

Knowledge and Attitude of Older Adults towards Use of Assistive Devices



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ABSTRACT

Background: Assistive devices are equipments that play a vital role for improving older adults independence and enhancing their quality of life. So understanding the intricate interplay between the knowledge possessed by older adults regarding available assistive technologies and their attitudes towards embracing these innovations is crucial for developing effective strategies to meet the unique needs of elderly people. **Aim:** Assess knowledge and attitudes of older adults towards use of assistive devices. **Design:** This study employed a descriptive research design. **Setting:** It was conducted at the geriatric outpatient clinic of the specialized Medical Hospital of Mansoura University and the outpatient clinic of the Mansoura specialized hospital which is affiliated to the Ministry of Health in Mansoura city. **Subjects:** a purposive sample of 224 older adults. **Tools:** The researcher utilized five tools to gather data, Mini- Mental State Examination, Demographic and Health Related Data Structured Interview sheet, Assistive devices knowledge questionnaire sheet, Assistive devices attitudes questionnaire sheet, and Katz. And Akpom Scale. **Results:** It was found that the mean age of the studied older adults was 65.03 ± 4.19 , Males were more prevalent, 66.6% of studied older adults were using assistive devices, 44.2% of studied older adults were using eye glasses, and 77.5 % of them had previous training regarding assistive devices. **Conclusion:** The majority of older adults had poor level of knowledge and more than two thirds of them had neutral attitudes towards use of assistive devices. Also, there was strong positive correlation between knowledge and attitudes of the subjects towards use of assistive devices. **Recommendations:** Show case role models who have embraced assistive devices in their daily lives.

Key words: *Assistive devices, Attitudes, Knowledge, Older adults.*

Introduction:

Assistive devices (ADs) are equipment that aid in the recovery of impaired physical and cognitive function, improve hearing, vision, communication capacities, assist seniors with mobility problems to improve independence and decrease care burden (Arefin, Habib, Arefin, & Arefin, 2020 & Prajapati, & Sharmila, 2020). Assistive Technology (AT) refers to a range of technologies that have been developed for seniors with disabilities (Lund et al., 2021). There is a continuous request around the world for utilizing of AT to improve active aging and independent living while addressing the obstacles presented by older adult (Mohamed et al., 2022).

To satisfy the demands of older persons, ADs should be convenient, appropriate, secure and cheap to meet older adults needs (Lee et al., 2021). For older adults there are advantage and disadvantage to ADs. One benefit is that it makes it possible for seniors to carry out their regular tasks. Bad emotion, however, are linked to social consequences for users; in particular, mobility aid use created feelings of loss and stigma associated

with getting old and functional impairment (Hunter, 2020).

As regard to Orem theory, all people capable of taking care of themselves and nurses should be able to recognize the things that help older adults get over obstacles and take care of themselves (Helty, Sitorus, Nusdwinuringtyas, & Martha, 2022). The need for assistive devices is predicted to rise as the number of seniors rises (Esteves, Esteves, & Abelha, 2020).

Significance of the study

In Egypt, the life expectancy of elders is increased & their proportion is expected to reach 12.3 percent in 2050 (Hassan, 2015). Assistive devices can assist seniors enhance their functional ability. However, they are often hesitant to utilize ADs. Several factors can influence the use of assistive devices. Understanding these factors is vital for addressing barriers and promoting the effective utilization of assistive devices (Arefin et al., 2020) & (Mohamed et al., 2022). Older adults who accept and acknowledge their limitations are more likely to be open to using assistive devices

that can help them overcome challenges and maintain their functional abilities (Weck, Helander, & Meristö, 2020).

Study's aim: Assess knowledge and attitudes of older adults towards use of assistive devices.

Research questions:

1. What is the level of knowledge of older adults towards use of assistive devices?
2. What is the type of attitudes of older adults towards use of assistive devices?
3. What is the level of older adult's functional ability?

Method

Study design: The researcher employed a descriptive study design.

Study setting: It was done at the geriatric outpatient clinic in each the specialized Medical Hospital at Mansoura University and Mansoura specialized hospital, affiliated to Ministry of Health, Dakahlia Governorate.

Subjects: A purposive sample of 224 senior citizens were chosen based on these criteria and brought to the previously indicated settings . Males and females who were 60 years and older , abled to communicate ,were willing to participate in the study and were available at time of data collection .Elderly with cognitive impairment were excluded .

