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ASSESSING OF THE NUTRITIONAL STATUS OF ELDERLY NURSING HOME RESIDENTS: CASE STUDY IN IRAQ

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Abstract:

The present study employed a descriptive (cross-sectional) design to assess the nutritional status of individuals residing in nursing homes located in the city of Babylon. The investigation was carried out within the time frame spanning from January 2, 2023, to July 23, 2023. In this study, a random sample of elderly residents (n=60) from nursing homes located in the city of Babylon was chosen using a probability sampling method. The data were obtained via the administration of a questionnaire and conducting interviews. Subsequently, a comprehensive analysis of the data was performed using both descriptive and inferential statistical techniques, leading to the identification of the following findings: This study provides an analysis of the demographic characteristics displayed by the sample population under investigation. The primary demographic category observed among the individuals who participated in the interviews is individuals between the ages of 70 and 74, constituting 30% of the total sample. the prevailing medical issues within the sample population are primarily attributed to overweight conditions and the utilization of medication. The majority of elderly individuals do not exhibit a strong inclination towards the consumption of vitamins and minerals. The phenomenon of hair loss and nail whitening is commonly observed among the elderly population.

Keywords: Assessment, Old Age, Nutritional Status, Home.

INTRODUCTION

The elderly population is the most rapidly growing demographic group on a global scale. Projections indicate that by the year 2025, the worldwide population of individuals aged 60 and above is anticipated to surpass 1.2 billion. The elderly demographic faces numerous noteworthy challenges that demand attention, including but not limited to poverty, social instability, food insecurity, and escalating health concerns such as malnutrition (Mohammad & Abdulwahid, 2022). The assessment of the overall health condition of a particular group is significantly influenced by the well-being of older adults. One of the most commonly observed health conditions related to the process of ageing is the presence of nutritional concerns and malnutrition resulting from inadequate consumption of food. Undiagnosed malnutrition has the potential to result in both infections and mortality. The nutritional status of older adults significantly influences their overall well-being and susceptibility to illness and mortality (Al–Rifa & Murad, 2022). The health status of a population is significantly influenced by the well-being of the elderly population. Nutritional issues are prevalent among the elderly population, with malnutrition being a frequently encountered ailment characterised by insufficient dietary intake. The failure to diagnose malnutrition can lead to an elevated susceptibility to illness and mortality (Ali & Ali Ma'ala, 2022). The elderly population exhibits a heightened susceptibility to malnutrition as a result of age-related factors, including physiological alterations, the presence of chronic illnesses, the utilisation of medications, and diminished physical mobility. Identifying or perceiving senior nourishment can pose challenges due to the effects of the ageing process. However, once recognised, the consequences can lead to a more rapid deterioration in health and unexpected mortality (Ali & Al-Juboori, 2021). The nutritional needs of individuals vary over the course of their lifespan. The aforementioned alterations may arise from the inherent process of ageing, a medical ailment, or a modification in one's way of life. A nutritional assessment, serving as a clinical study aimed at assessing the nutritional status, identifying potential risks, and examining dietary patterns among elderly individuals, could offer significant insights. When evaluating the condition of older adults and ascertaining the frequency of particular health and nutrition risks in this population, it is important to consider various factors (AL-Jebory & Khalifa, 2013). The nutritional requirements of individuals undergo alterations with advancing age. The aetiology of these alterations may

be attributed to a medical condition, modifications in one's lifestyle, or the inherent process of ageing. Undertaking a clinical investigation with the objective of evaluating the nutritional status, identifying potential risk factors, and analysing the dietary patterns of elderly individuals can yield significant insights into the prevalence of specific nutritional health risks among this demographic (Taberna *et al.,* 2019). The process of nutrition assessment in older adults involves the utilisation of anthropometric measurements, dietary history, and clinical appearance to evaluate their nutritional status and identify the underlying factors contributing to malnutrition. The primary objective of a nutritional assessment is to determine the adequacy of an individual's dietary intake in terms of accessibility, acceptability, and the provision of essential nutrients (Dent *et al.,* 2019). Proper nutrition, particularly for older individuals, contributes to various health benefits such as the preservation of independent living abilities, prevention of chronic diseases, promotion of vitality, facilitation of everyday activities, enhancement of energy levels, improvement of mood, and overall maintenance of health. The objective of the present study is to assess the prevalence of nutrition-related health concerns among individuals residing in nursing homes and home-based senior citizens in Babylon (Jassim *et al.,* 2019).

