies carried out on elders who may not interested in knowledge about healthy food.

These results supported by **Hammouh et al., (2023)** who conducted a study about "Nutrition Knowledge, Attitudes, and Practices (KAPs) among Jordanian Elderly— A Cross-Sectional Study" in Jordan, (n=1200) and reported that more than half (52.8%) of the studied sample had poor knowledge.

Also, these results came in harmony with **Fouad et al., (2022)** who reported that, a major deficiency in the knowledge of the elderly regarding nutritional aspects; overall, nearly one-fifth of the studied elderly had satisfactory nutritional knowledge. This might due to that it is influenced by the level of education of the elderly themselves.

These results were in the same way with **Nasution et al., (2021)** who studied " Knowledge and Nutritional Status of Elderly " in the Medan city area, Indonesia (n=30) and reported that the majority of the elderly have less knowledge about nutrition that must be consumed with a percentage of 43.3%. This might be due to attributable to a variety of factors regarding the studied elderly people such as had low education level and lived in rural area. In addition to, studies carried out on elders who may not interested in knowledge about healthy food.

The results of the present study showed more than half of the studied elderly people had satisfactory total practices level regarding malnutrition disease, while more than two fifth of them had unsatisfactory total practices level regarding malnutrition diseases. From the researcher point of view this might be due to most of the study sample lived with family who care of elders and their nutrition.

These results came in harmony with **Hammouh et al., (2023)** who observed that two thirds of the studied elderly people (72.6%) had poor practice. Also, these results

in the same line with **Kumar et al., (2017)** who studied "An Epidemiological Study of Knowledge Attitude and Practice of Nutritional Status of the Elderly in Rural Population of Ambala District, Haryana" (n=300) in Indian and reported that poor score in practice part. This might be due to all study sample were elders most of them didn't work and had insufficient income.

The results of the present study showed that; more than half of the studied elderly people had positive total attitude level regarding malnutrition diseases, while less than half of them had negative total attitude level regarding malnutrition diseases. These results agreed with **Jeruszka-Bielak et al., (2018)** who reported that the most of studied elderly people had positive nutrition related attitude about healthy food and healthy eating. This might be due to participants try to promote their health and prevent themselves from malnutrition diseases

In another hands, these results disagreed with **Kumar et al., (2017)** who reported that poor score in attitude part of questionnaire and only 45.2% had positive attitude towards malnutrition. This might be due to participants hadn't enough knowledge about healthy food and malnutrition diseases so, they didn't interest in promote their health and prevent themselves from malnutrition diseases.

The results of the present study showed that; there was a highly statistically significant correlation between total attitude level of the studied elderly people and their total practices level regarding malnutrition disease (p<0.001). While, there was statistically significant relationship between total knowledge level of the studied elderly

people and total attitude level regarding malnutrition diseases (p<0.05) **(Table 3).** This might be due to good nutritional knowledge and a positive attitude affect dietary practices, leading to good nutritional status and disease prevention.

These results were in agreement with **Ong et al., (2021)** who found that there was significance relation between nutrition knowledge, and attitudes. In the same line, these results supported by **Jeruszka-Bielak et al., (2018)** who reported that nutrition related attitude (NRAs) was significantly associated with nutrition related knowledge (NRKs).

Moreover, these results approved by **Shalaby et al., (2016)** who studied "Impact of nutritional health educational program 'on elderly persons' nutritional knowledge, attitude and practice" in Egypt (n=115) and found that; higher percentages of the elderly with positive attitude had satisfactory knowledge, and higher percentages of those with negative attitude had unsatisfactory knowledge.

Conclusion

More than half of the studied elderly people had poor total knowledge regarding malnutrition diseases and its preventive measures and more than one fifth of them had good total knowledge level, more than half of the studied elderly people had satisfactory total practices regarding malnutrition diseases, and less than half of them had unsatisfactory total practices, more than half of the studied elderly people had positive total attitude regarding malnutrition diseases and less than half of them had negative total attitude. There was a highly statistically significant correlation between total attitude of the studied elderly people and their total

practices regarding malnutrition diseases (p<0.001).

Recommendations

- Conducting health educational programs for elderly people to increase their knowledge, attitude and practices about malnutrition diseases and its preventive measures.

