Functional Constipation among Elderly in Assiut Geriatric Clubs

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Abstract

Constipation is a public health problem among elderly people and may lead to complications if left untreated. **Aim:** assess of functional constipation criteria among elderly. **Research design:** descriptive research design was used. **Setting:** This research was carried out in Assiut geriatric clubs. **Sample:** A study sample includes 200 elderly people. **Tools:** four tools have been used: **1st tool:** included three parts: Part (1) socio-demographic data. Part (2) studied elderly medical history. Part (3): includes knowledge about constipation. **2nd tool**: assessment functional constipation in elderly. **3rd tool** includes two parts: Part (1) Assessment of constipation symptoms. Part (2): The standard diary **4th tool:** contains two parts: Part (1): Physical Activity Scale for the Elderly. Part (2): 3-day food-recall diary. **Results:** The age of studied elderly mean± SD was 64.67±2.64. It was found that 72.5% of studied elderly had a functional constipation there was statistical significant between functional constipation, sitting, light activity and foods that help prevent constipation. **Conclusion:** Increase symptoms of functional constipation in elderly with low knowledge level of physical activity, fluids and fibers intake. **Recommendations:** Health education program for elderly with functional constipation about improve of physical activity and dietary intake.

Keywords: Activity, Diet, Elderly, Functional Constipation & Knowledge.

Introduction

According to the **Central Intelligence Agency (2020)**, Egypt's elderly population has reached 6.5 million and will also rise to 18.1 million elderly in 2050, the Egyptian life expectancy for 2019 is 71.90 years: 68.2 for men and 73.0 for women. Moreover, aging reflects the accumulation over time of changes in a human being, including physical, emotional, and social changes. It is one of the major risk factors identified for most human diseases. While old age starts, it cannot be defined uniformly because it varies according to the context. The United Nations has accepted that 65+ years will generally be defined as old age, and this is the first attempt to define old age globally **(Ouchi, et al., 2017, WHO, 2016 & Dillin, et al., 2014).** Constipation defined as difficult, incomplete and irregular bowel movements. It is the most common digestive problem which it considers a symptom than a disease **(Alimoradzadeh, et al., 2017).**

Constipation represents one of physiological health problem which affected elderly people than younger individuals. In addition, it is noted that the prevalence of constipation increases with age, especially for those over 65 years of age. Also chronic constipation affects 17–40% of the elderly, which interferes with their quality of life (**Farahat & et al 2019).**

Constipation in older people can result from anatomical and physiological changes. Motor changes can directly influence the role of smooth muscles or via visceral innervation. Anatomical modifications can lead to internal thickening and external anal sphincter thinning. Neurological changes can decrease the electro-sensitivity of the mucosa, the sensation of rectal distention, and somatic motor nerve function (**Nebhinani & Suthar 2017).**

Clinical criteria for functional constipation (FC) in elderly consists of < 3 bowel movements a week, pressure, lumpy or rough stools, anorectal obstruction sensation, incomplete defecation and manual manoeuvring. Almost all symptoms are subjective. This is so-called self-defend constipation **(Levin, 2019).**

The nurse should be encouraging the elderly to increase fluid intake approximately; 2000 to 3000 mL/day, medically contraindicated, if not. Take at least 20 g of dietary fiber (e.g., raw fruits, fresh vegetables, whole grains) a day to support the patient. Urge the patient to do some exercise and physical activity. Consider isometric abdominal and gluteal exercises, encourage a quarterly deadline for removal **(Wayne, 2016).**

Significance of the study

In people aged 65 and over, the prevalence of constipation is between 30 percent and 40 percent, which poses an economic burden on patients and health care providers. Chronic functional

constipation(FC) decreases the quality of life of the elderly and, with advancing age, poses many complex health issues (**Cevik & Zaybak, 2018**).

Aim of the study:
The aim of the study was to assess functional constipation among elderly people at Assiut Geriatric clubs.

Research questions
1. Is there a low level of knowledge about functional constipation?
2. Do awareness and functional constipation have a good relationship?
3. Is there a positive relationship between both functional constipation and foods that help avoid constipation?

Subjects & Method
Research design: descriptive research design was used.

Setting: This research has been performed in Assiut geriatric clubs namely (legitimacy Assembly and Islamic hub of culture).

Sample: Convenient sample (total coverage of all elderly members who agree to participate in the study) 50 legitimacy Assembly club and 150 in Islamic cultural club totally 200 elderly to assess the functional constipation.

Inclusion criteria:
- People 60 years and old
- The total number of the elderly legitimacy Assembly Club and Islamic cultural club

Exclusion Criteria:
- Previous intestinal surgery
- Use laxatives

Tools of the study:
Tool (1): self-administered questionnaire, **Part (I):** It includes socio demographic data as, age, sex**,** residence, marital status, income, occupation, and level of education and social level (**El-Gilany. et al., 2012**).

