

Assessment of Knowledge and Practices Regarding Elderly Care among Elderly Care Givers at Geriatric Homes

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Abstract

Background: Elderly mainly need to caregivers who should have the chance to perform their practices toward their elderly by professional. **Aim:** to assess knowledge and practices regarding elderly care among elderly care givers at geriatric homes. **Design:** descriptive study design. **Setting:** In geriatric homes at Cairo governorate. **Sample:** A convenient sample included 60 of elderly caregivers working in the previous mentioned settings. **Tool:** two tools were used; interview questionnaire form (Appendix I); the questionnaire sheet was designed by the researcher and written in simple Arabic language based on scientific literature review and experts' opinion. It is comprised of two parts. Part I; It was used to assess demographic characteristics of elderly caregivers. Part II; It was used to assess knowledge about elderly care. Observational checklist to assess caregivers' practices by researcher (Appendix II); it was adopted from Saskatchewan Ministry of Health Home Care Policy Manual (2021) and Rice (1999). The checklist was used to meet the needs of elderly caregivers. **Results:** show that 71.7% elderly caregivers regarded to gender were female. There were highly statistically significant difference and very highly statistically significant differences between total knowledge and total practices at P-value was ($p < 0.01^{**}$) and ($p < 0.001^{***}$) respectively. **Conclusion:** two fifths of studied sample age was ranged from 41 to less than 50 years old with the mean age was 38.53 ± 9.79 . Majority of study sample were females than males, who were in common married. More than half of them were poor in total knowledge about elderly care at geriatric homes. For the total practices of the elderly caregivers toward elderly care at geriatric home, three quarters of the elderly caregivers were not competent. There was a positive correlation between knowledge score with practice score when $r = 0.856$. **Recommendation:** Encourage multidisciplinary researches in the same study in order to cover large group of elderly caregivers in different places and effectively address the issue of caregiver's burden during caring for elderly with chronic illness and problematic behavior.

Keywords: Elderly, Elderly caregivers & Geriatric homes

Introduction

Increasing of ageing in the Arab countries and the increase of life expectation at 60, is associated with an increase in disability rates for old age. In Egypt, in 2018, the number of elderly persons reached 6.410 million (3,418 million men, 2,992 million women) by the ratio of elderly, 6.7% (6.9% men, 6.4% women) of the total population, this number increased in 2031 to 11.5%. The total number of geriatric homes are 54 one, where there are 1774 elderly person & 639 caregiver Sibai, et al., (2017) & The Central Agency for Public Mobility and Statistics (CAPMAS), (2018).

As the numbers of elderly people needful nursing or residential care increase, the professionalism of the elderly caregivers employed in this setting grows in importance. Caregiving is inevitably a demanding and stressful job in a complex organizational setting and it has been widely regarded as one of the most stressful occupations, associated with high levels of lacking of knowledge, skills & coping with work stress James, et al., (2021).

The role of the caregiver includes actions that are intended to support the elderly people prevented physically or mentally from performing the practical tasks of activities of daily living and self-care. A caregiver is

defined as being the person that is accountable for caring for a sick or dependent person, facilitating the performance of their daily activities, such as feeding, personal hygiene, providing routine medication and accompanying them to the health services, or carrying out other things required in their daily lives **Fee, et al., (2020)**.

Geriatric homes offer a broad range of health-related services for people aged ≥ 60 years. The services provided include skilled nursing care, rehabilitation services, and dietary services. Disabling or burdensome disorders, most commonly dementia, incontinence, and immobility may trigger consideration of geriatric home placement **Sørbye, et al., (2018)**.

Nursing intervention through the community health nurse (CHN) is involved in primary, secondary, and tertiary prevention efforts for elderly and caregivers. The major areas in which CHN plays an important role toward elderly are decrease of risk and maintenance of independence; supervision and encouragement of caregivers. CHN should become involved in exploring service options for elderly individuals and in educating the general public in the problems and needs of elderly individuals and their caregivers. These goals can be accomplished by designing and carrying an intervention that educate elderly caregivers and organizations or by advocating for legislation to support elder independence and elder caregivers when possible **Stanhope, et al., (2019)**.