- Establishing periodically nutritional assessment of elderly to identify at risk by using Mini-Nutritional Assessment scale as a simple and firm screening tool.

- Further studies should be conduct including the different items of the older adults' lifestyle as exercise, stress management, sleep and rest, nutritional status and health outcome for them.

References:

Abate, T., Mengistu, B., Atnafu, A., & Derso, T. (2020). Malnutrition and its determinants among older adults people in Addis Ababa, Ethiopia. BMC geriatrics, 20(1), Pp: 1- 9.

Alsaud, W., Tabbaa, M., Kasabri, V., Suyagh, M., Abu Alsamen, M., Haddad, H., & Alshweki, A. (2020). Prevalence of cardiovascular diseases risk factors among Jordanians. Journal Saudi Heart Association, 32(2), P 326.

Aly, Sh., Abd Elhameed, S., Hassan, Sh., & Saad, N. (2020). Relation between Nutritional Status and Chronic Diseases among Elderly at Assiut City. Assiut Scientific Nursing Journal, 8(21): Pp:1-14.

Arthur, P., Tawiah, J., & Turkson, R. (2020). Assessment of Dietary habits of the Aged in Nkawie in the Atwima Nwabiagya District of Ashanti Region. American Journal of Food Science and Health. 6(4): Pp:119-127.

Ferede, Y., Derso, T., & Sisay, M. (2022). Prevalence of malnutrition and associated factors among older adults from urban and rural residences of Metu district, Southwest Ethiopia. BMC nutrition, 8(1), Pp:1-14.

Fouad, A., Abd Allah, E., Hussien, A., & Mohamed, R. (2022). Assessment of Knowledge Regarding Nutrition among Elderly in Rural Area, Sharkia Governorate. Zagazig Nursing Journal, 18(2), Pp: 92-103.

Gregorič, M., Hristov, H., Blaznik, U., Koroušić, B., Delfar, N., & Pravst, I. (2022). Dietary Intakes of Slovenian Adults and Elderly: Design and Results of the National Dietary Study SI. Nutrients, 14(17), Pp: 10-18

Hammouh, F., Abdullah, M., Al-Bakheit, A., Al-Awwad, N., Dabbour, I., & Al-Jawaldeh, A. (2023). Nutrition Knowledge, Attitudes, and Practices (KAPs) among Jordanian Elderly—A Cross-Sectional Study. Nutrients, 15(9), Pp.: 4-8.

Hefnawy, G. (2019). Prevalence of Malnutrition in Community-Dwelling Egyptian Elderly. Indian Journal of Public Health, 10(12), p. 1241

Jeruszka-Bielak, M., Kollajtis-Dolowy, A., Santoro, A., Ostan, R., Berendsen, A., Jennings, A., & Pietruszka, B. (2018). Are nutrition-related knowledge and attitudes reflected in lifestyle and health among elderly people? A study across five European countries. Frontiers in physiology, 9, Pp:4-10

Kamwana, W., Mapesa, J., & Oirere, N. (2021). Dietary practices associated with prevalence of malnutrition among the elderly in Kiambu County, Kenya. World Journal of Advanced Research and Reviews, 11(03), Pp:1,2

Kumar, S., Mittal, A., Bishnoi, A., Goel, R., Bhonsla, S., Saini, P., & Khan, Z. (2017). An Epidemiological Study of Knowledge Attitude and Practice of Nutritional Status of the Elderly in Rural Population of Ambala District, Haryana. Indian Journal of Public Health, 8(3). Pp: 276, 278

Machón, M., Mateo-Abad, M., Vrotsou, K., Zupiria, X., Güell, C., Rico, L and Vergara, I. (2018). Dietary Patterns and Their Relationship with Frailty in Functionally Independent Older Adults, 10(4), Pp: 4-9.

Mathewson, S., Azevedo, P., Gordon, A., Phillips, B., & Greig, C. (2021). Overcoming protein-energy malnutrition in older adults in the residential care setting: A narrative review of causes and interventions. Ageing research reviews, 70(165), Pp: 101- 401**.**

Mo'awad, E. (2019). Nutritional Status of Institutionalized Elderly: A Recommended Plan of Care, World Journal of Nursing Sciences, 5 (3): Pp: 181,182,185,198

Motadi, S., Khorommbi, T., Maluleke, L., Mugware, A., & Mushaphi, L. (2022). Nutritional status and dietary pattern of the elderly in Thulamela Municipality of Vhembe District. African Journal of Primary Health Care & Family Medicine, 14(1), Pp.1-8.