Part (II): This involves the medical history of the elderly, such as hypertension, diabetes, atherosclerosis and renal failure, cardiovascular disease and the medicine used.

Part (III): question to assess elderly knowledge's about constipation such as definition, symptoms, risk factors, medication, and preventing of FC as mobility, exercise, diet, and fluid intake.

Scoring system: incorrect 1 and correct 2 for the definition 2, risk factors 16, symptoms 12, prevention 12, complications 10 and management 12 the total was 64. Less than 60% (38 poor), 60 – < 75% (38 - 48 fair) & 75% (48) and more is good

Tool (2): To assess the functional constipation in elderly:
According to Rome II criteria: an elderly person may have constipation, if he has included two or more of the following points, straining in more than 25% defecations, lumpy or stiff stools in more than 25% of defecations, the sensation of incomplete evacuation in more than 25% defecations, anorectal obstruction, or blockage feeling in more than 25% of defecations and manual maneuvers to encourage more than 25 percent of defecations (e.g. digital evacuation, pelvic floor support) (**Nour-Eldein, et al., 2014**).

Tool (3):
Part I: Patient Assessment of Constipation Symptoms (PAC-SYM) Questionnaire used to measure participant symptoms as absent, mild, moderate, severe, or very severe on the 5 Likert scale, the score included 12 items comprising three abdominal subscales (four items), rectal subscales (three items) and stool subscales (five items) (**Nour-Eldein, et al., 2014**).

Part II: The Standard Diary
It is a regular constipation diagnosis tracking chart that tracks the number of defecations, the volume of feces, the consistency of feces, the strain during defecation, and the feeling after defecation of not having completely evacuated. According to the consistency of feces, the scale is graded from 1 to 5: small and hard like marbles (1); bulky and hard (2); regular (3); soft (4) and watery (5). Thus, with looser fecal consistency, the score grows. Straining is scored from 1 to 4 during defecation: defecation without straining (1); At the beginning of defecation, strain (2); strain halfway through defecation (3); and strain throughout defecation (4). After defecation, the sense of not having completely evacuated was scored from 0 to 1: there was no such feeling (0), and there was such a feeling (1). The amount of feces was scored from 1 to 3: the amount of feces was smaller than the previous evacuation (1); regular (2) and large quantities of feces (3). The number of evacuations per day has also been reported (**Pamuk, et al., 2003**).

Tool (4):
Part I: Physical Activity Scale for the Elderly (PASE) it is a brief 10-item questionnaire that measures the past week is physical activity. The frequency of these events is graded as never [0], seldom (1-2 days/week [1]), sometimes (3-4 days/week [2]), and often (5-7 days/week [3]). The length is also graded as less than 1 hour [0], 1 to 2 hours [1], 2 to 4 hours [2], and more than 4 hours a week [3]. The final PASE activity score is calculated by multiplying by an item weight the amount of time spent on each activity (hr./week) (**Colleen, 2012**).

Part II: 3-day food-recall diary.
Records have been done for everything of eating and drinking for three days (2 weekdays and 1 weekend day). Both meals, snacks, and drinks are included. Please select days that are representative of existing eating habits for the elderly **(Vargas-García, &Vargas-Salado, 2013)**.

Validity:
The tools were transferred to Arabic language and reviewed to ascertain their validity by five experts in the community and gerontological health nursing, who checked the method for clarification, validity, completeness, comprehension and applicability.

Reliability: was measured using cronbachs' Alpha test on 10% of cases it was 0.887 for knowledge, 0.692 for functional constipation, 0.963 for severity, and 0.668 for physical activities, 0. 741 for diet.

Pilot study:
Before the start of data collection, pilot study was performed on 20 of elderly (10%) in a selected setting to examine the applicability, and clarity of the developed tools. It was not excluded from the study.

Method

1. **Administrative phase:** An official letter from the Dean of the Faculty of Nursing was given to the heads of geriatric clubs in the town of Assist to permit for the researcher to carry out this study with the elderly participants. This letter contained a permit for the research to be carried out and clarified the aim of the study.

2. **Ethical consideration:** the Ethical Committee at the Faculty of Nursing has accepted the plan for study. There is no danger to the subject of the research during the implementation of the study. Patients were directed by their right to withdraw from the research at any time. Confidentiality and anonymity was assured. The study was followed common ethical principle in clinical research.