Sample Size Calculation: The size of the sample was determined with precision/absolute error of 5% and type 1 error of 5% based on data from literature (Mohamed et al., 2022) .Sample size was determined as regard to the formula, $n = \frac{(Z_{1-\alpha/2})^2 \cdot P(1 - P)}{d^2}$

where, $Z_{1-\alpha/2}$ at 5% type 1 error ($p < 0.05$) is 1.96, P is the expected proportion in population based on previous studies and d is the absolute error or precision. Therefore, sample size $n = \frac{(1.96)^2 \cdot (0.267)(1 - 0.267)}{(0.058)^2} = 223.4$. Based on the formula, the total sample size needed was 224 older adults.

Study 'tools; Five tools were utilized to gather data relevant to the study;

Tool I: Mini- Mental State Examination (MMSE):

Folstein (1999) created this tool. It was used to select the sample subjects. Elok (2008), translated it into Arabic language and validated and tested for its reliability ($r = 0.93$) by Abd El

Moniem (2012). It was employed to evaluate the cognitive function of elders. The final classification ,with a total score of 30 is as follows :

- **Normal cognitive function :** Score of (24-30).
- **Mild cognitive impairment:** Score from (18-23).
- **Severe cognitive impairment:** Score from (0-17).

Tool II: Demographic and Health Related Data Structured Interview Sheet:

The researcher developed it after review of pertinent literature (Mohamed et al., 2022&Kruse, Fohn, Umunnakwe, Patel, & Patel, 2020):

- **Part 1:** Demographic characteristics of the older adults such as age, sex, marital status, education, and income.
- **Part 2:** Health relevant data for example chronic diseases, number of currently used medications, using of assistive devices, onset of using assistive devices, number of utilized assistive devices, and previous training regarding assistive devices
- **Tool III: Assistive devices knowledge questionnaire sheet:**

The researcher developed it after review of relevant literature (Ben Mortenson et al., 2018& Prajapati, & Sharmila, 2021). It included questions about knowledge of older adults related to assistive devices such as definition, purpose of ADs, care of assistive devices and types of assistive devices. Responses of older adults were based on two-point Likert scale, where yes equal (1) and no equal (0). The total score was 23 and was summed up and judged based on the following:

- **Good knowledge :** From 75% and more from (17.25 and more points of correct answer)
- **Fair knowledge :** From 50% to less than 75% score from (11.5 to less than 17.25 points of correct answer)
- **Poor knowledge:** From Less than 50% score from (11.5 points of correct answer)

Tool IV: Assistive devices attitudes questionnaire sheet:

The researcher developed it after review of pertinent literatures (Peterson, & Adams-Price, 2022 & (Mitra, Singh, Rajendran Deepam, & Asthana, 2022). It included statements on older adults' attitudes towards assistive devices .Older adults' responses rated on three-point Likert scale from disagree (=1), I'm not sure (=2), and agree (=3). Expect the attitudes number 15 and 16 were reversed as disagree (=3), I'm not sure (=2), agree

(=1). The total score was 48 and was classified as following:

- **Positive attitudes** : From(39 to 48 of correct answer)
- **Neutral attitudes** : From (17 to 38 of correct answer)
- **Negative attitudes**: From (1 to 16 of correct answer)

Tool V: Katz. And Akpom Scale:

It was created by (Katz & Akpom, 1976), it was employed to evaluate activities of daily living. It was translated into Arabic Language and tested for validity and reliability $r = 0.88$ by (Hallaj, 2007).The total score of the scale was 6-18. According to Katz and Akpom scale elderly were divided into three categories:

- **Totally dependence**: those who scored 13 to 18 points.
- **Partially dependence**: those who scored 7 to 12 points.
- **Independence**: those who scored of 6 points.

Data collection process:

I: Preparatory phase: A formal letter was taken from the faculty of nursing and was directed to director of each hospital and the head oeach geriatric outpatient clinic to obtain their approval .In addition, the researcher met the medical and nursing staff of each geriatric outpatient clinic and introduced herself to them to get their permission to gather data and also explain the purpose of study.