Significance of the Study

The world's population is anticipated to exceed 9 billion in 2050. Within this overall increase, the elderly population will be significantly higher than others. In 2050, the elderly population is expected to jump from 8.5% to 16.7%, which means that almost 1 in every 5 individuals will be above the age of 60. The population in the Arab region is expected to nearly double and a half by 2050, increasing from 281 million people in 2000 to an almost 659 million, so from 6.02 percent of the total population in 2000 to 15.2 percent by 2050. This is a 60 percent increase during the 35 years from 2015 till 2050. The trends of ageing

in the Arab countries and the increase of life expectation, is related to increase disability rates for elderly (**Chiu et al., 2020**). So, this research spotlighted on assessment of knowledge and practices regarding elderly care among elderly care givers at geriatric homes.

Aim of the Study

To assess the knowledge and practices regarding elderly care among elderly care givers at geriatric homes through:

- 1- Assessing care givers' knowledge about elderly care.
- 2- Assessing care givers' practices toward elderly care.

Research Questions:

- 1- What is level of knowledge among elderly caregivers regarding elderly care at geriatric home?
- 2- Are the elderly caregivers competent in their practice toward elderly care at geriatric home?
- 3- Is there correlation between knowledge & practices among elderly caregivers?

Subjects and Methods

- I-Technical design
- II-Operational design
- III-Administrative and ethical design
- IV-Statistical design

I-Technical Design:

The technical design includes; the design, setting, sample & tools were used in the study

A- Research design: descriptive study

B- Setting:

This study will be conducted to half number of districts in Cairo governorate, and select two geriatric homes of each district that more density in the following geriatric homes which located at Cairo governorate and these settings were chosen because they serve the community around Ain Shams University. Where those are; facility of mosenen saman elshikh (Rod el farag) ,dar anwar almostafa & Dar mosenen alrahman (Almataria), botros ghaly for elderly (Alwaily), dar mosenen and mosenat el hadi aleslamy (Alsharabia) , dar Mosenen alkhairia aleslamia (alsaida zainab)..

C- Sampling:

A convenient sample was used in this study. The total numbers of elderly caregivers who work in the previous mentioned setting were 73 person and pilot study it was chosen and carried out on 13 person whom & excluded later the study sample. The sample became 60 persons for both genders (male & female), 10 persons from each geriatric home, elderly caregiver from 20 to 60 years old. Work at geriatric homes and accepting to participate in the study program.

C. Tools of data collection: two tools were used for data collection.

I. Interview questionnaire form (Appendix I):

the questionnaire sheet was designed by the researcher and written in simple Arabic language based on scientific literature review, experts' opinion and personal experience and filled. It is comprised of two parts:

Part I: It was used to assess demographic characteristics of elderly caregivers include age, gender, education, marital status, no of elderly people who are caring for and No of caregivers' care for

Part II: It was used to assess knowledge about elderly care such as concept of aging, factors of elderly wellbeing, health problems related aging, human rights related elderly at geriatric home, normal changes related aging (physical, mental, social and psychological), daily care for elderly (physical exercises, healthy & balanced nutrition, sleeping disturbance, personal hygiene, bed sores, elderly falls) and first aids for common cases (bruises, fracture, fainting, diabetic coma, diarrhea and burn)

Scoring system for knowledge questions:

The questionnaire of the elderly' caregivers related to knowledge was constructed in the form of Multiple - Choice Questions. The right answers were scored one and those wrong were scored zero. These scores were summed-up and converted into a percent score and categorized into three levels as:

- Good: if the percent score was 70-100%
- Fair: if the percent score was 50-69 %
- Poor: if the percent score was 0-49 %

II. Observational checklist to assess caregivers' practices by researcher (Appendix II):

it was adopted from Saskatchewan Ministry of

Health Home Care Policy Manual (2021) and Rice (1999). The checklist was used to meet the needs of elderly caregivers. it covers the following items: legal issues related elderly at geriatric home, meet elderly needs related aging (physically , mentally, socially and psychologically), perform daily care for elderly (physical activity, preparing healthy & balanced nutrition , provide safety during nutrition the elderly, defecating, sleeping & rest pattern) , assist elderly according to his ability to do personal hygiene (mouth & teeth , hair, nail, foot care and bathing) , provide safe environment for elderly, take care of unable elderly (mobilization in bed, ambulation (helps the elderly to get up and sit, helps the elderly to stand and walk), lifting from bed to chair & inverse, proper precautions to avoid bed sores, right steps for elderly bed lying bathing and first aids for common cases (nasal bleeding, bruises , fracture, fainting , diabetic coma , diarrhea and burn) .