3. **Data collection phase**: An explanation of the purpose of the research was done to chiefs of geriatric clubs. Also the goal of the study was clarified to studied elderly to gain their cooperation before starting data collection. The researcher started to collect data from 11 June 2019 to 11 August 2019. Assessment was done on all the study sample (200) elderly participants. The data was collected 3 days per week at evening time, average number of elderly met beer day 7-9. Sometimes the interview questionnaire filled by the elderly themselves and others by the researcher. The length of each interview took from 30-35 minutes. The researcher was available in club to answer any questions.

4. **Statistical analysis:** The information obtained was checked, prepared, coded, evaluated and tabulated for computer entry. Descriptive statistic (percentages, means and standard deviations) were done using computer program SPSS version 26. The one-way variance analysis (ANOVA) test used to compare means is used. The F-test is test statistic resulting from an ordinary one-way analysis of variance (ANOVA). F-test is used to test differences in means in the three phase's pre, post, and follow-up. And Chi-square test were used for measures of significance. The P value is important at P<0.05 and the P<0.01 value is highly significant.

Results

Table (1): Socio demographic characteristics among elderly participants in Geriatric clubs at Assiut City, 2019

| Socio demographic data	No.(200)	%
• **Age/(years):**		
- 60 -< 65	106	53.0
- 65 -< 70	90	45.0
- ≥ 70	4	2.0
Mean ± SD	64.67±2.64	
• **Sex:**		
- Male	14	7.0
- Female	186	93.0
• **Marital status:**		
- Married	122	61.0
- Widow	75	37.5
- Divorced	3	1.5
• **Level of education:**		
- Primary education	16	8.0
- Preparatory education	13	6.5
- Secondary (general & technical of 3 or 5 years)	132	66.0
- University graduate	39	11.5
• **Past Occupation:**		
- Non-working/ house wife	52	26.0
- Employee	139	69.5
- Technical	9	4.5
• **Residence:**		
- Rural	6	3.0
- Urban	194	97.0
• **Living with:**		
- Alone	54	27.0
- With their family	146	73.0
• **Social level**		
- Low	45	22.5
- Middle	96	48.0
- High	59	29.5
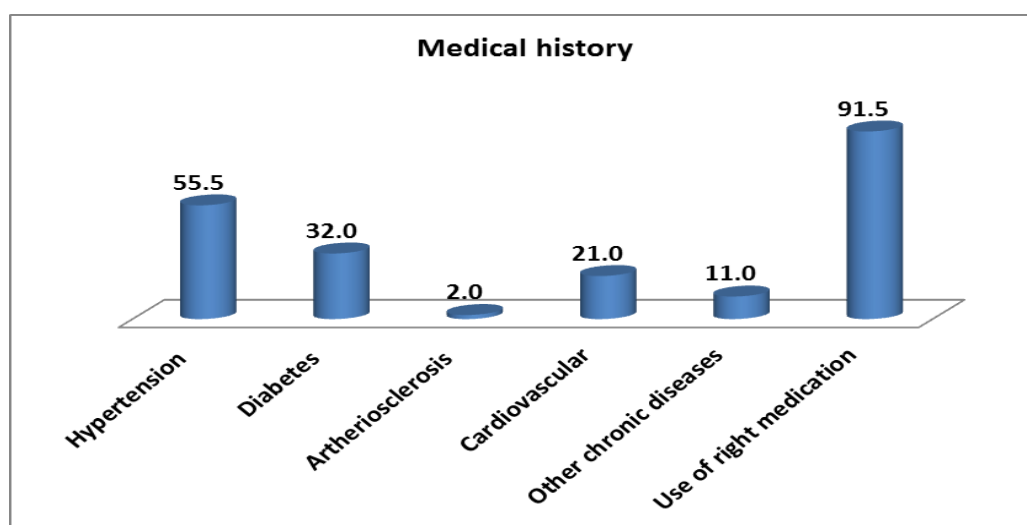
Figure (1): Distribution of the elderly participants regarding their medical history in Geriatric clubs at Assiut City, 2019
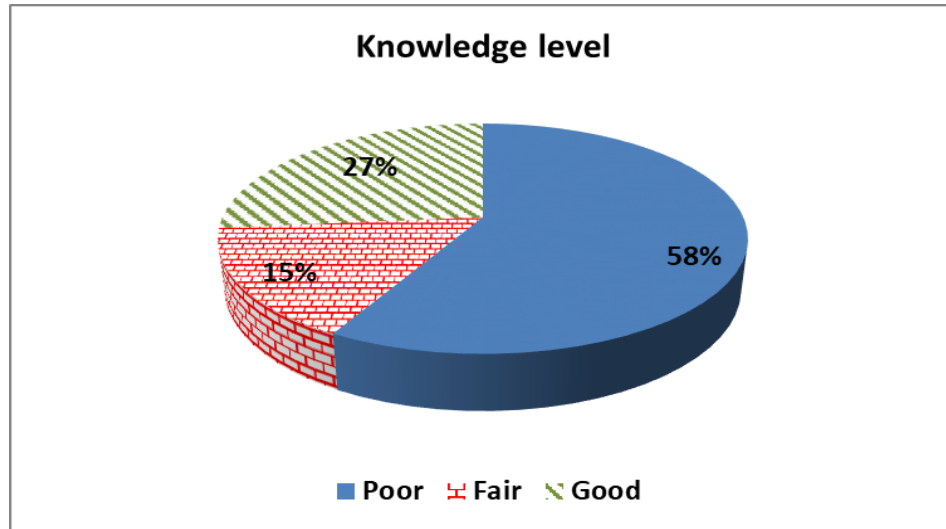
Figure (2): Distribution of the studied elderly regarding their total knowledge scores about constipation in Geriatric clubs at Assiut City, 2019