METHODOLOGY

The current study used a descriptive (cross sectional) design to examine the nutritional status of Babylon city nursing home residents. A graphic study was carried out in Al-Hilla City from January 2nd to July 23rd, 2023. Using "Potentiality," the researcher created the instruments necessary to achieve the study's objectives. A random sample of sixty (60) seniors from Babylon City's nursing homes was chosen for this study. The example was doled out to the review as per the accompanying comprehensive standards. Adults between the ages of 58 and 78 who live in a nursing home and are in poor health The questionnaire and interview were used to collect data, which were then analyzed using descriptive and inferential statistical data analysis to reveal: For proper data collection, a questionnaire and demographic information were used in addition to demographic characteristic analysis of the sample in question. "Test and retest" proved the instrument's reliability, and a panel of experts determined the instrument's validity. Ethical approval: Kut Community University provided the data. the consent of the sector's management and the ethics committee. All participants who agreed to participate in the current investigation gave written consent after being informed of goals of the research and information needs. To ensure that the study's data were obtained securely, certain measures were taken and data were handled with care. The statistical analysis of this study was done with SPSS version 26. The data were analyzed using continuous numerical descriptive statistics (Relative Sufficiency) and arithmetic illative (frequency, "percentages, arithmetic mean, and standard deviation").

RESULTS

Table 1. Frequencies, Percentages and Cumulative Percent of old age Demographic Characteristics and some related variables with comparative significant

Variables	Groups	Freq.'s	Percent	Cum. Percent	C.S. P-value
Age Groups	**60-64**	9	18	18	**χ^2 = 3.6 P=0.463 NS**
	65-69	10	20	38	
	70-74	15	30	68	
	75-79	7	14	82	
	80 >	9	18	100	
Gender	**Male**	31	62	62	**Binomial P=0.120 NS**
	Female	19	38	100	
Education	**illiterate**	15	30	30	**χ^2 = 14.68 P=0.023 S**
	read write	5	10	40	
	primary	9	18	58	
	secondary	3	6	64	
	intermediate	3	6	70	
	institute	7	14	84	
	university	8	16	100	
Medical History	**Non**	18	36	36	**χ^2 = 3.92 P=0.048 S**
	Diabetes mellitus	1	2	38	
	Heart disease	3	6	44	
	Respiratory disease	4	8	52	
	Hypertension	6	12	64	
	Renal disease and U.T.I.	4	8	72	
	Diabetes mellitus and Respiratory disease	6	12	84	