Developing the study tools of data collection;-

- ❖ The researcher used Arabic version of the study tool I (Mini mental state examination) and tool V (Katz. And Akpom Scale). Tool II (Demographic and Health Related Data Structured Interview Sheet),tool III (Assistive devices knowledge questionnaire sheet), and tool IV (Assistive devices attitudes questionnaire sheet) were developed by the researcher based on review of relevant literature.
- ❖ **Content validity**; the study instruments were evaluated for its content validity by a jury of five experts in the fields of Gerontological Nursing. As a result, the required adjustment were made and completed form was utilized to gather data .
- ❖ **The reliability**; tool III (Assistive devices knowledge questionnaire sheet) and tool IV (Assistive devices attitudes questionnaire sheet). Cronbach's Alpha ($r = 0.83$ & $r = 0.85$, respectively) had provided assurance.

- ❖ **Face validity**; in order to determine the clarity and feasibility, relevance , comprehensive and applicability of the developed tool as well as the time required to complete the questionnaire sheet , a pilot study involving 23 older adults were then excluded from the study sample and the study results ,and the necessary modifications was made .It took 40 to 45 minutes to complete the inter view schedule .

II: Operational phase;

- ❖ As soon as the required approval was received the researcher began gathering data.
- ❖ This phase lasted 6 months commencing in August 2022 and ended in January 2023. This phase consisted of the following steps:
- ❖ The researcher visited each clinic twice a week in accordance with the schedules of the Geriatric outpatient clinics of Mansoura specialized hospital (Saturday and Wednesday), and Geriatric outpatient clinic of Mansoura University specialized medical hospital (Tuesday and Thursday).
- ❖ **Ethical considerations**

An ethical approval was obtained from the Research Ethics Committee of the Faculty of Nursing – Mansoura University. Every research subject in the study was given detailed information about the aim of the study before taken their written informed consent. The study's objective was the only use for the data, and the study participant's privacy and confidentiality were also guaranteed. Each member was received reassurance that their participation is voluntary, and they were aware that they have the right to withdraw from the research at any time without any problems.

Statistical Analysis: The collected data was coded, tabulated, and analyzed using the statistical package of social science (Spss) version 22 was used. The frequency, percentage, mean, standard deviation, and Cronbach's Alpha tests were used as descriptive appropriate statistical tests. Comparing categorical variables was done using Chi-square test (χ^2). The correlation coefficient (r) between two quantitative variables was determined using Pearson's correlation. At P 0.05, the difference was considered significant.

Results

(Table1) presents the distribution of the studied older adults regarding to their demographic characteristics. The age of the studied older adults ranged from 60 to 84 years with a mean of 65.03 ± 4.19 . Study subjects aged from 75 years old and above were 35.3%.

Males were more than females in the studied older adults. They were 54.9%. Regarding the marital status, 47.8% of studied older adults were widowed and only 1.8% were singles. As regard to place of residence, 54.0 % of studied participants were from urbans.

Concerning the education of studied older adults illiteracy was prevailing, it constituted 51.3%. Regarding to occupation before retirement, it was observed that 66.6% of studied older adults were working before retirement. Regarding source of income 43.3% of studied older adults have pension. In relation to monthly income, 55.8 % of studied older adults reported that their monthly income was enough. Concerning the living condition, 76.3% of studied older adults were living with their family.

(Table 2) shows distribution of medical history. It was observed that 58.5 % of the studied elder people were suffering from hypertension and 39.7 % of them had three diseases and more. As regard to medication use. It was found that 53.1 % of the studied older adults were taking more than 5 types of medication per day. Concerning accessibility to medical health services, it was found that, 58 % of the studied older adults had difficulty to reach to medical health services. (Figure 1) shows distribution of studied subjects according to their use of assistive devices. It was found that 61.6 % of studied older adults were using assistive devices.

(Table 3) shows history of using assistive devices among the studied older adults. It was observed that 44.2% of studied older adults were using eyeglasses and it was observed that 66.8% of studied older adults were using one assistive device. In addition, 55.1% of them were using assistive devices from 1 year to less than 5 years. It was observed that 77.5% of them had previous training regarding assistive devices, and 46.4 % of them made regular checkup and maintenance of assistive device.

(Figure 2) shows knowledge level of studied older adults towards assistive devices. It was observed that, 77.2% of the studied subjects had poor knowledge, while 21% of them had fair knowledge, and only 1.8 % of them had good knowledge towards assistive devices.