Table (2): Distribution of elderly participants regarding their symptoms of functional constipation in Geriatric clubs at Assiut City, 2019

| Items	No. (200)	%
In more than 25 percent of defecations, strain	147	**73.5**
More than 25 percent of defecations include lumpy or hard stools	91	45.5
Incomplete evacuation in more than 25% of defecation sensations	96	**48.0**
Anorectal obstruction or blockage feeling in over 25 percent of defecations	95	47.5
Manual maneuvers (e.g. digital evacuation, pelvic floor support) to promote defecation by more than 25%	34	**17.0**

#More than one answer
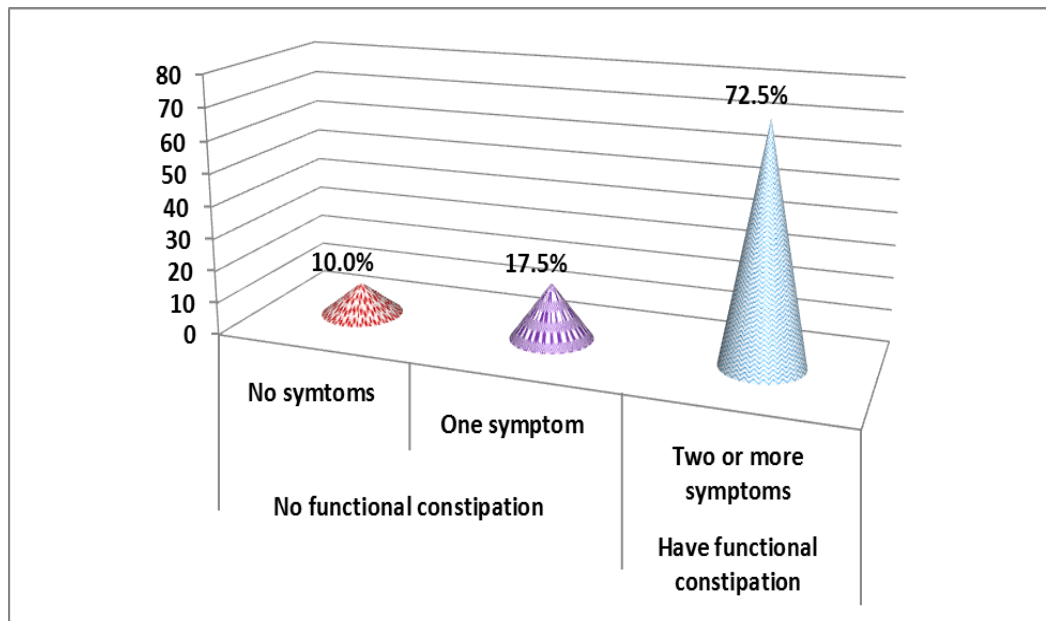
Figure (3): prevalence of functional constipation of the studied elderly in Geriatric clubs at Assiut City, 2019

Table (3): Distribution of elderly participants regarding their daily monitoring for symptoms of constipation (Standard diary) in Geriatric clubs at Assiut City, 2019

Items	No.(200)	%
Consistency of feces		
Small and hard like marbles	75	37.5
Bulky and hard	64	32.0
Normal	61	30.5
Straining during defecation		
Defecation with no straining	50	25.0
At the beginning of defecation	53	26.5
Halfway at through defecation	30	15.0
Throughout defecation	67	33.5
Feeling uncompleted evacuated after defecation		
Yes	104	**52.0**
No	96	48.0
The amount of feces		
Smaller than the previous evacuation	131	**65.5**
Regular	67	33.5
Large amount	2	1.0

Table (4): Distribution of elderly participants regarding their severity of constipation symptoms in Geriatric clubs at Assiut City, 2019

