

Health Needs and Problems of Bedridden Older Adults in Geriatric Homes

Hanan Khalil Elsayed Abd Elaal¹, Nahla Ahmed Abd Elaziz², Shaimaa Fathy Miky³

Community Health Nursing Department, Faculty of Nursing – Ain shams University-Cairo- Egypt

¹ B.sc.In Nursing, ² Professor of Community Health Nursing, ³ Lecturer of Community Health Nursing

Abstract

Background: Bedridden is a form of immobility that can present as the inability to move or even sit upright. Caring for bedridden older adults can be difficult and requires a great deal of patience and understanding. **Aim:** The aim of this study was to assess the health needs and problems of bedridden older adults in geriatric homes. **Design:** Descriptive design was used to conduct this study. **Setting:** The study was conducted in geriatric homes in East Cairo, which includes the high rate of bedridden older adults in Dar Fouad Habib, Dar Al Marwa, and Dar Saidat Misr. **Sample:** A convenience sample of 144 bedridden older adults from the previously mentioned settings. **Tools:** Two tools were used for data collection. The first tool was divided into four parts, a structured interviewing questionnaire to assess 1-socio-demographic characteristics of bedridden older adults. 2- Physical health status assessment, 3-health needs assessment of bedridden older adults. 4- Health problems assessment of bedridden older adults. The second tool was to assess geriatric home environment. **Results:** The study findings revealed that 70.8% of bedridden older adults were 70>80 years, with the mean± SD of age is 74.4±7.07, 58.3% of bedridden older adults were females, 67.4% of the study sample were widows, regarding educational level, 24.3% of bedridden older adults had a university education, and 39.6% of bedridden older adults had a previous job in the governmental sector. 67.0% of them had insufficient monthly income. **Conclusion:** There was a positive and highly significant correlation between the total score of health needs and problems and the health status of bedridden older adults. **Recommendations:** periodic physical examination for older adult to early detection of health problems and promote intervention. Continuous assessment of needs and problems for bedridden older adults.

Keywords: Bedridden Older Adults, Health Needs, Problems, and Geriatric Homes.

Introduction

The elderly is defined by the state census bureau as a person aging 60 years and older with three subcategories of elderly person's 60 to 65, 70 to 75, 75 to more. Aging results in reducing physiological reserve, which increases vulnerability to diseases and impairments. Older adult changes that occur in individuals include physiological, psychological, sociological changes and emotional changes (Bannister et al., 2019).

Statistics from the United Nations population indicate that more than 700 million people are over the age of 60 years. By 2050, they will number 2 billion, more than 20% of the world's population, 60 years or more. The increase in the number of elderly will be greater and faster in a number of countries in the developing world, and compared to Asia, which

is described as the region with the largest number of elderly, Africa faces the largest proportionate growth (United Nations, 2020).

Ibrahim, (2016) stated that aging is one of the most serious social issues, not only in Egypt but in the world. A country's socioeconomic conditions must be taken into account when considering the issue of rapid aging. Elderly is a universal phenomenon with a varying degree of probability, individual survive childhood, grow to maturity, and become old and it is the closing period in the life span, that is a period when people move away from previous, more desirable periods or times of usefulness and ignoring the future as much as possible. Age sixty is usually considered the dividing line between middle and old age. The many bedridden elderly needs assistance and care in a healthy, safe environment and face a broad range of medical,

physical, psychological, social needs that require assistance and supervision depending on their needs.

A bedridden older adult stays in bed for short or long periods for various reasons, including chronic illnesses, old age, and disability. Bedridden older adults cannot perform self-care and medical care partially or completely and need the help of others. Bedridden is a major cause of morbidity and mortality in older adults (**Shilpa et al., 2018**).

The causes of bedridden elderly may result from cardiovascular, respiratory, musculoskeletal, neurologic, gastrointestinal, metabolic, urinary, or skin problems. Bedridden older adults often suffers from several diseases which worsen their mobility. Arthritis, osteoporosis, hip fracture, stroke, and Parkinson's disease are among the most common causes of bedridden in old age (**Zhang et al., 2019**).

The complications of bedridden, such as pressure injure contractures, pulmonary embolism, lung infections, muscular atrophy, urinary retention, urinary incontinence, constipation, fecal incontinence, muscular weakness, pneumonia, depression, and sensory deprivation (**Pellatt, 2014**).

The management of bedridden elderly involves a thorough assessment leading to a list of problems and then treatment aimed at these problems. The therapy should be carried out by the multidisciplinary team and also, the prevention and management of bedridden elderly complications are generally easier than to treat or cure them. These complications can be substantially reduced by identifying risk factors and applying preventive measures, and using simple exercises and teaching the bedridden older adults or the caretaker (**Smith et al., 2017**).

Bedridden older adults, as any age group, have certain basic needs, such as physical, psychological, and emotional needs as well as the needs for love and belonging, self-esteem, and self-actualization. Their physical,

emotional, and social needs are complex and interrelated. Physical needs for bedridden older adults start with the most basic of requirements, good nutrition, hydration, shelter, sleep, and treatment of illness and injury are fundamental to survival. (**Tatangelo, 2018**).

The bedridden elderly have a basic need to remain connected to family members, friends, and like-minded elderly. This is psychological, social beneficial because such connections can minimize issues with depression and loneliness and boost emotional stability. A bedridden older adult can become depressed because they may feel that they are burdening others, are losing their autonomy or because their social interactions are limited. It is important to meet their emotional, social, and mental health needs and to help the elderly know that they are still part of their community (**Portacolone et al., 2019**).