Nasution, S., Siregar, C., Ariga, R., Haykal, M., & Purba, W. (2021). Knowledge and Nutritional Status of Elderly. In IOP Conference Series: Earth and Environmental Science. 709 (1), p. 4.

Ong, R., Chow, W., Cheong, M., Lim, G., Xie, W., Baggs, G., & Chew, S. (2021). Associations between socio-demographics, nutrition knowledge, nutrition competencies and attitudes in community-dwelling healthy older adults in Singapore: Findings from the SHIELD study. Journal of Health, Population and Nutrition, 40(1), Pp: 4-5.

Pellay, H., Marmonier, C., Samieri, C., & Féart, C. (2020). Socio-Demographic Characteristics, Dietary, and Nutritional Intakes of French Elderly Community Dwellers According to Their Dairy Product Consumption: Data from the Three-City Cohort. Nutrients, 7; 12(11), P. 4.

Razon, A., Haque, M., Ahmed, M., & Ahmad, T. (2022). Assessment of dietary habits, nutritional status and common health complications of older people living in rural areas of Bangladesh. Heliyon, 8(2), P. 4**.**

Shalaby, S. I., Awad, M. M., El Dean, H. N., Mohamed, R. A., Gupta, N., & Singh, R. (2016). Impact of nutritional health educational program on elderly persons' nutritional knowledge, attitude, and practice. Research Journal of Pharmaceutical, Biological, and Chemical Sciences, 7(3), Pp: 466- 470.

Ten Cate, D., Schoonhoven, L., Huisman– de Waal, G., Schuurmans, M., & Ettema, R. (2021). Hospital and home care nurses' experiences and perceptions regarding nutritional care for older adults to prevent and treat malnutrition: A cross-sectional study. Journal of clinical nursing, 30(13-14), Pp: 2-4.

Whitelock, E., & Ensaff, H. (2018). On your own: Older adults' food choice and dietary habits. Nutrients, 10(4), P. 4.

معلومات واتجاهات وممارسات كبار السن تجاه الوقاية من امراض سوء التغذية

أميرة محمود محمد عبد الرؤوفـ هويدا صادق عبد الحميد ـ أمينة عبد الرازق محمود

كبار السن معرضون لسوء التغذية بسبب التدهور الفسيولوجي المرتبط بالعمر، وبالتالي فإن المعرفة والمواقف والممارسات الخاصة بهم ضرورية للوقاية من أمراض سوء التغذية. لذا هدفت هذه الدراسة الي تقييم معلومات واتجاهات وممارسات كبار السن تجاه الوقاية من أمراض سوء التغذية. و تم استخدام تصميم بحث وصفي لإجراء هذه الدراسة. وقد اجريت هذه الدراسة لكبار السن في العيادة الخارجية للباطنة بمستشفى بنها الجامعي على عينة عشوائية من كبار السن، وبلغت العينة ٢٦٤ من كبار السن. واظهرت النتائج بأن ٣٨,٣٪ من كبار السن تتراوح أعمارهم بين ٦٥ > ٧٠ سنة،٥٨,٧ ٪ من كبار السن لديهم معرفة ضعيفة فيما يتعلق بأمراض سوء التغذية وطرق الوقاية منها، ٥٨,٣٪ لديهم ممارسات إجمالية مرضية، ٥٦,٨٪ لديهم اتجاهات إجمالية إيجابية. كما توجد علاقة ذات دلالة إحصائية عالية بين اتجاهات وممارسات كبار السن الذين شملتهم الدراسة فيما يتعلق بالوقاية من أمراض سوء التغذية. واوصت الدراسة بضرورة تخطيط وتنفيذ برامج تثقيفية لكبار السن لزيادة معارفهم واتجاهاتهم وممارساتهم فيما يتعلق بأمراض سوء التغذية واجراءات الوقاية منها.