(Figure 3) shows the of attitude of the studied subjects towards assistive devices. It was found that, 69.2 % of the studied older adults had neutral attitudes towards assistive devices, 26.8 % of them had positive attitudes, and only 9 % of

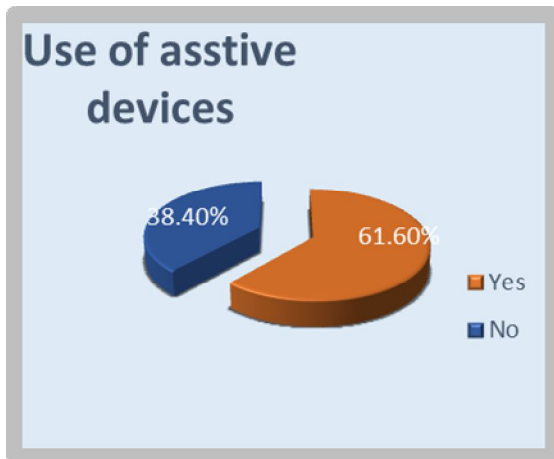
them had negative attitudes towards assistive devices.

(Figure 4) shows level of functional ability of the studied older adults. It was found that, 53.1 % of the studied older adults were independent. (Table 4) presents relation between demographic characteristics of the studied older adults and their knowledge towards assistive devices. It was found that there was highly statistically significant relation ($p=0.005$) between knowledge level and demographic characteristics regarding place of residence, older adult's educational level, work before retirement, current work, monthly income, and living arrangement.

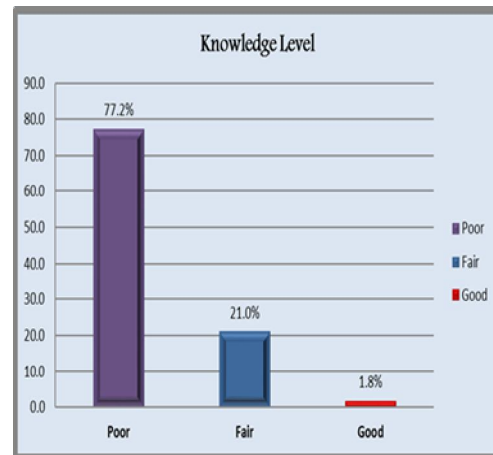
(Table 5) presents relation between medical history of the studied subjects and their knowledge towards assistive devices. It was found that there was statistically significant relation ($p=0.037$) between knowledge level and accessibility to medical health services. (Figure 5) presents relation between older adults use of assistive devices and their knowledge towards assistive devices. There was highly statistically significant relation ($p<0.0001$) was found between knowledge level and their use of assistive devices.

(Table 6) shows relation between demographic characteristics of the studied older adult and their attitudes towards assistive devices. It was found that there was statistically significant relation ($p< 0.005$) between attitude and demographic characteristics regarding place of residence, older adult's educational level, work before retirement, current work, monthly income, and living arrangement. (Figure 6) shows relation between studied older adults use of assistive devices and their attitude towards assistive devices. There was highly statistically significant relation ($p<0.0001$) between attitudes of studied older adults towards assistive devices and their use of assistive devices.

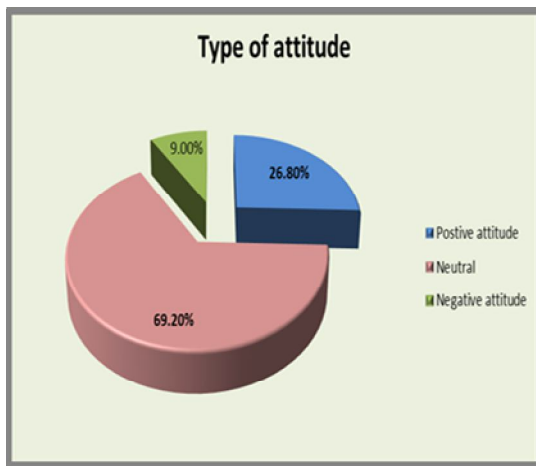
(Table 7) shows relation between functional ability of the studied older adults and their knowledge and attitudes towards assistive devices. It was found that there was no statistically significant relation ($p > 0.05$) found between functional ability of the studied older adult, their knowledge, and attitudes towards assistive devices. (Figure 7) shows Correlation between knowledge and attitudes of the studied older adults towards use of assistive devices. It was found that there was strong positive correlation between knowledge and attitudes of the studied older adults towards use of assistive devices ($r =0.754$) & ($p<0.0001$).