Health problems among bedridden elderly will occur if their healthy-living needs are not met or achievable. The implications, if left unchecked, can affect the bedridden older adults of life and lead to them suffering from social dysfunction. Chronic disease is associated with the risk of physical and psychological disability as well as decreased individual quality of life. Among the psychological and physical diseases commonly experienced by the elderly are dementia, Parkinson's, Alzheimer's, sleep disorders, cardiovascular, digestive system disorders, hypertension, diabetes, urinary incontinence, and rheumatism (joints) (**Jaul et al., 2018**).

Community health nurses play an important role in providing care to bedridden older adults and they should be aware of the complications and its preventive measures. The initial step in managing the actual or potential health hazards caused by immobility is to make an accurate assessment of older adult mobility status. All nursing actions are directed at providing a safe environment and preventing injury and complications (**Kassim et al., 2017**).

Significance of the study:

Older adult's number is increased today due to many factors such as increase adequacy of health services and awareness of people with regards to sanitation and better nutrition practices. Today the elderly are viewed with positive rather than myth and concern rather than neglect. Many parts of the world are facing the phenomenon of aging (**United Nations, 2017**).

The number of bedridden elderly needing assistance with one or more activities of daily living was estimated in 2017 at 2.7 million. The number is expected to rise to 5.9 million bedridden elderly by 2040 and to 7.6 million by 2070. The agency for health care research and quality; reported the number of non-institutionalized American bedridden elderly needing help with ADLs was 8.6 million (**Wittenberg, 2018**).

According to the Central Agency for Public Mobilization and Statistics showed that the number of elderly people in Egypt is about 7 million, or 7.1% of the total population on January 1, 2020, and this percentage is expected to increase to 17.9% in 2052 (**CAPMAS, 2020**).

(**Wahba, 2018**) stated that in Egypt, the percentage of the elderly who are bedridden in geriatric homes amount 15% of the total number of elderly adult residence in geriatric homes.

Aim of the study:

Aim of this study to assess health needs and problems of bedridden older adult in geriatric homes through:

- 1- Assess the physical health status of bedridden older adults.
- 2- Assess the health needs of bedridden older adults in geriatric homes.
- 3- Assess health problems of the bedridden older adults in a geriatric home.
- 4- Assess geriatric home environment for the bedridden older adults.

Research questions

The current study answered the following questions:

- Is there a relation between physical health status and health needs of bedridden older adult?
- Is there a relation between physical health status and health problems of bedridden older adults?
- Is there a relation between physical health needs and health problems of bedridden older adults?
- What are the differences between geriatric homes environment?

Subjects and Methods:

The subject and method of the current study discussed under the following main four designs:

- I- Technical design.
- II- Operational design.
- III- Administrative design.
- IV- Statistical design.

I-Research design:

A descriptive research design was used to conduct this study.

Study Setting:

This study was conducted at Geriatric Homes in East Cairo which include the high rate of Bedridden Older Adults Dar Fouad Habib in 32 kilo Masr Ismalia road having 64 Bedridden Older Adult, Dar Al Marwa for older adult in Masr Elgedida have 50 Bedridden Older Adult, Dar Saidat Misr for caring of elderly in Masr Elgedida they have 30 Bedridden Older Adult.

Subjects and sample:

Convenience sample, of 144 Bedridden Older Adult from previous mentioned settings according to the following criteria.

Criteria of selection:

Both sexes, age over 60 year's old, bedridden conscious client.

Technical design:

Tools of data collection:

The data for this study were collected by using two tools:

First tool: (Appendix I)

A structured interviewing questionnaire designed by the investigator and written in a simple Arabic language to gather data which concern the aim of the study and consists of the following four parts:

Part I: Socio-demographic characteristic of bedridden older adult includes (age, gender, marital status, educational level, job, monthly income, source of income, number of children, previous residence)

Part II: This part was adopted from **König, (2010)** to assess physical health status of bedridden older adults, by observation and medical record.

❖ **Scoring system:**

For bedridden older adult physical health status was scored "one" point to present problems answer, "zero" if no present problems, total score= 53 grads. These scores were summed and were converted into a percent score.

It was classified into 2 categories:

- **Stable** if the score was 0: < 31 (< 60%).
- **Unstable** if the score was 31: 53 (≥ 60%).

Part III: Assessment the health needs of bedridden older adults: This part was adopted from (**Crystal et al., 2007 and Dijkhuizen & Annemarie et al. 2016**).

❖ **Scoring system:**

For bedridden older adult health needs was scored (two) for "Always" (one) for "sometimes" & (zero) for "never", total score= 42 grads. The scores of the items were summed up and were converted into a percentage score.

It was classified into 3 categories:

- Low needs** 0: < 42 "Independent" (< 50%).
- Moderate needs** 42 :< 58 "dependent" (50-70%).
- High needs** 58:84 "more dependent" (≥ 70%).

Part V: Assessment the health problems of bedridden older adults. This part was adopted

from **Lynn et al. (2011), Suzuki et al. (2016) and Al-Kandari and Crews (2014)**.

Scoring system:

For bedridden older adult health problems was scored (two) for "Always", (one) for "sometimes" and (zero) for "never", total score= 56 grads. The scores of the items were summed up and were converted into a percentage score.

It was classified into 3 categories:

- Mild problem** 0: 56 (<50%).
- Moderate problem** 56: < 81 (50-70%).
- Sever problem** 81: 112 (≥ 70%).