Items	No. (200)	%
Severe symptoms related to abdomen		
Absent	43	21.5
Mild	22	11.0
Moderate	71	35.5
Sever	64	**32.0**
Severe symptoms related to rectum		
Absent	50	25.0
Mild	43	21.5
Moderate	89	44.5
Sever	18	**9.0**
Severe symptoms related to stool		
Absent	45	22.5
Mild	10	5.0
Moderate	16	8.0
Sever	129	**64.5**

Table (5): Distribution of elderly participants regarding their total activities during the last 7 days in Geriatric clubs at Assiut City, 2019

Items	No. (200)	%
Sitting activities		
Seldom (1-2 days)	55	27.5
Sometimes (3- 4 days)	141	70.5
Often	4	2.0
Light activities		
Never	17	8.5
Seldom (1-2 days)	183	**91.5**
Moderate activities		
Never	4	2.0
Seldom (1-2 days)	196	98.0
Strenuous activities		
Never	188	94.0
Seldom (1-2 days)	12	6.0

Items	No. (200)	%
Muscle strength activities		
Never	191	95.5
Seldom (1-2 days)	9	4.5
Household activity		
No	8	4.0
Yes	192	**96.0**

Table (6): Distribution of elderly participants regarding their foods that have been eaten during the last three days, in Geriatric clubs at Assiut City 2019

Items	No. (200)	%
Foods helps to prevent constipation		
Water		
Less than recommended	120	60.0
Recommended amount	80	40.0
Green fruit or vegetable		
Less than recommended	187	**93.5**
Recommended amount	13	6.5
Fenugreek, herbs and soup		
Less than recommended	182	91.0
Recommended amount	18	9.0
Browne bread		
Less than recommended	6	3.0
Recommended amount	194	**97.0**
Cocked vegetable		
Less than recommended	49	24.5
Recommended amount	151	75.5
Oates, Nuts		
Less than recommended	192	**96.0**
Recommended amount	8	4.0
Honey		
Less than recommended	162	81.0
Recommended amount	38	19.0
Foods helps the occurrence of constipation		
Rice or pasta		
Recommended amount	92	46.0
More than recommended amount	108	**54.0**
Caffeine drinks		
Recommended amount	39	19.5
More than recommended amount	161	**80.5**
Milk product		
More than recommended	200	**100.0**
Fried food		
Recommended amount	133	66.5
More than recommended amount	67	**33.5**
White bread		
Recommended amount	75	37.5
More than recommended amount	125	**62.5**

Table (7) Relation between functional constipation and socio demographic characteristics among elderly participants in Geriatric clubs at Assiut City 2019

| Items		No constipation (No=55) No.	%	Constipation (No=145) No.	%	X^2	P-value
Age	60 -< 65	33	60.0	73	50.3	2.640	0.267
	65 -< 70	22	40.0	68	46.9		
	≥ 70	0	0.0	4	2.8		
Sex	Male	6	10.9	8	5.5	1.781	0.182
	Female	49	89.1	137	**94.5**		
Marital status	Married	39	70.9	83	57.2	3.388	0.184
	Widow	15	27.3	60	41.4		
	Divorced	1	1.8	2	1.4		
Level of education	Primary education	2	3.6	14	9.7	5.252	0.386
	Preparatory education	3	5.5	10	6.9		
	Secondary (general & technical of 3 or 5 years)	42	76.4	80	71.9		
	University graduate	8	14.5	31	21.4		
Past Occupation	Non-working/ house wife	18	32.7	34	23.4	2.712	0.258
	Employee	36	65.5	103	71.0		
	Technical	1	1.8	8	5.5		
Residence:	Rural	2	3.6	4	2.8	0.106	0.745
	Urban	53	96.4	141	**97.2**		
Living with	Alone	12	21.8	42	29.0	1.033	0.309
	With their family	43	78.2	103	71.0		
Social level	Low	1	1.8	12	8.3	3.902	0.142
	Middle	24	43.6	48	33.1		
	High	30	54.5	85	**58.6**		
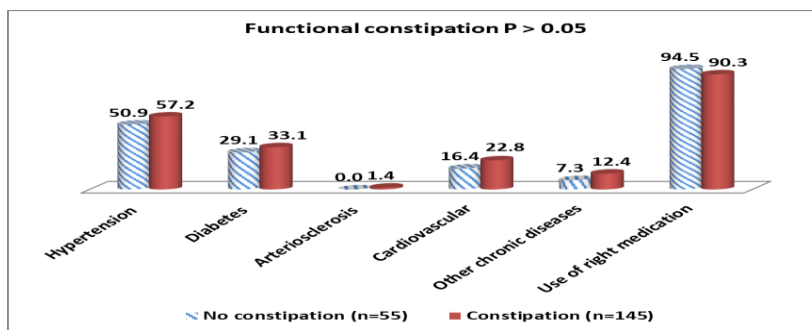
Figure (4): Relation between functional constipation and chronic disease among elderly participants in Geriatric clubs at Assiut City 2019
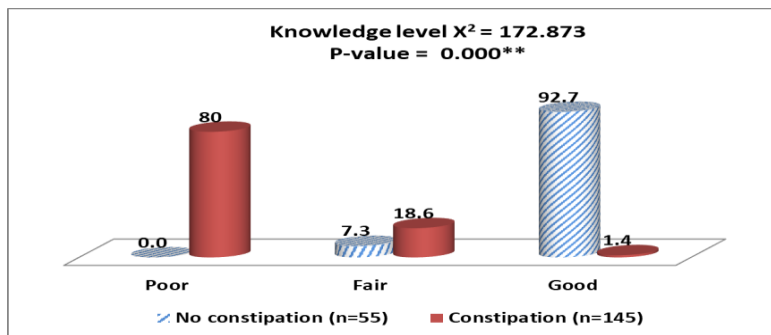