Scoring system for practices questions:

- Score from $0 < 60$ referred to not competent practices.
- Score from $60 \leq 100$ referred to competent practices.

The Validity: it was tested through 5 experts, from community health nursing department, faculty of nursing, Ain Shames University.

The reliability was done by Cronbach's Alpha coefficient test which revealed that each of the three tools consisted of relatively homogenous items as indicated by the moderate to high reliability of each tool, where the reliability of them was 0.831

II. Operation design:

A- Preparatory phase:

A review of past, recent, national and international related literatures covering all aspects of the researcher subject using the available textbooks, nursing articles and magazines and internet search. In order to get a clear picture on the research problem and to assist in development of data collection tools to gather all information and review about knowledge & practices regarding elderly care among elderly care givers at geriatric homes.

B- Pilot Study:

A pilot study was conducted on thirteen of the elderly caregivers in the pre-

mentioned settings, in order to test the eligibility, including the suitability and feasibility, availability of the study population. Also, to determine the time required to conduct the constructed research tools. then the necessary modifications were done according to the result of pilot study and carried out on whom are excluded later in the study sample.

C-Field Work:

The researcher was revising the literature to design the tools and the tools will revise from expertise to test the content validity.

Observation of caregivers' practices was carried out during the morning shift during their practice of different nursing care skills utilizing tool. covert observation was used so that the elderly caregivers did not notice that they were observed during their practices, since the researcher is normally present in the geriatric home. Each care giver was observed on three different occasions while performing each procedure of the observation checklist. Obtained data were converted into numeric data, and the average of the three observations was calculated.

The actual field work started from the beginning of July and finished at August (2020) for data collection. The researcher was available one day weekly (Thursday) during morning shift from 9 am to 1 pm, and started by introducing herself to the elderly caregivers and giving the brief idea about the aim of the research. The researcher interviewed with each elderly caregiver at geriatric home individually at available time within 30 minutes to complete questionnaire. This technique was performed one day each week. the researcher clarified the objectives and aim of the study to caregivers included in the study before starting. the researcher was guaranteeing maintaining anonymity and confidentiality of subjects' data included in the study

The caregivers were informed that they are allowed to choose to participate or not in the study and they have the right to withdraw from the study at any time

Limitation of the Study:

1. Some geriatric homes {Dar mosenat alkarma & Agaez aramel ahkarma (Shobra), Mosenen and mosenat alkelma altaeba & alqs wahba (Alsahel)} refused the conduction of any kind of research for fear of transfer of infection of COVID -19.

2. The geriatric homes {Facility of mosenat sanea elkhairat (Rod el farag), Ever green (Alwaily), Dar Mosenen yom almostashfiat (alsaida zainab)} were excluded from the sample because there was lack of flow of elderly caregivers, where they terminated from work.

III- Administrative design:

To carry out this study, a letter was issued to pre- mentioned settings from the dean of Faculty of Nursing, Ain Shams University explaining the aim of the study to obtain permission and help. The necessary approval letter was obtained from the head of geriatric homes in pre- mentioned settings. The title, objectives, study technique and tools were explained to gain their approval in data collection.

Ethical consideration:

verbal approval was obtained from the caregivers before inclusion in the study; a clear and simple explanation was given according to their level of understanding, physical and mental readiness. They secured that all the gathered data was confidential and used for research purpose only.

IV. Statistical design:

Data collected from the studied sample was revised, coded and entered using. PC. Computerized data entry and statistical analysis were fulfilled using the statistical package for social sciences (SPSS) version 20. Data were presented using descriptive statistics in the form of frequencies, percentages and chi-square.