Second tool:

Geriatric home environment assessment: This tool was adopted from **Marshall et al. (2015)**.

❖ **Scoring system:**

A scoring system was followed by Geriatric Home Observational Checklist (GHOC) to assess geriatric home environmental assessment; give scored (one) for "yes" and (zero) for "No". , total score= 34 grads. These scores were summed up and were converted into a percentage score

It will be classified into 2categories:

- **Good** environmental condition 0:17 (> 70%).
- **Poor** environmental condition 23:34 (< 50%).

Content validity and reliability:

Face and content validity of the study tools was assessed by a group of five experts in community health nursing, Faculty of Nursing, Ain-Shams University, and a medical doctor, for comprehensiveness, accuracy, and clarity in language.

Reliability of tool

The reliability of the tool was assessed through measuring its consistency by the Cronbach's alpha test and its value was (0.889).

II-Operational design

It included Operational design for this study consisted of pilot study, field work, content validity, and ethical consideration.

Preparatory phase:

This phase included reviewing of local and international literature related to the various aspects of the research problem. This helped the investigator to be acquired with the magnitude and seriousness of problems and guided to prepare the required data collection tools.

Pilot study

A pilot study was conducted on 15 Bedridden Older Adult those represent (10%) from total sample study, it was done for evaluation of the applicability and the clarity of the tools, assessment of feasibility of field work, identification of a suitable place for interviewing bedridden older adult, and to detect any possible obstacles that might face the investigator and interfere with data collection. The sample of the pilot study was included the total study sample because the questions was related to topic.

Fieldwork:

The study was carried out over 2 days per week during the morning shift in the different geriatric homes by using the previously mentioned study tools. The investigator introduced herself first then met with bedridden older adults and caregivers to explain the purpose of the study to the subjects before starting the interview where each subject will be interviewed individually.

The data collection process spanned about 6 months during the period from 21 July until December 2019. The investigator attended the geriatric home from 10:00 a.m. to 2:00 p.m., two days per week (Sunday and Wednesday) for each geriatric home to observe the bedridden older adult clients in different situations; the investigator interviewed the institution's administrators and the social worker to meet the bedridden older adults in their rooms.

Each bedridden elderly was interviewed individually after oral consent for participation in the study according to ethical issues. The investigator introduced herself firstly to the

bedridden elderly in geriatric homes and a brief explanation of the nature and aim of the study was done before each interview. Collecting the data was done by the researcher, the time needed of completing the tool for the bedridden elderly was about 20-30 minutes; the average number was 3 to 4 bedridden older adults per day.

An observational checklist for each geriatric home was conducted for observing buildings, environmental sanitation, safety measures, health clinics, kitchens, and the crowding index took about 15-20 minutes for each geriatric home.

III- Administrative design

Official permission to conduct the study was obtained from the dean at faculty of Nursing Ain-shams University; also, an official permission was obtained from the director of Dar Fouad Habib, Dar Saidat Misr, and Dar Al Marwa in Cairo to conduct the study. The investigator had official letter to meet the directors of Geriatric Homes to explain the purpose, methods of the data collection. Total confidentiality of any obtained information was ensured. Also, the study maneuvers couldn't harm the participants.

Ethical considerations:

Each participant informed about the purpose of the study. They were informed as well that participation in the study is completely voluntary as well as they have the right to withdraw from the study at any point without any reason. Additionally, all participants were assured that their anonymity and confidentiality secured through coding the data. Moreover, participants were informed that the data not reused for any research purposes without the permission.

IV- Statistical Design

Data entry was done using SPSS v25 computer software package. Quality control was done at the stages of the coding and data entry. Statistical presentation and analysis of this study was conducted using the frequency distribution for qualitative variables and mean and standard deviation for quantitative variables. Qualitative variables were compared using chi-

square test. Pearson correlation co-efficient (r) was used for assessment of the inter relation among quantitative variables.

Significance of the result:

- **Highly significant** at p -value < 0.001 .
- **Statistically significant** was considered at p -value < 0.05
- Non-significant at p -value > 0.05 .

Result:

Table (1): shows that 70.8% of bedridden older adults were 70>80 years, with the mean \pm SD of age is 74.4 ± 7.07 , 58.3% of bedridden older adults were females, 67.4% of study sample were widows. regarding educational level, 24.3% of bedridden older adults had university education, 39.6% of bedridden older adults their previous job were a governmental sector, 67.0% of them had insufficient monthly income, while 48.6% of bedridden older adults; their source of income were governmental sector, 55.6% of them had 1-3 children, and 91.0% of bedridden older adults lived in the urban area.

Figure (1): shows that 78.5% of bedridden older adults had unstable general health status while 21.5% of them were stable general health status.

Figure (2): shows that 47.9% of bedridden older adults had high physical needs,

while 48.6% of them had high psychological need, Also 51.4% of them had high emotional needs, and 37.5% of them had social needs.

Figure (3): shows that 50.7% of bedridden older adults had severe health problems, while 30.5% of them had moderate health problems and 18.8% of the study sample only had mild health problems.

Table (2): This table shows that there was a positive correlation and highly significant between the total score of health needs, health problems, and health status.

Table (3): This table shows that there was a highly statistical significant differences in total health needs according to bedridden older adult's level of education $X^2=25.49$, $P=0.001$, there was a significant statistical difference in total health needs according to bedridden older adult's monthly income $X^2=16.823$, $P=0.032$.