Figure (5): Relation between functional constipation and total knowledge among elderly participants in Geriatric clubs at Assiut City 2019

Table (8) Relation between functional constipation and severity of constipation symptoms among elderly participants in Geriatric clubs at Assiut City 2019

Severity of constipation symptoms	Functional constipation				X^2	P-value
	No constipation (n=55)		Constipation (n=145)			
	No.	%	No.	%		
Severe symptoms related to abdomen						
Absent	43	78.2	0	0.0	172.642	0.000**
Mild	12	21.8	10	6.9		
Moderate	0	0.0	71	49.0		
Sever	0	0.0	64	44.1		
Severe symptoms related to rectum						
Absent	50	90.9	0	0.0	177.838	0.000**
Mild	5	9.1	38	26.2		
Moderate	0	0.0	89	61.4		
Sever	0	0.0	18	12.4		
Severe symptoms related to stool						
Absent	45	81.8	0	0.0	200.000	0.000**
Mild	10	18.2	0	0.0		
Moderate	0	0.0	16	11.0		
Sever	0	0.0	129	**89.0**		

** P. Value is significant at P<0.05

Table (9): Relation between functional constipation and total activities during the last 7 days, among elderly participants in Geriatric clubs at Assiut City, 2019

Total activities	Functional constipation				X^2	P-value
	No constipation (n=55)		Constipation (n=145)			
	No.	%	No.	%		
Sitting activity						
Seldom	11	20.0	44	30.3	12.151	**0.002***
Sometimes	40	72.7	101	69.7		
Often	4	7.3	0	0.0		
Light activity						
Never	1	1.8	16	11.0	4.355	**0.037***
Seldom	54	98.2	129	89.0		
Moderate activity						
Never	2	3.6	2	1.4	1.036	0.309
Seldom	53	96.4	143	98.6		
Strenuous activities						
Never	49	89.1	139	95.9	3.242	0.072
Seldom	6	10.9	6	4.1		
Muscle strength activity						
Never	52	94.5	139	95.9	0.161	0.688
Seldom	3	5.5	6	4.1		

** P. Value is significant at P<0.05

Table (10) Relation between functional constipation and foods that have been eaten during the last three days, among elderly participants in Geriatric clubs at Assiut City, 2019

Items	Functional constipation(n=145)				X²	P-value
	No constipation (n=55)		Constipation (n=145)			
	No.	%	No.	%		
-Foods help prevent constipation						
Water						
less than recommended	25	45.5	95	65.5	6.688	0.010*
recommended amount	30	54.5	50	34.5		
Green fruit or vegetable						
less than recommended	42	76.4	145	100.0	36.655	0.000**
recommended amount	13	23.6	0	0.0		
Fenugreek, herbs and soup						
less than recommended	37	67.3	145	100.0	52.148	0.000**
recommended amount	18	32.7	0	0.0		
Browne bread						
less than recommended	0	0.0	6	4.1	2.346	0.126
recommended amount	55	100.0	139	95.9		
Cocked vegetable						
less than recommended	13	23.6	36	24.8	0.031	0.861
recommended amount	42	76.4	109	75.2		
Oates, Nuts						
less than recommended	47	85.5	145	100.0	21.970	0.000**
recommended amount	8	14.5	0	0.0		
Honey						
less than recommended	41	74.5	121	83.4	2.054	0.152
recommended amount	14	25.5	24	16.6		
-Foods helps the occurrence of constipation						
Rice						
Recommended amount	30	54.5	62	42.8	2.230	0.135
More than recommended amount	25	45.5	83	57.2		
Caffeine drinks						
Recommended amount	21	38.2	18	12.4	16.867	**0.000****
More than recommended amount	34	61.8	127	87.6		
Milk product						
More than recommended amount	55	100.0	145	100.0	-	-
Fried food						
Recommended amount	40	72.7	93	64.1	1.321	0.250
More than recommended amount	15	27.3	52	35.9		
White bread						
Recommended amount	31	56.4	44	30.3	11.518	**0.001***
More than recommended amount	24	43.6	101	69.7		