	Diabetes mellitus and Hypertension	1	2	86	
	Diabetes mellitus and Renal disease and U.T.F.	5	10	96	
	Heart disease and Hypertension	1	2	98	
	Hypertension and Renal disease and U.T.I.	1	2	100	
Dentures	**no**	41	82	82	**Binomial P=0.000 HS**
	yes	9	18	100	
Duration of wearing dentures	**1**	5	55.6	55.6	**Binomial P=1.000 NS**
	2	4	44.4	100	
Operation	**no**	28	56	56	**Binomial P=0.480 NS**
	yes	22	44	100	
Smoking	**no**	35	70	70	**Binomial P=0.007 HS**
	yes	15	30	100	
Duration of Smoking	**Up to 30 years**	6	40	40	**χ^2 = 55.12 P=0.000 HS**
	Up to 45 years	7	46.7	86.7	
	Up to 65 years	2	13.3	100	
Quantity	**0**	35	70	70	**χ^2 = 83.6 P=0.000 HS**
	1	10	20	90	
	2	3	6	96	
	3	1	2	98	
	4	1	2	100	
Medication	**no**	18	36	36	**Binomial P=0.066 NS**
	yes	32	64	100	
Duration of Medication use	**Up to 10 years**	14	43.8	43.8	**χ^2 = 3.6 P=0.463 NS**
	Up to 20 years	11	34.4	78.1	
	Up to 30 years	7	21.9	100	
Quantity	**0**	18	36	36	**χ^2 = 5.2 P=0.158 NS**
	1	8	16	52	
	2	13	26	78	
	3	7	14	92	
	4	4	8	100	
Clinical Appearance	**Gingivitis and Easy Hair Loss**	3	6	6	**χ^2 = 24.4 P=0.004 HS**
	Gingivitis and Bleaching Nails	2	4	10	
	Gingivitis and Pallor	3	6	16	
	Gingivitis and Conjunctiva Pallor	8	16	32	
	Easy Hair Loss and Bleaching Nails	12	24	56	
	Easy Hair Loss and Pallor	1	2	58	
	Easy Hair Loss and Conjunctiva Pallor	3	6	64	
	Bleaching Nails and Pallor	4	8	72	
	Bleaching Nails and Conjunctiva Pallor	10	20	92	
	Pallor and Conjunctiva Pallor	4	8	100	

Body mass index - groups	**Under weight**	8	16	16	**χ^2 = 2.32 P=0.509 NS**
	Normal weight	13	26	42	
	Over weight	15	30	72	
	Obesity	14	28	100	
Mid upper arm circumference	**very thin**	2	4	4	**χ^2 = 54.4 P=0.000 HS**
	thin	7	14	18	
	Normal	41	82	100	

P = p- value, S= significant, NS = non-significant, HS = high- significant

The data shown in this table reveals that the majority of participants in the study group are male, accounting for over half of the total individuals (62%). Approximately 30% of individuals fall between the age range of 70 to 74 years old, constituting the majority of age groups. A significant proportion of individuals within this population exhibit a lack of literacy skills, with approximately 30% being unable to read or write proficiently. The area of medical history comprises 36% of the overall nonmedical history present, most of elderly no dentures users with (82%) most of them no operation with(56%), no smoker with(70%), medication intake most more than yes medication intake(64%), the majority of clinical manifestations resulted in easy hair loss and discolored nails (24%), BMI was the most in overweight people (30%), MUAC was the most in normal elderly people (82%).

Table 2. Frequencies, Percentages and Cumulative percentage of food intake at different times of day

periods	Foods Intake During each period	Freq.'s	Percent	Cum. Percent
Breakfast	Protein	1	2	2
	Another's	1	2	4
	Protein and Carbohydrates	3	6	10
	Carbohydrates and Another's	1	2	12
	Protein and Mineral	1	2	14
	Protein and Another's and Carbohydrates	43	86	100
Duha (Morning)	Abstain	41	82	82
	Minerals	5	10	92
	Another's	1	2	94
	Carbohydrates and Mineral and Another's	1	2	96
	Protein and Carbohydrates	1	2	98
	Protein and Carbohydrates and Mineral	1	2	100
Launch	Abstain	3	6	6
	Protein	1	2	8
	Carbohydrates and Mineral	2	4	12
	Protein and Carbohydrates	26	52	64
	Protein and Carbohydrates and Mineral	15	30	94
	Protein and Mineral	1	2	96
	Protein and Another's and Carbohydrates	2	4	100
Afternoon	Abstain	39	78	78
	Minerals	1	2	80
	Another's	1	2	82
	Carbohydrates and Mineral	1	2	84
	Protein and Carbohydrates	1	2	86
	Protein and Another's	1	2	88
	Carbohydrates and Another's	3	6	94
	Protein and Another's and Carbohydrates	3	6	100
Dinner	Abstain	6	12	12
	Protein	2	4	16
	Another's	1	2	18
	Carbohydrates and Mineral and Another's	1	2	20
	Carbohydrates and Mineral	1	2	22