Table (4): This table shows that there was a statistical significant differences in total health Status according to bedridden older adult's age group $X^2=9.63$, $P=0.002$, and monthly income $X^2=12.606$, $P=0.013$.

Table (5): This table shows that there was a highly statistical significant differences in total health problems according to bedridden older adult's marital status $X^2=56.98$, $P=0.000$.

Part I: Socio-demographic Characteristics of Bedridden Older Adult**Table (1):** Distribution of Studied Bedridden Older Adult regarding their Socio-demographic Characteristics (n= 144).

Items	NO	%
Age		
• 60<70 year	42	29.2
• 70>80 years	102	70.8
Mean ±SD	74.4±7.07	
Gender		
• Male	60	41.7
• Female	84	58.3
Marital status		
• Single	14	9.7
• Married	19	13.2
• Widow	97	67.4
• Divorced	14	9.7
Level of education		
• Not read and write	34	23.6
• Read and write	27	18.8
• Primary	33	22.9
• Secondary	15	10.4
• University	35	24.3
Previous job		
• Government sector	57	39.6
• Private sector	17	11.8
• Hand craft	26	18.0
• House wife	44	30.6
Monthly income		
• Sufficient	48	33.0
• Insufficient	96	67.0
Source of income		
• Government	70	48.6
• Privet	15	10.4
• Family assistance	20	13.9
• Social assistance (ministry of social solidarity)	10	6.9
• Others: their Children	29	20.2
Number of Children		
• 1-3	80	55.5
• > 3	20	13.9
• No sons	44	30.6
Previous Residence		
• Rural	13	9.0
• Urban	131	91.0

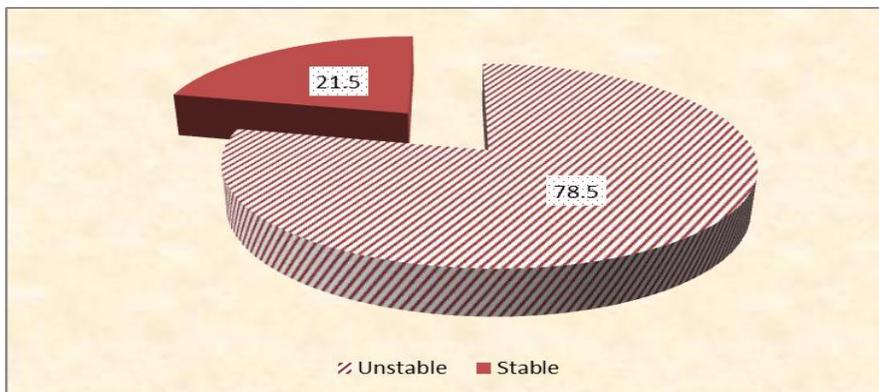


Figure (1): Distribution of Studied Bedridden Older Adult regarding their total Physical Health Assessment (n=144).

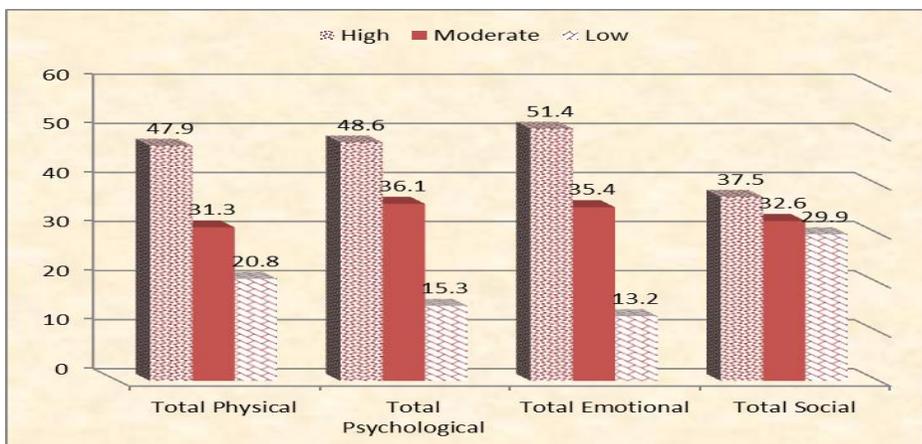


Figure (2): Distribution of Studied Bedridden Older Adult regarding their total Health Needs Physical, Psychological, Emotional and Social (n=144).

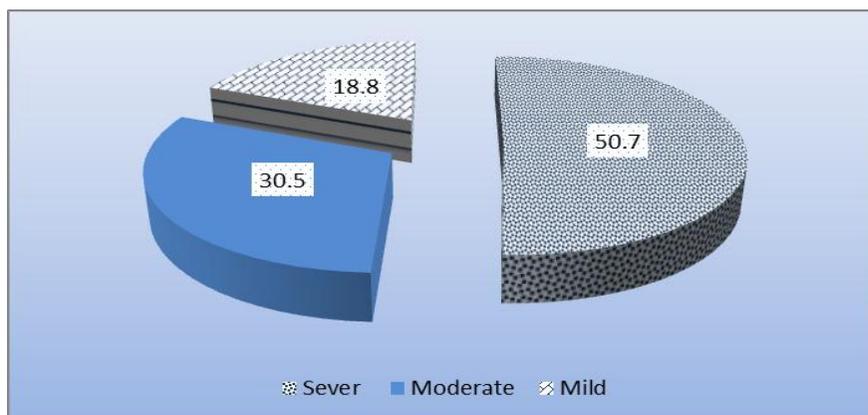


Figure (3): Distribution of Studied Bedridden Older Adult regarding their total Health Problems (n=144).