** P. Value is significant at P<0.05

Table (1): Shows the sociodemographic characteristics of the elderly studied. It was noted that the age group between 60-<65 years represent more than half (53.0%) with mean ± S.D. was 64.67±2.64. Also 93.0% and 97.0% of them were female and from urban, also and 61.0%, 66.0 and 69.5% of them were married, secondary education and employee. in addition 73.0% and 48.0% of them live with their family and hade middle social level.

Figure (1): This figure showed that 55.5% of studied elderly had history of hypertension while 2.0% had atherosclerosis.

Figure (2): Also that 58.0% of studded elderly had poor knowledge score while 27.0% of them had good knowledge scores about constipation

Table (2): This table showed that 73.5% of studied elderly had straining in more than 25% of defecations and 48.0% of them were in more than 25% of defecations, the feeling of incomplete evacuation. While 17.0% of them reported manual maneuvers to promote more than 25 percent of defecations (e.g., digital evacuation, pelvic floor support).

Figure (3): Illustrate that 72.5% of studied elderly had functional constipation with two or more symptoms.

Table (3): Reported 65.5% of studied elderly the amount of feces was less than that of the previous evacuation. While 52.0% of them reported that had feeling uncompleted evacuated after defecation.

Table (4): Also 64.5% and 32.0% respectively of studied elderly had severe symptoms related to stool and abdomen

Table (5): This table found that 91.5% and 98.0% of studied elderly had seldom light activities and moderate activities, while 94.0% don't do strenuous activities.

Table (6): This table reported that 93.5%, 91.0%, 96.0 and 81.0 respectively of the studied elderly reported take green fruit or vegetable, fenugreek, herbs and soup, oates, nuts and honey less than recommended. While 100.0% of studied sample take milk product more than recommended and 54.0%, 80.5%, 33.5% and 62.5 of them take rice or pasta, caffeine drinks, fried food and white bread more than recommended amount**.**

Table (7): This table illustrated that 97.0% and 94.5 % of studied sample hade constipation were female and were from urban. This also no statistical significant difference at all times.

Figure (4): Show that the no statistical significant between functional constipation and chronic disease among elderly participants.

Figure (5): While 80.0% of studied elderly with constipation hade poor knowledge score with highly statistical significant difference at P=0.000

Table (8): This table showed that 89.0%, 44.1% and 12.4 of studied elderly with constipation had severe symptoms related to stool, abdomen, and rectum with statistical significant difference at P=0.000 at all items.

Table (9): Presented that there was a statistically significant difference between functional constipation and activities during the last 7 days with P=0.002, 0.037 at items named sitting activity and light activity.

Table (10): Presented that there were statistically significant differences between functional constipation and foods eating during the last three days with P=0.000 at items name green fruit or vegetable, fenugreek, herbs and soup, oates, Nuts and P=0.010 at drinking water less than recommended.

While P=0.000, 0.001 take caffeine drinks and white bread more than recommended amount

Discussion:
Constipation is a prolonged, multifunctional condition that affects about 20% of the world's total population and is more common in females and the elderly. Its prevalence ranges from 7.72% to 42.86% in people older than 70 years **(Gomes et al 2019)**. The aim of the study was to assess functional constipation among elderly people at Assiut Geriatric clubs. With regard to socio-demographic characteristics, this analysis showed that more than half of the studied were elderly aged between 60-<65 year, and majority of elderly were female. Also more than half of studied samples were married, got secondary education and approximately less than three-quarters of them were employee. In addition, the vast majority of the studied samples were living in urban areas.

The current findings agree with **Gomes et al., (2019)** it is more commonly found in women who fined the higher prevalence in the age group of 60-69 years old, and its related factors. Moreover, **Qaseem et al., (2017)** found that constipation rates perform to increase gradually after the age of 50 years. **Mihara et al., (2020)** showed that female sex as an independent risk factor of constipation.

This result noted that vast majority of elderly participants were live in urban areas. This may be related to the natural of urban society living which characterized by limited activity level than rural society. This is similar to **Yilmaz & Asiret, (2017)** who found that elderly people in the urban areas had a higher prevalence in constipation than rural areas, but there is no specific description in either domestic or international research to clarify this difference. **Farahat et al (2019)** who study the risk factors for constipation among elderly people attending the Damietta District family health center, and reported that elderly population in the urban areas had a higher prevalence in constipation than rural areas but there is no specific description in either domestic or international research to explain this difference. **Yang et al., (2016)** who showed that there was no difference in the constipation incidence between urban and rural areas.