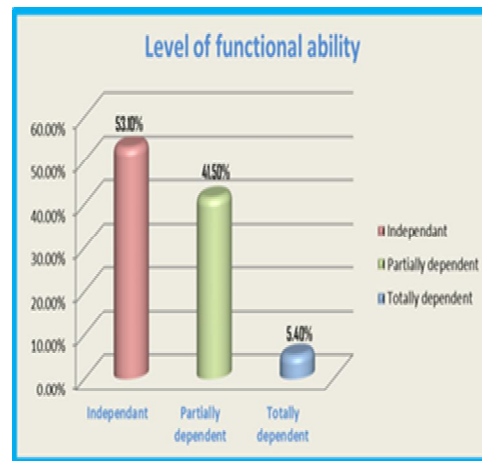
(Figure 1) Distribution of studied older adults according to their use of assistive devices



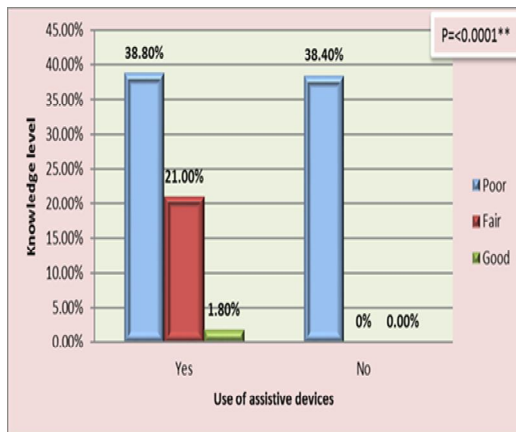
(Figure 2) Knowledge level of studied older adults towards assistive devices.



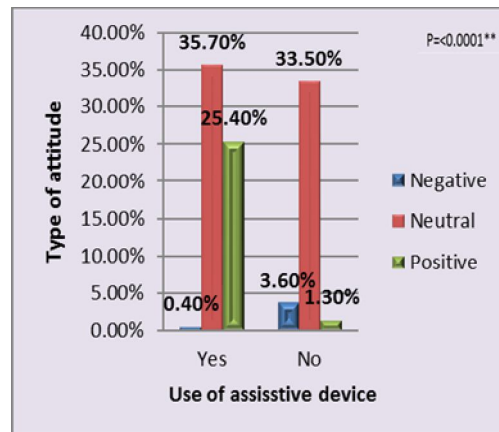
(Figure 3) The attitude of the studied older adults towards assistive devices.



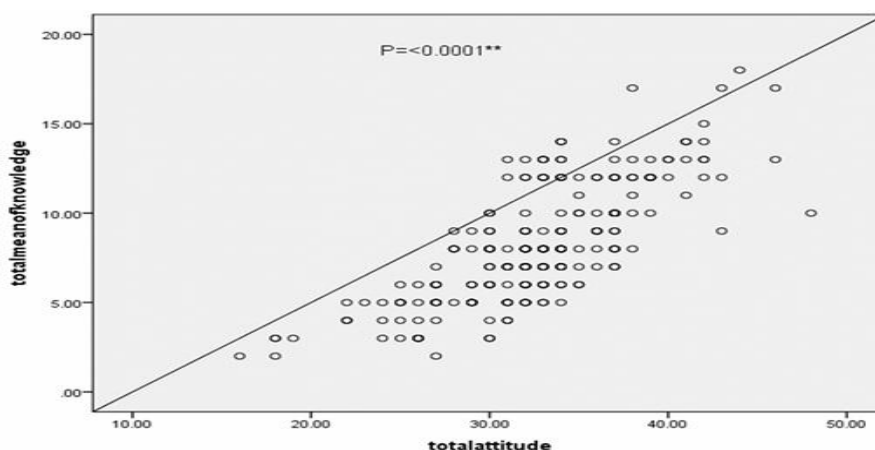
(Figure 4) Level of functional ability of the studied older adults



(Figure 5) Relation between older adult's use of assistive devices and their knowledge towards assistive devices.