Table (2): Correlation between total score of health needs, health problems and health status (n=144).

Items		Total score of Health Needs	Total score of Health Problems	Total score of Health Status
Total score of health Needs	r		0.618	0.552
	p-value		<0.001**	<0.001**
Total score of health Problems	r	0.618		0.574
	p-value	<0.001**		<0.001**
Total score of health Status	r	0.552	0.574	
	p-value	<0.001**	<0.001**	

r-Pearson Correlation Coefficient; **p-value <0.001 highly significant

Table (3): Total Comparison Studied Geriatric Home Environmental Assessment (n=3).

Items	Dar Al Marwa				Dar Fouad Habib				Dar Saidat Misr			
	Yes		No		Yes		No		Yes		No	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
General lighting	0	0	1	100.0	1	100.0	0	0.0	1	100.0	0	0.0
External doors	1	100.0	0	0.0	1	100.0	0	0.0	1	100.0	0	0.0
Stairs	0	0	1	100.0	1	100.0	0	0.0	1	100.0	0	0.0
Reception	0	0	1	100.0	1	100.0	0	0.0	1	100.0	0	0.0
Bathrooms	0	0	1	100.0	1	100.0	0	0.0	1	100.0	0	0.0
Kitchen	0	0	1	100.0	1	100.0	0	0.0	1	100.0	0	0.0
Laundry room	0	0	1	100.0	1	100.0	0	0.0	1	100.0	0	0.0
Drive ways	0	0	1	100.0	1	100.0	0	0.0	1	100.0	0	0.0
Safety and security	0	0	1	100.0	1	100.0	0	0.0	1	100.0	0	0.0

Table (4): Statistically relation between total Health Needs and Socio-Demographic Characteristics of Studied Bedridden Older Adult (n=144).

Items	Low needs (n=30)		Moderate needs (n=46)		Highly needs (n=68)		X ²	p value
	No	%	No	%	No	%		
Age								
60 - 70 year	8	26.7	14	30.4	20	29.4	0.129	0.938
70>=80 years	22	73.3	32	69.6	48	70.6		
Gender								
Male	15	50.0	18	39.1	27	39.7	1.086	0.581
Female	15	50.0	28	60.9	41	60.3		
Level of education								
Illiterate	12	40.0	11	23.9	11	16.2		
Reading and writing	3	10.0	13	28.3	11	16.2		
Primary	11	36.7	11	23.9	11	16.2	25.49	0.001**
Secondary	3	10.0	3	6.5	9	13.2		
University	1	3.3	8	17.4	26	38.2		
Monthly income								
Insufficient	25	83.3	29	63.0	42	61.8	16.823	0.032
Sufficient	5	16.7	17	37.0	26	38.2		

(**) highly statistically significant at p<0.01

Table (5): Statistically relation between total Health Status and socio-demographic Characteristics of Studied Bedridden Older Adult (n=144).

Items	Unstable (n=113)		Stable (n=31)		X ²	p value
	No	%	No	%		
Age: 60-70 year	26	23.0	16	51.6	9.63	0.002*
70 >80 years	87	77.0	15	48.4		
Gender: Male	48	42.5	12	38.7	0.142	0.706
Female	65	57.5	19	61.3		
Marital status: Single	11	9.7	3	9.7	3.03	0.387
Married	17	15.0	2	6.5		
Widow	76	67.3	21	67.7		
Divorced	9	8.0	5	16.1		
Level of education: Illiterate	30	26.5	4	12.9	8.67	0.07
Reading and writing	20	17.7	7	22.6		
Primary	28	24.8	5	16.1		
Secondary	8	7.1	7	22.6		
University	27	23.9	8	25.8		
Monthly income					12.606	0.013*
Insufficient	72	63.7	24	77.4		
Sufficient	41	36.3	7	22.6		

(*) statistically significant at p<0.05

Table (6): Statistically relation between total Health Problems and socio-demographic characteristics of Studied Bedridden Older Adult (n=144).

Items	Mild (n=27)		Moderate (n=44)		Severe (n=73)		X ²	p value
	No	%	No	%	No	%		
Age							2.472	0.291
60-70 year	11	40.7	13	29.5	18	24.7		
70>80 years	16	59.3	31	70.5	55	75.3		
Gender							4.73	0.094
Male	14	51.9	22	50.0	24	32.9		
Female	13	48.1	22	50.0	49	67.1		
Marital status							56.98	0.000**
Single	5	18.5	4	9.1	5	6.8		
Married	10	37.0	4	9.1	5	6.8		
Widow	12	44.5	22	50.0	63	86.4		
Divorced	0	0.0	14	31.8	0	0.0		
Level of education							14.315	0.074
illiterate	5	18.5	8	18.2	21	28.8		
Reading and writing	2	7.4	11	25.0	14	19.2		
Primary	6	22.3	8	18.2	19	26.0		
Secondary	4	14.8	2	4.5	9	12.3		
University	10	37.0	15	34.1	10	13.7		
Monthly income							4.893	0.769
insufficient	14	51.9	32	72.7	50	68.5		
sufficient	13	48.1	12	27.3	23	31.5		

(**) highly statistically significant at p<0.01

Discussion:

The result of the current study showed that, the mean age of bedridden older adults was 74.4±7.07 years (**Table1**). This result was in agreement with the study carried out by **Chen,**

et al., (2018) who assess the disease characteristics and management of hospitalized bedridden older adults with community-acquired pneumonia in China; he reported that the age bedridden elderly 70≥80 years.