	Protein and Carbohydrates	16	32	54
	Protein and Another's	2	4	58
	Carbohydrates and Another's	3	6	64
	Protein and Carbohydrates and Mineral	11	22	86
	Protein and Mineral	1	2	88
	Protein and Another's and Carbohydrates	6	12	100

The 24-hour diet recall table shows that the Elderly population study nursing home residents ate in breakfast foods containing protein, carbohydrates, and others mainly (86%). contains protein and carbohydrates (52%). Afternoon results for abstinence (78%) and protein and carbohydrate dinner (32%) of the entire sample.

Table 3. Summary Statistics for the items of the Dietary Habits

Items	Likert Scale	Freq.'s	Percent	M.S.	S.D.	R.S. %	Grade
I don't take enough food every day	Never	16	32	1.7	0.51	56.67	**Pass**
	Some times	33	66				
	Always	1	2				
Usually don't eat anything through one day or two days a month	Never	32	64	1.38	0.53	46.00	**Pass**
	Some times	17	34				
	Always	1	2				
Address the vegetables twice or many times a day	Never	23	46	1.66	0.69	55.33	**Failure**
	Some times	21	42				
	Always	6	12				
Touch milk or milk products once per day	Never	3	6	2.3	0.58	76.67	**Pass**
	Some times	29	58				
	Always	18	36				
I eat fruits or fruit juice once per day	Never	1	2	2.36	0.53	78.67	**Pass**
	Some times	30	60				
	Always	19	38				
Take the bread and rice or other grains	Never	3	6	2.48	0.61	82.67	**Pass**
	Some times	20	40				
	always	27	54				
Touch tea , coffee and soft drinks immediately after a meal	Never	5	10	2.32	0.65	77.33	**Failure**
	Some times	24	48				
	Always	21	42				

The data shown in the table indicates that a majority of the participants (66%) occasionally fail to consume an adequate amount of food on a daily basis. A majority of individuals (64%) typically abstain from consuming food for a period of approximately one to two days per month. The veggies are not addressed more than once or multiple times a day, accounting for 46% of the cases. Approximately 58% of individuals engage in the act of coming into contact with milk or dairy products on a daily basis. Approximately 60% of individuals consume fruit or fruit juice on a daily basis. A significant proportion of individuals (54%) consistently consume bread, rice, or other cereal-based foods as part of their regular dietary intake. Additionally, a notable percentage (48%) occasionally engage in the consumption of tea, coffee, and soft drinks immediately following their meals.

Table 4. Overall assessed represents

No.	Assessment	Frequency	Percent
1	Failure	35	70%
2	Success	15	30%
3	Total	60	100%

This table reveals that seventy percent (70%) of overall assessed represents has result of failure and the remaining is for the result of success thirty percent (30%). this indicates that a negative direction of nutritional status in the studied population is determined

DISCUSSION

The analysis revealed that the data presented in the table suggests a predominance of male participants within the study group, accounting for just over half of the individuals (62%). Approximately 30% of individuals fall between the age range of 70 to 74 years old, constituting the largest proportion among other age groups. Thirty percent of them are illiterate. the medical history is accounted as domaint (36%) for non-medical history present, most of elderly no dentures users with (82%) most of them had no operation with (56%), no smokers with (70%), medication intake most more than yes medication intake (64%), The predominant clinical manifestations observed in this study were hair loss and whitening of the nails, accounting for 24% of the cases. Additionally, a significant proportion of the elderly population exhibited overweight status, with a majority having a body mass index (BMI) beyond the recommended range, constituting 30% of the participants, MUAC majority of seniors normal (82%). This research supports the findings of Duerksen (2021), who researched nutritional condition among olderly people in the general community and found that the majority of them had good nutritional condition because they were cared for by their relative (Duerksen *et al.,* 2021).