(Figure 6) Relation between studied older adults use of assistive devices and their attitude towards assistive devices.



(Figure 7) Correlation between knowledge and attitudes of the studied older adults towards use of assistive devices

Table 1: Demographic characteristics of the studied older adults

Demographic Characteristics	N= 224	100%
Age (years)		
60 < 65	69	30.8
65 < 75	76	33.9
≥ 75	79	35.3
Mean ± SD	65.03 ± 4.19	
Sex		
Male	123	54.9
Female	101	45.1
Marital status		
Widow	107	47.8
Married	95	42.4
Divorced	18	8.0
Single	4	1.8
Place of residence		
Urban	121	54.0
Rural	103	46.0
Educational level		
Illiterate	115	51.3
Read and write	49	21.9
Basic education	49	21.9
Higher education	11	4.9
Work before retirement		
Yes	138	66.6
No	86	38.4
Current work		
Yes	67	29.9
No	157	70.1
Monthly income		
Enough	125	55.8
Not enough	92	41.1
Enough and saved	7	3.1
Source of income		
Pension	97	43.3
Son's help	67	29.9
Social affairs	40	17.9
Property	20	8.9
Living arrangements		
With family	171	76.3
Alone	53	23.7

Table 2: Medical history of studied older adults.

Medical history	N (224)	100%
Types of chronic diseases		
Hypertension	131	58.5
Diabetes mellitus	106	47.3
Bone and joint diseases	104	46.4
Respiratory diseases	58	25.9
Kidney and urinary tract diseases	47	21.0
Heart disease	43	19.2
Chronic liver disease	21	9.4
Tumors	19	8.5
Number of chronic diseases		
No disease	4	1.8
One disease	51	22.8
Two diseases	80	35.7
Three and more disease	89	39.7
Number of medications intake		
More than 5 medications	119	53.1
Less than 5 medications	105	46.9
Accessibility to medical health services		
Difficult to reach	130	58.0
Easy to reach	94	42.0

Table 3: History of using assistive devices of the studied older adults

Item	N (138)	100%
Types of assistive devices[#]		
Eye glasses	99	44.2
Canes	34	15.2
Hearing aids	21	9.4
Walkers	8	3.6
Wheel chairs	8	3.6
Crutches	8	3.6
Number of utilized assistive devices		
One	92	66.8
Two	41	29.7
Three or more	5	3.6
Onset of using assistive devices		
1year-<5 years	76	55.1
5 years -<10 years	44	31.9
10 years and more	18	13
Previous training regarding assistive devices		
Yes	107	77.5
No	31	22.5
Regular check up and maintenance of assistive devices		
No	74	53.6
Yes	64	46.4

[#] More than one answer was given

This table includes only those who use assistive devices.

Table 4: Relation between demographic characteristics of the studied older adults and their knowledge towards assistive devices.

Demographic Characteristics	N= 224	Knowledge level						Test of significance	
		Poor		Fair		Good		χ^2	P
		N	%	N	%	N	%		
Age (years)									
60 < 65	69	55	24.6	13	5.8	1	0.4	4.249	0.373
65 < 75	76	63	28.1	12	5.4	1	0.4		
≥ 75	79	55	24.6	22	9.8	2	0.9		
Sex									
Male	123	99	44.2	22	9.8	2	0.9	1.659	0.436
Female	101	74	33.0	25	11.2	2	0.9		
Marital status									
Widow	107	79	35.3	26	11.6	2	0.9	5.348	0.500
Married	95	78	34.8	16	7.1	1	0.4		
Divorced	18	12	5.4	5	2.2	1	0.4		
Single	4	4	1.8	0	0.0	0	0.0		
Place of residence									
Urban	121	70	31.2	47	21.0	4	1.8	56.211	<0.0001**
Rural	103	103	46.0	0	0.0	0	0.0		
Educational level									
Illiterate	115	90	40.2	23	10.3	2	0.9	19.633	0.003**
Read and write	49	42	18.8	6	2.7	1	0.4		
Basic education	49	38	17.0	11	4.9	0	0.0		
Higher education	11	3	1.3	7	3.1	1	0.4		
Work before retirement									
Yes	138	87	38.8	47	21.0	4	1.8	41.152	<0.0001**
No	86	86	38.4	0	0.0	0	0.0		
Current work									
Yes	67	36	16.1	27	12.1	4	1.8	33.208	<0.0001**
No	157	137	61.2	2	8.9	0	0.0		
Monthly family income									
Enough	125	81	36.2	41	18.3	3	1.3	63.718	<0.0001**
Not enough	92	92	41.1	0	0.0	0	0.0		
Enough and saved	7	0	0.0	6	2.7	1	0.4		
Living arrangements									
With family	171	122	54.5	45	20.1	4	1.8	14.282	0.001**
Alone	53	51	22.8	2	0.9	0	0.0		