However, this finding in the same line with these of study carried out by **Satoshi, et al., (2020)** who compare the skin microbiome and skin physiological functions of bedridden older patients in Japan with those of ambulatory older people and young individuals and reported that the age of bedridden older adult ranged from 78-85 years.

Also, the current study revealed that more than half of bedridden older adults were female, more than two third of study sample were widow, more than two third of them had insufficient monthly income, (**Table1**) this result was agreement with the study carried out by **Hu, et al., (2017)** who assessed the health status and health service utilization of the bedridden elderly of a remote and poor village in Jinzhai, and found that 58.2% of studied bedridden older adult were female, 67.1% of studied bedridden elderly were widow, and 67.2 % of studied bedridden elderly had insufficient monthly income.

Conversely, this result was in disagreement with **Moreira, et al., (2019)** who conducted the study design of a biomedical kit for bedridden patients: a conceptual approach in Portugal, and found that 90.1% of elderly persons were male, and 92% of elderly hadn't insufficient monthly income and lived in rural area.

Also, this result was in accordance with **Indu, et al., (2018)** who conducted the study of a qualitative study on the mental health needs of elderly in South India and found that majority of elderly had insufficient monthly income, and lived in urban area.

The current study showed that majority of bedridden older adult had unstable general health status while less than quarter of them were had stable general health status (**figure 1**). This result was agreement with **Lubenow, & Silva, (2019)** who conducted the study the elderly think of the care provided by health services in Brazil and found that majority of elderly persons had unstable general health status.

Also, the result of the study in agreement with **Wicha, et al., (2018)** who assessed the health status of dependent older people and pattern of care among caregivers in Thailand and found that 24.0% of elderly persons had stable general health status.

Also, this result was agreement with **Moreira, et al., (2019)** who conducted the study design of a biomedical kit for bedridden patients: a conceptual approach in Portugal and found that less than half of bedridden older adult highly physical needs and social needs.

Regarding to their physical, psychological, emotional and social health needs. The current study illustrated that nearly half of bedridden older adult high physical needs, high psychological need, Also, more than half of them high emotional needs, and more than one third of them had social needs (**figure 2**). This result was agreement with **Gopalakrishnan, et al., (2019)** who conducted the study access and barriers to oral health care for dependent elderly people living in rest homes in New Zealand and found that half of elderly patients had high physical needs, and psychological need. Also, this result was in agreement with **Sidhu, et al., (2020)** who assessed the pattern and extent of utilization of social welfare schemes by the elderly in India and found that more than half of elderly had emotional needs.

The current study shows that more than half of bedridden older adult had severe health problems, while nearly one third of them had moderate problems (**figure 3**). This finding is congruent with **Indu, et al., (2018)** who conducted the study of a qualitative study on the mental health needs of elderly in India and found that 51.0% of elderly people had severe problems.

Also, this result is supported with **Jiao, et al., (2019)** who conducted the study incidence and related factors for hospital-acquired pneumonia among older bedridden patients in China and found that more than half of elderly people had severe problems.

The current study indicated that there were positive correlation and highly statistical significant association between health needs and health problems and health status of the studied bedridden older adults (**Table 2**). This result is in agreement with **Tiwari, & Sonal, (2018)** who conducted the study about the clinical practice guidelines for addressing the rehabilitation needs of elderly India and he found that there were correlation and a statistically significant association between level of health needs and level of health problems of the studied bedridden elderly patient.

According to research question **No 4** the current study revealed that Dar Fouad Habib, Dar Saidat Misr, and Dar Al Marwa were equal in external doors, and Dar Fouad Habib, Dar Saidat Misr were equal environmental requirements criteria for a bedridden older adults in geriatric homes in general lighting, stairs, reception, bathrooms, kitchen, laundry room, driveways, safety, and security, While opposite to Dar Al Marwa (**Table 3**). This result was supported with **Sabbour et al., (2018)** who conducted a study about the frailty and malnutrition among Egyptian elderly: prevalence and risk factors in the nursing home and community-dwelling elderly in Egypt and found that two thirds of elderly participants reported had environmental requirements in geriatric homes.

Conversely, this result is in disagreement with **Ismail et al., (2018)** who conducted the study about the risk of falls and the effect of a health education program in the prevention of falls among elderly in geriatric homes in Egypt and found that the most important environmental risk factors of falls in geriatric homes, where more than three fifth of elderly participants reported slippery bathroom floors, more than two fifth reported that the light was hard to reach

The current study revealed that there was highly significant statistical differences in total health needs according to bedridden older adult' level of education, there was a significant statistical differences in total health needs

according to bedridden older adult' monthly income (**Table 4**). This result is in agreement with **Bezerra, et al., (2019)** who conducted the study of a new methodology for use by a single caregiver to bathe bedridden elderly persons using advanced mechatronic systems in Europe and found that highly significant statistical difference in total health needs of bedridden elderly persons to level of education, and their ages.

Conversely, this result is in disagreement with **Moreira, et al., (2019)** who conducted the study design of a biomedical kit for bedridden patients: a conceptual approach in Portugal and found that there no significant statistical differences in total health needs according to bedridden patients monthly income and residence.

The current study indicated that there were significant statistical differences in total health Status according to bedridden older adult age group and monthly income (**Table 5**). This result was accordance with **Indu, et al., (2018)** who conducted the study of a qualitative study on the mental health needs of elderly in India and he reported that there were significant statistical differences in total health Status according to bedridden elderly age group. Also, this result is in agreement with **Jiao, et al., (2019)** who conducted the study incidence and related factors for hospital-acquired pneumonia among older bedridden patients in China and found that there were significant statistical differences in total health Status according to older bedridden patient's monthly incomes, and qualifications.