RESULTS

Table (1): Distribution of the elderly caregivers according to their demographic characteristics (no= 60)

Items	No.	%
Age (in years):		
▪ 20- < 30	8	13.3
▪ 31- < 40	12	20.0
▪ 41- < 50	24	40.0
▪ 51- < 60	16	26.7
Mean ± SD	38.53± 9.79	
Gender:		
▪ Male	17	28.3
▪ Female	43	71.7
Education:		
▪ Illiterate	9	15.0
▪ Read and write	16	26.7
▪ Basic education	35	58.3
▪ High education	0	0.0
Marital Status:		
▪ Single	13	21.7
▪ Married	33	55.0
▪ Widow/widower	5	8.3
▪ Divorced	9	15.0
No of elderly people who are caring for:		
▪ Three	16	26.7
▪ More than three	44	73.3
Health condition of elderly cared by caregivers:		
▪ Independent elderly	10	16.7
▪ Dependent elderly	8	13.3
▪ Both	42	70.0

Table 1 displays that the caregivers' age ranged between 20 to 60 years old. 40 % of them were between age 41 and 50 years. As regard gender, it was found that the 71.7% of caregivers were females. Regarding educational level 58.3 % has basic education. Concerning marital status, the table shows that 55% of the sample was married. Regarding the number of elderly people who are caring for, it was found that, 73.3 % was caring for more than three elderlies. In relation to the health condition of the elderly person who cares for him the table shows that, 70% of health condition of elderly cared by caregivers were both dependent and independent elderlies.

Table (2): Distribution of the elderly caregivers according to their knowledge about daily care for elderly at geriatric home (n= 60)

Items	Good		Fair		Poor	
	No	%	No	%	No	%
Importance of physical exercises	0	0	22	36.6	38	63.3
Needs to food preparation for elderly	0	0	19	31.7	41	68.3
Causes of elderly sleep disturbance	0	0	19	31.6	41	68.3
Importance of personal hygiene	0	0	35	58.3	25	41.6
Causes of bed sores	0	0	29	48.3	31	51.6
Meaning of passive range of motion & keeping body mechanics	1	1.7	15	25.0	44	73.3
Causes of elderly falling	0	0	34	56.6	26	43.3
Total	0	0	25	41.7	35	58.3

Table (2) Indicates that 0 % 1.7% & 0 % of elderly caregivers had good knowledge regarding to causes of bed sores, meaning of passive range of motion & keeping body mechanics and causes of elderly falling respectively. Meanwhile 0 % of them had good knowledge about daily care for elderly at geriatric home

Table (3): Distribution of the elderly caregivers according to their total knowledge about elderly care among elderly care givers at geriatric homes (n= 60).

Total knowledge	No	%
Good	2	3.4
Fair	23	38.3
Poor	35	58.3
Mean ± SD	78.69±8.15	

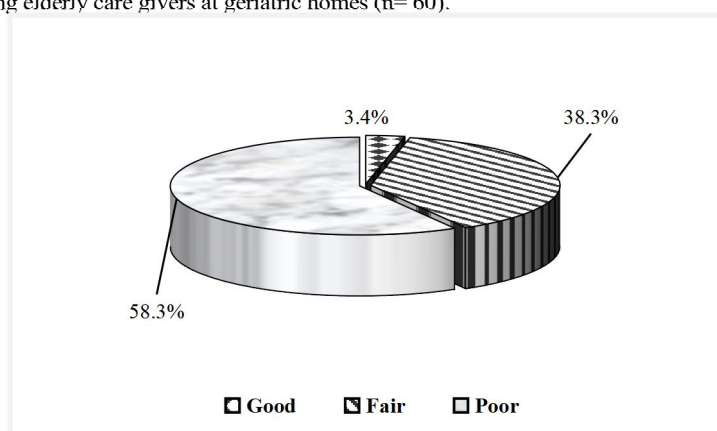
Figure (1): Distribution of the elderly caregivers according to their total knowledge about elderly care among elderly care givers at geriatric homes (n= 60).

Table (3) & Figure (1) Indicates that 3.4% ,38.3% & 58.3 % of elderly caregivers had a good, fair & poor knowledge respectively regarding to total knowledge about elderly care among elderly care givers at geriatric homes.