Table 5: Relation between medical history of the studied older adult and their knowledge towards assistive devices

Item	N= 224	Knowledge level						Test of significance	
		Poor		Fair		Good		χ^2	P
		N	%	N	%	N	%		
Number of chronic diseases									
No disease	4	3	1.3	1	0.4	0	0.0	1.268	0.973
One disease	51	41	18.3	9	4.0	1	0.4		
Two diseases	80	62	27.7	16	7.1	2	0.9		
Three and more diseases	89	67	29.9	21	9.4	1	0.4		
Number of medications intake									
Less than 5 medications	105	86	38.4	17	7.6	2	0.9	2.737	0.254
More than 5 medications	119	87	38.8	30	13.4	2	0.9		
Accessibility to medical health services									
Difficult to reach	130	108	48.2	21	9.4	1	0.4	6.605	0.037*
Easy to reach	94	65	29.0	26	11.6	3	1.3		

Table 6: Relation between demographic characteristics of the studied older adult and their attitudes towards assistive devices.

Demographic Characteristics	N=224	Type of attitude						Test of significance	
		Negative		Neutral		Positive		χ^2	P
		N	%	N	%	N	%		
Age (years)									
60 < 65	69	2	0.9	46	20.5	21	9.4	2.347	0.672
65 < 75	76	4	1.8	50	22.3	22	9.8		
≥ 75	79	3	1.3	59	26.3	17	7.6		
Sex									
Male	123	6	2.7	87	38.8	30	13.4	1.180	0.554
Female	101	3	1.3	68	30.4	30	13.4		
Marital status									
Widow	107	5	2.2	71	31.7	31	13.8	3.561	0.736
Married	95	4	1.8	68	30.4	23	10.3		
Divorced	18	0	0.0	12	5.4	6	2.7		
Single	4	0	0.0	4	1.8	0	0.0		
Place of residence									
Urban	121	0	0.0	68	30.4	53	23.7	45.443	<0.0001**
Rural	103	9	4.0	87	38.8	7	3.1		
Educational level									
Illiterate	115	4	1.8	88	39.3	23	10.3	13.081	0.042*
Read and write	49	2	0.9	34	15.2	13	5.8		
Basic education	49	3	1.3	29	12.9	17	7.6		
Higher education	11	0	0.0	4	1.8	7	3.1		
Work before retirement									
Yes	138	0	0.0	80	35.7	58	25.9	52.168	<0.0001**
No	86	9	4.0	75	33.5	2	0.9		
Current work									
Yes	67	0	0.0	33	14.7	34	15.2	29.824	<0.0001**
No	157	9	4.0	122	54.5	26	11.6		
Monthly income									
Enough	125	1	0.4	75	33.5	49	21.9	48.712	<0.0001**
Not enough	92	8	3.6	79	35.3	5	2.2		
Enough and saved	7	0	0.0	1	0.4	6	2.7		
Living arrangements									
With family	171	1	0.4	113	50.4	57	25.4	33.781	<0.0001**
Alone	53	8	3.6	42	18.8	3	1.3		

Table 7: shows relation between functional ability of the studied older adults and their knowledge and attitudes towards assistive devices.