The current study revealed that there were highly significant statistical differences in total health problems according to bedridden older adult's marital status (**Table 6**). This result was agreement with **Matsusaka, et al., (2018)** who assessed the study of pneumonia risks in bedridden patients receiving oral care and their screening tool: malnutrition and urinary tract infection-induced inflammation in Japan and cleared that there were highly significant statistical differences in total health

problems with bedridden patients marital status, and their ages.

Also, this result was agreement with **Fuling, & Yang, (2020)** who conducted the study about the comparison of health efficiency between Pension security and medical security for the elderly in China and found that there were highly significant statistical differences in total health problems with elderly gender and marital status.

Conclusion:

After conduction of the present study; it concluded the following:

The present study showed that there was highly statistically significant relation between health status and health needs of the studied bedridden older adults. There was highly statistically significant relation between health status and health problems of the studied bedridden older adults. Also, there was highly statistically significant relation between health needs and health problems of the studied bedridden older adults. Also, the current study indicated that Dar Fouad Habib and Dar Saidat Misr were equal in external environmental requirements criteria opposite to Dar Almarwa. Finally the present study concluded that There were positive correlation and highly significant between the total score of health needs, health problems and health status

Recommendations:

In the light of these findings it was recommended that:

- Periodic physical examination for older adult to early identifications and detection of health problems and promote intervention.
- Continuous assessment of needs and problems for bedridden older adult.
- Importance of follow-up care that offers the bedridden older adult the best chance for recovery and long-term survival.
- Ensuring documentation systems related to finding changes in health of elderly at geriatric home.

Future research about:

Needs to further explore health needs and problems for bedridden older adults.

References:

- AlKandari, Y., Crews, D., (2014):** Social support and health among elderly Kuwaitis. *Journal of Biosocial Science*, pp. 518–530
- Bannister, Judith, David E. Bloom, and Larry Rosenberg (2019):** *Population Aging and Economic Growth in China*. Cambridge, MA: The Program on the Global Demography of Aging
- Bezerra, K., Machado, J., Carvalho, V., Soares, F., Matos, D., Castro, M., and Lopes, H. (2019):** A New Methodology for Use by a Single Caregiver to Bathe Bedridden Elderly Persons Using Advanced Mechatronic Systems. In *Health care. Multidisciplinary Digital Publishing Institute*; 4, p.p 124.
- CAPMAS (2020):** Central Agency of public Mobilization and Statistics: The number of elderly persons in Egypt, aging population. *Statistical Year book 2020*.
- Chen L, Zhou F, Li H, Xing X, Han X, Wang Y. (2018):** Disease characteristics and management of hospitalized bedridden older adults with Community-Acquired Pneumonia in China. *8(2)*; pp. 187-209.
- Crystal, S., Jonson, R.w., and Harman, J., (2007):** out of pocket health care costs among older americans. *J. Gerontol B psycho scisoc*, *55 (1)*; pp. 552-562.
- Dijkhuizen and Annemarie A., Lawton, M. P., and Elaine M., (2016):** Assessment of Individual Activities of Daily Living and its Health in Elderly of People Taiwan *International Journal of Gerontology (117)*; pp. 143-149.
- Fuling, C., and Yang, L. (2020):** Comparison of health efficiency between Pension security and Medical security for the elderly. *Financial Engineering and Risk Management*, *3(1)*, pp.1-13.
- Gopalakrishnan, A., Kahu, E., Jones, L., and Brunton, P. (2019):** Access and barriers to oral health care for dependent elderly people living in rest homes. *Gerodontology*, *36 (2)*, pp.149-155.
- Hu, C., Yu, W., Lv, Y., Chen, H., Deng, Q., and Zhang, L. (2017):** Study on the Health Status and Health Service Utilization of the Elderly of