Table (4): Distribution of the elderly caregivers according to their practices toward the human rights of elderly at geriatric homes (n=60)

Practices about human rights of elderly	No.	%
Competent	10	16.7
Not Competent	50	83.3

As revealed in **table 4**, that, only 16.7% of the elderly caregivers were competent in practices about human rights of elderly at geriatric home, while 83.3 % were not competent respectively.

Table (5): Distribution of the elderly caregivers according to their practices of proving safe environment (n=60)

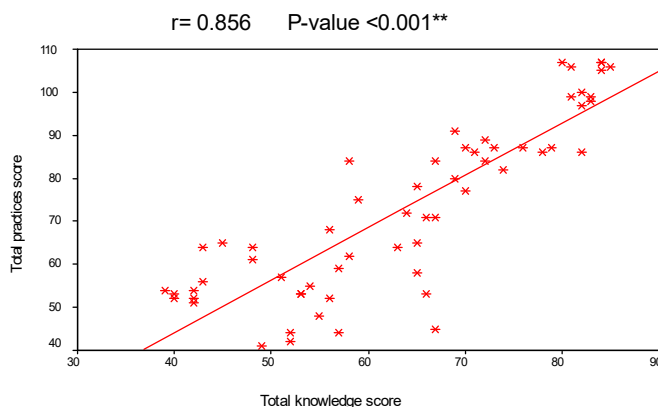
Practices about proving safe environment	No.	%
Competent	14	23.3
Not Competent	46	76.7

As shown in **table 5**, that, only 23.3% of the elderly caregivers were competent in practices about proving safe environment of elderly at geriatric home, while 83.3 % were not competent respectively.

Table (6): Correlation between total knowledge of the elderly caregivers and their total practices toward care of the elderly (n=60)

Total practices	Total knowledge						Chi-square	
	Good		Fair		Poor			
	N	%	N	%	N	%	X ²	P-value
Competent	2	3.4	11	18.3	2	3.3	19.334	<0.001**
Not Competent	0	0.0	12	20.0	33	55.0		

Figure (2): Correlation between total knowledge of the elderly caregivers and their total practices toward care of the elderly (n=60)



This figure revealed that there was highly statistically significant correlation between knowledge score with practice score when P-value was < 0.001**

Discussion

Ageing is a global phenomenon with the number of persons 60 years and over. Estimated to reach two billion by the year 2050; for some persons, living longer is accompanied by challenges of disability and being dependent on others to assist with everyday tasks. Already, 101 million people 60 years and over worldwide are estimated to be care-dependent. Elderly

caregivers should have the opportunity to perform their practices by professional way on a day-to-day basis as an integral part of elderly care (James, et al., 2021).

According to demographic characteristics of the elderly caregivers, the current study found that, elderly caregivers' age ranged between twenty to sixty years old with two fifths of them age was ranged from 41 to less than 50 years old with the mean age was 38.53 ± 9.79 . (Table 1). This finding is in

agreement with **Van Houtven, et al., (2020)**, who studied essential long-term care workers commonly hold second jobs and double or triple duty caregiving roles in northeastern United States who stated that, the mean age of long-term care workers was forty-one years

Bilal, et al., (2020), disagree with the current results, where the previous study about elderly care in the time of coronavirus: perceptions and experiences of care home staff in Pakistan found that, the majority of elderly caregivers were less than 40 years. In this regards **Shi, et al., (2020)** who studied Perceived stress and social support influence anxiety symptoms of Chinese family caregivers of community dwelling older adults: a cross-sectional study illustrated that more than two thirds of caregivers were less than forty years.

Concerning gender, the present study demonstrated that, the dominance of females than males, who were in common married. this finding is in agreement with that of **Moholt , et al., (2020)** who studied the factors affecting the use of home-based services and out-of-home respite care services: A survey of family caregivers for older persons with dementia in Northern Norway who reported that the more than three fifth of elderly caregivers were females . As well, **Fagerström, et al., (2020)** who revealed in their study about the analyzing the situation of older family caregivers with a focus on health-related quality of life and pain: cross-sectional cohorts' study in Sweden that, the great majority of their studied sample married

This trend was opposite to what was found in a study in China by **Shi, et al., (2020)** who found that, more than half of the studied sample were married men, in this regards **James, et al., (2021)** revealed in their study about socio-demographic, health and functional status correlates of caregiver burden among care recipients age sixty years and older in Jamaica that, more than half of the studied sample were single female. In Egypt, caregiving is a female occupation, and this give a reason why the majority of the study sample were more females than males.