Traditionally, care for older persons was a duty of the Egyptian family. Family support is especially important for older people, particularly when they need assistance because of chronic illnesses and diseases that are debilitating **Shaheen et al (2017).** Also the present study revealed that the majority of the researchers studied sample living with their family, this may be indicated to the effect on dependent on their family to had decrease physical ability. This results disagree with, **Aminu, (2019)**

who study Association between the effects of oral health and older adults' living arrangements, in their study of the association between living alone and health care utilization in older adults, mentioned that a great number of the studied elderly persons live alone. Also, this results agreed with **Yan, & Fang, (2017)** who studied elder abuse and neglect in Asia, and found that the majority of elder live with their family.

The present research has shown that more than half of studied sample had lowly knowledge. **Turk et al (2014)** who studied General knowledge about diabetes in the elderly diabetic population in Slovenia, found that the elderly diabetic low level of general knowledge about the disease.

A symptom and not a disease is constipation. It happens if the colon absorbs too much water or if the muscle contractions of the colon are sluggish or slow, allowing the stool to pass too slowly through the colon. **(Chen et al., (2017).** This study presented that less than three quarter of the studied elderly had constipation with more than one symptom approximately more than two thirds of them had a straining in more than 25% of defecations.

O'Neill et al., (2017) who study Burden and risk factors for gastrointestinal symptom, found that the prevalence of functional constipation has detrimental effects on the quality of life and sleepiness during the day. Although the demographics and disease burden are identical between functional constipation and irritable bowel syndrome, although the clinical symptoms vary considerably.

Regarding the severity of constipation symptoms, the current findings show that more than one quarter of the studied elderly had severe symptoms related to abdomen and less than two quarters of the studied elderly had severe symptoms related to stool. This agreed with **Dumic et al (2019)** who study Older-age Gastrointestinal Tract Disorders, found the elderly constipation symptoms straining rather than decreased bowel movement frequency and abdominal pain and discomfort among elderly people.

The present study illustrated that functional constipation and activities during the last 7 days, the majority of the studied sample show in light and household activity .These results are in agreement with **Gao et al., (2019)** who study Exercise therapy in patients with constipation: a systematic study of randomized controlled trials and a meta-analysis. The findings of this systematic examination and meta-analysis showed that, as a way of improving the symptoms of constipation patients, exercise had important benefits.

In addition, this is similar to results reported by **Forootan et al., (2018)** who study chronic constipation and found that the dietary changes,

increased intestinal transit times, lack of physical activity, are potential causes for the development of functional constipation in the elderly.

This study showed the statistical significant differences between functional constipation and foods that help prevent constipation during the last three days observed on green fruit or vegetable, fenugreek, herbs and soup, oates, Nuts and water less than recommended. Also between functional constipation and foods that have been eaten during the last three days take caffeine drinks and white bread more than recommended amount.

This is agreement with **Emmanuel et al., (2016)** who study Constipation in Older People, A Consensus Statement, It found that fiber intake was significant, particularly for the elderly, to the point that all national dietary recommendations and food guide pyramids emphasize the need to increase dietary fiber intake, such as fruits and vegetables, in order to avoid functional constipation.

Moreover, this finding supported by **Haller et al., (2020)** who study Nutrition Therapy for Intestinal Disorders and fiber supplementation was found to be in the form of laxative discontinuation in more than half of the fiber population.

Also in the same line with **Ahn et al., (2018)** Who discovered that statistical significance was provided relation between constipation and malnutrition, where the percentage of constipation was significantly lower among elderly patients who ate fruits and vegetables and those who drank more than five cups of fluids per day. This may be attributed to low intake of fluid, which is associated with slow colonic transit and low stool production.

This is in agreement with **Martínez-Martínez et al., (2017)** and all older people individuals evaluated as having a mean intake of fiber below the recommended rate were considered constipated as compared with others. Moreover, **Lopes et al., (2019)** found that higher fiber intake was correlated with a decreased risk of constipation after multiple factors were regulated.

Conclusion
Based on the results findings, having concluded that, Increase symptoms of functional constipation in elderly with low level of knowledge about physical activity and suitable dietary intake of fluids and fibers

Recommendations:
- Health education program about functional constipation, dietary intake and physical activities
- Provide a simplified booklet about functional constipation (symptoms, physical activity and suitable diet) in the library of geriatric clubs

- Further research about the effect of nursing intervention fiber intake was decreased risk of constipation.

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