- a Remote and Poor Village in a Mountainous Area in Jinzhai, Anhui. *International journal of environmental research and public health*, 14(4), PP. 408.
- Ibrahim, (2016):** Exploring the social problems facing the elderly in the geriatric homes, Alexandria, Egypt. Thesis for master degree in social sciences. Alexandria University
- Indu, P. V., Remadevi, S., Philip, S., and Mathew, T. (2018):** A qualitative study on the mental health needs of elderly in Kerala, South India. *Journal of Geriatric Mental Health*, 5 (2), pp. 143.
- Ismail, G. M., Fahim, H. I., Bakr, I., Wassif, G. O., & Hamza, S. A. (2018):** Risk of falls and Effect of a Health Education Program in Prevention of Falls among Elderly in Geriatric Homes in Cairo, Egypt. *The Egyptian Journal of Geriatrics and Gerontology*, 5(2): PP. 1-7.
- Jaul, E., Barron, J., Rosenzweig, J. P., and Menczel, J. (2018):** An overview of comorbidities and the development of pressure ulcers among older adults. *BMC geriatrics*, 18 (1), pp.1-11.
- Jiao, J., Yang, X. Y., Li, Z., Zhao, Y. W., Cao, J., Li, F. F., and Liu, Y. L. (2019):** Incidence and Related Factors for Hospital-Acquired Pneumonia Among Older Bedridden Patients in China: A Hospital-Based Multicenter Registry Data Based Study. *Frontiers in public health*, 7, pp. 221.
- Kassim, N. A., Farid, T. M., Pessar, S. A., and Shawkat, S. A. (2017):** Performance evaluation of different D-dimer cutoffs in bedridden hospitalized elderly patients. *Clinical and Applied Thrombosis/ Hemostasis*, 23(8), pp.998-1004
- König, H. H., Heider, D., Lehnert, T., Riedel-Heller, S. G., Angermeyer, M. C., Matschinger, H., and Alonso, J. (2010):** Health status of the advanced elderly in six European countries: results from a representative survey using EQ-5D and SF-12. *Health and quality of life outcomes*, 8(1), 1-11.
- Lubenow, J. A. M., and Silva, A. O. (2019):** What the elderly think of the care provided by health services. *Revista Brasileira de Geriatria e Gerontologia*, pp. 2-22.
- Lynn, S., Bickley, Peter, G., and Szilagyi, (2011):** Bates' guide to physical examination and history taking. Lippincott Williams & Wilkins; pp. 10–19.
- Marshall EG, Clarke BS, and Varatharasan N., (2015):** A long-term care comprehensive geriatric assessment (LTC-CGA) tool: improving care for frail older adults; pp.2–10.
- Matsusaka, K., Kawakami, G., Kamekawa, H., Momma, H., Nagatomi, R., Itoh, J., and Yamaya, M. (2018):** Pneumonia risks in bedridden patients receiving oral care and their screening tool: Malnutrition and urinary tract infection - induced inflammation. *Geriatrics & Gerontology International*, 18 (5), pp.714-722.
- Moreira, F., Matos, D., Carvalho, V., and Soares, F. (2019):** Design of a biomedical kit for bedridden patients: a conceptual approach. In *IECON 2019-45th Annual Conference of the IEEE Industrial Electronics Society*.1, pp. 6859-6865.
- Pellatt, G. (2014):** 6 Caring for People with Impaired Mobility. *Developing Practical Nursing Skills*, pp. 243.
- Peterson K. and Moddeman G., (2018):** Managing chronic pain in the bedridden elderly. *American Nurse Today*, Septamber, Vol.5 No.9, available at:<http://www.americannursetoday.com/articala.pp.7084-8650>.
- Portacolone E, Covinsky KE, Rubinstein RL, et al. (2019):** The precarity of older adults living alone with cognitive impairment. *The Gerontologist*; 59 (2): pp. 271-280.
- Sabbour,S.M., Abdul Rahamn, S.A., Eldin Amin. G.E., & Mohamed.B.A., (2018):** Frailty and malnutrition among Egyptian elderly: prevalence and risk factors in nursing home and community dwelling elderly in Cairo, Egypt., pp. 28-31.
- Satoshi, K., Nagase, S., Urai, T., and Okamoto, S. (2020):** Distinct skin microbiome and skin physiological functions between bedridden older patients and healthy people: a single-center study in Japan. *Frontiers in medicine*, 7; PP. 101.
- Shilpa Amarya, Kalyani Singh and Manisha Sabharwal (2018):** Ageing Process and Physiological Changes, *Gerontology, Grazia D'Onofrio*,<https://www.intechopen.com/books/gerontology/ageing-process-and-physiological-changes>.

- Sidhu, J. K., Rana, K., Khanna, P., and Singh, T. (2020):** Pattern and Extent of Utilization of Social Welfare Schemes by the Elderly in
- Smith, G., Recio-Saucedo, A. and Griffiths, P (2017):** The measurement frequency and completeness of vital signs in general hospital wards: An evidence free zone, *International journal of nursing studies*, 74 (4); pp. 1-4.
- Suzuki, M., Yoshimura, H., Munakata, M., Sunaga, S., Katsuhara, Y., and Osada, H. (2016):** Development of the self-assessment scale of nursing practice for elderly patients with cognitive impairment in *Journal of Japan Academy of Gerontological Nursing*. pp. 36–46.
- Tatangelo G., (2018):** “I just don’t focus on my needs.” The unmet health needs of partner and offspring caregivers of people with dementia: A qualitative study. *International Journal of Nursing Studies*. 1; 77: p.p 8-14.
- Tiwari, S. C., and Akanksha Sonal (2018):** "Clinical Practice Guidelines for addressing the Rehabilitation Needs of Elderly in the Indian context." *Indian Journal of Psychiatry* 60.3; pp. 411.
- United Nations (2020):** World Population Ageing 2020 Highlights, United Nations, Department of Economic and Social Affairs, Population Division New York. PP.1: 7.
- United Nations, (2017):** Department of Economic and Social Affairs, Population Division Living Arrangements of Older Persons Around the World. pp.5-9.
- Wahba, M. (2018):** The government embraces the elderly and provides them with accommodation and health care.
- Wicha, S., Saovapha, B., Sripattarakul, S., Manop, N., Muankonkaew, T., and Srirungrueang, S. (2018):** Health Status of Dependent Older People and Pattern of Care among Caregivers: A Case Study of Hong Ha Health Promoting Hospital, Lampang, Thailand. *Asian Journal for Public Opinion Research*, 5 (3): pp. 228-249.
- Wittenberg, R. (2018):** Projections of Demand and Expenditure on Adult Social Care 2017 to 2070. Personal Social Services Research Unit, London School of Economics. <https://www.pssru.ac.uk/pub/5421.pdf>
- Zhang Y, Wang TT, Che L, et al. (2019):** Effects of hip fractures to the quality of life in old patients. *Journal of Practical Orthopaedics*; 54: pp.1615-20.