Concerning to the level of education, this study revealed that, more than half of them had basic education. This explains why they are

not responding easy to the knowledge given to them so most of them feel stress in caring of their elderlies at geriatric home. This finding is in agreement with that of **Ekström, et al., (2020)** who studied high burden among older family caregivers is associated with high prevalence of symptoms: data from the Swedish Study "Good Aging in Skane (GAS)". Where they concluded that, more than one third of caregivers were with low educational level. Opposing with the previous findings, **Keheo et al., (2019)** found in their study about quality of life of caregivers of older patients with advanced cancer in United States that, more than half of the studied caregivers obtained some college or above.

Regarding level of knowledge related to daily care for elderly at geriatric home, the result of this study found that more than half of elderly caregivers have poor knowledge regarding to daily care for elderly at geriatric home, (**Table 2**). This finding goes with **Bassah , et al.,(2018)** in Buea Health District, Cameroon who studied An Exploratory Study of the Knowledge and Practices of Family Caregivers in the Care of the Elderly at Home, the studied sample were one hundred twenty six primary family caregivers from twenty one communities in the Buea Health District. More than one third of them did not know about complex problems like bowel and urinary incontinence as well as most of them do not know about elderly care resources within their communities.

As well, **Yanagisawa, et al., (2018)** who found in their study about Survey on nursing home caregivers' basic knowledge of oral health management: Dental terminology that, the caregivers have lack of knowing of dental terms.

The lack of understanding of daily care for elderly could be owing to the following factor. a situation in which there is no established educational program for caregivers, and they receive insufficient education on care for elderly

In relation to elderly caregivers' practices about human rights of elderly at geriatric home the current finding showed that, most of them were not competent (**table 3**) this result in the same line with **Bassah , et al.,(2018)**in

Buea Health District, Cameroon who found that caregivers' practices were not very desirable, although a majority of the participants knew the rights of the elderly; some of them still reported practices like yelling and ignoring that are abusive of older adults.

As well, Myhre, et al., (2020) who found that abuse from direct-care staff:

'An unthinkable event'; staff-to-resident abuse was considered to be difficult to talk about and viewed as not being in accordance with the leaders' trust in their employees. These suggest the need for education on the rights of the elderly and how elderly abuse can be prevented.

Regarding to elderly caregivers' practices about proving safe environment of elderly at geriatric home, this study revealed that most of elderly caregivers were not competent (table 4). These findings are in agreement with the Mamani ,et al.,(2019) who studied elderly caregiver: knowledge, attitudes and practices about falls and its prevention in in Cuiaba where the total sample size was ninety seven informal elderly caregivers' residents and reported that, caregivers know about falls and its prevention, but in a superficial way, and it seems to influence their attitudes and practices regarding the prevention of this event.

As well Bull et al., (2016), who found in their study about Family caregivers' knowledge of delirium and preferred modalities for receipt of information that, the knowledge about fall prevention presented by informal elderly caregivers was incomplete or considered minimal. This seem to explain why falls are reported as common among the elderly, recording a very high prevalence in admissions, with most of the victims ending up with fractures.

Conclusion

Two fifths of studied sample age were ranged from 41 to less than 50 years old with the mean age was 38.53 ± 9.79 . Majority of study sample were females than males, who were in common married. More than half of them were poor in total knowledge about elderly care at geriatric homes. three quarters of them were not

competent in practice. there was highly statistically significant correlation between knowledge score with practice score when P-value was $< 0.001^{**}$

Recommendation

Encourage multidisciplinary researches in the same study in order to cover large group of elderly caregivers in different places and Increase training courses in geriatric homes and encourage elderly caregivers to use first aids bag in emergency cases.

Further Researches on:

1. Investigate contributing factors of improving elderly care givers' practices to improve their understanding and awareness.
2. The impact of self-efficacy on training and guidance methods, goal setting practices.
3. Apply the study on large sample for generalization of the results.

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