The findings of the research demonstrated that the 24-hour diet recall graph index shows that the surveyed population of seniors living in nursing homes most often ate breakfast that contained proteins, carbohydrates, and others (86%). Morning Doha includes abstinence (82%). Start contains proteins and carbohydrates (52%). Examine the overall sample's absence of alcohol in the afternoon (78%) as well as the protein and carbohydrate content of dinner (32%) (Alzahrani & Alamri, 2017).

Table (3) The findings of the research demonstrated that the 24-hour food recall table shows that the studies population of residents in nursing homes most often eat breakfast that contained proteins, carbohydrates, and the remaining participants (86%). In the morning in Doha, there is a high percentage of abstention, specifically 82%. The composition of launch includes protein and carbs, which account for 52% of its content. The findings from the afternoon portion of the study indicate that 78% of participants chose to abstain. In contrast, 32% of the overall sample opted for a dinner option that had both protein and carbohydrates. Prior research conducted in Turkey and Lebanon has substantiated the correlation between education and nutritional status, whereby those with greater levels of education tend to exhibit improved nutritional well-being. As you age, you are more likely to develop one or more chronic diseases (Hossain *et al.,* 2016).

The correlation between inadequate nutritional status and the presence of depression. Moreover, the findings of the study on senior individuals indicate that 70% of the whole sample tested experienced failure, while the remaining 30% achieved achievement. this indicates that a negative direction of nutritional status in the studied population is determined. Similar results were also observed in tests conducted in Iraq and Lebanon. The findings of these research indicate that older individuals who are experiencing depression and cognitive impairment tend to exhibit poorer dietary status (Doumit & Nasser, 2017).

The findings of this study indicate that elderly individuals who consumed fewer than three meals per day exhibited poorer scores on the Mini Nutritional Assessment (MNA). Prior research has indicated that the primary factor contributing to reduced food consumption is a decline in appetite. The diminished desire to eat can potentially be attributed to physiological alterations that occur with advancing age, as well as other physical ailments prevalent among older individuals. Additionally, challenges related to mastication and swallowing may contribute to this phenomenon. One of the factors contributing to insufficient food intake among the elderly is their diminished capacity to make decisions regarding their dietary choices. Additionally, challenges related to meal preparation and consumption, such as difficulties in preparing or consuming whole meals, have been identified as additional reasons for inadequate food intake (Bahat *et al.,* 2022).

CONCLUSIONS

Elderly is a biological reality that is beyond human control and there are many health problems that they suffer from, such as chronic diseases, heart and arterial diseases, falls and fractures, diseases of the motor and mental system, diseases of malnutrition, diseases of the nervous system, mental and psychological problems, in addition to social problems.

The study confirms that, old age group is predominantly males with (70 - 74) years old. Old age residents have no opportunity for better education. Old age residents have current medical problem, are overweight and taking medication. The majority of the elderly population are not avid consumers of vitamins and minerals. Most of the old age residents is losing hair easily and bleaching nails. Old age resident's demographic characteristics do not show any relationship to their nutritional status

RECOMMENDATIONS

In order to enhance the collaboration between governmental institutions, civil society organisations, and the Ministry of Labour and the Ministry of Health, it is recommended that a comparative study be conducted to examine the state of nutrition among elderly individuals residing in nursing homes and those living in the community. This

study aims to provide a comprehensive understanding of the needs and challenges faced by residents, thereby facilitating effective governance and policy-making. Furthermore, the results of the study underscored the strong correlation between malnutrition and the state of one's health. Enhanced management and prevention of malnutrition in the older population could potentially be achieved by identifying potential predictive factors

CONFLICT OF INTEREST

The authors declare no conflicts of interest associated with this manuscript.

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