Item	N=224	Level of independence						Test of significance	
		Totally dependent		Partially dependent		Independent		χ^2	P
		N	%	N	%	N	%		
Level of Knowledge about assistive devices									
Poor	173	10	4.5	72	32.1	91	40.6	4.707	0.319
Fair	47	1	0.4	19	8.5	27	12.1		
Good	4	1	0.4	2	0.9	1	0.4		
Type of attitude about assistive devices									
Negative	9	0	0.0	3	1.3	6	2.7	2.096	0.718
Neutral	155	10	4.5	66	29.5	79	35.3		
Positive	60	2	0.9	24	10.7	34	15.2		

Discussion

The results of the current study showed that the age's mean was 65.03 ± 4.19 years. This may be justified by the elders were suffering from multi chronic disease and go to hospital for monthly treatment at the expense of the state. Dissimilarly, a research held in Egypt by Mohamed et al., (2022), who found that the mean of age of study subjects was 76.58 ± 4.85 years, also a research done in Germany by Fotteler, et al., (2021), who found that the mean age of study subjects was 72.7 years, and a study done in Nebraska by Idachaba, et al., (2021), who found that the average age of study subjects was 69.3 ± 9.9 years.

Males were more prevalent in the present study. This may be explained by men are generally more prone to certain health conditions that contribute to health issues so they go to these hospitals for follow up. Similarly, a study held in Egypt by Mohamed et al., (2022) and a study done in Turkey by Simsek, Yümin, Sertel, Öztürk, & Yümin, (2012) who found that the majority of study participants were men. Contradictory to the result of the present study, a research carried out in Germany by Fotteler, et al., (2021), Yu, et al., (2022), and a study done in Nebraska by Idachaba, et al., (2021), who found that the majority of study participants were females.

Regarding to place of residence, the present study showed that, more than half of older adults were living in urban areas. This may be justified by there were health care and medical health services are available in the city more than the rural areas so urban residence represents most of the studied sample. Similarly, a study held in China by Yu, et al., (2022), who found that most of older adults were living in the city. Regarding marital status, the present study revealed that nearly half of the studied older adults were widowed. This result may be attributed to most of older adults at this stage of life lose their partners. Dissimilarly, a study done in Egypt by Mohamed et al., (2022) and a study done in China by Yu, et al., (2022), who found that most study subjects were married.

Concerning the level of education in this study, more than half of older adults were illiterates. This result may be justified by in the past poverty can prevent older adults from accessing education. While, this result is contradictory with a study performed in Egypt by Mohamed et al., (2022), who found that the majority of study subjects were reading and writing. In addition, a study done in China by Yu, et al., (2022), who

found that most participants, had primary school graduates.

Regarding to occupation before retirement, this research showed that two third of studied participants were working before retirement. This may be explained, as the majority of studied subjects were males. Similarly, a study done in Egypt by Mohamed et al., (2022), who found the majority of study subjects, were working in governmental sector and a study held in China by Yu, et al., (2022), who found that most of participants were workers before retirement.

According to monthly income, the results of this study showed that more than half of the older adults said that their monthly income was enough. This may due to the studied older adults were working before retirement and have a pension and most of them live with their families. This is in the same line with a study performed in Egypt by Mohamed et al., (2022) and a study done in China by Yu, et al., (2022), who found that the participants, had enough monthly income.

Concerning the living arrangement, the present study showed that the majority of studied older adults were living with their families. This may be explained as in Egypt, the older adults still live in extended family. This is in the same line with study done in Egypt by Mohamed et al., (2022), who found the majority of study subjects, were living with their families. In contrast, a study done in Germany by Fotteler, et al., (2021), who found that the subjects still lived alone in their own homes.

Regarding the chronic diseases, this study found that more than half of older adults were suffering from hypertension and diabetes mellitus. This may be explained as individual's age and physiological changes can increase the risk of developing hypertension and diabetes mellitus. Similarly, a study done in Egypt by Mohamed et al., (2022), a study done in China by Jiang, Zhang, & Xi, (2019), and a study done in Turkey by Simsek, Yümin, Sertel, Öztürk, & Yümin, (2012), who found that majority of study participants were having hypertension and diabetes mellitus.

As regard to medication use, this study showed that more than half of the studied participants were taking more than five types of medication per day. This may be justified by older adults often have complex health profiles which can necessitate medications to address these multifaceted needs. In addition, as older adults age, their bodies can become more sensitive to

medication side effects. Treating side effects might require additional medications, contributing to polypharmacy. Dissimilarly, with the present finding, a study done in Egypt by Mohamed et al., (2022), who found the majority of study subjects, were taking less than five types of medications.

Concerning accessibility to medical health services, the study showed that more than half of subjects had difficulty to reach to medical health services. This may be explained as many older adults experience mobility issues due to age-related changes, chronic conditions, or disabilities. Physical limitations can make it challenging them to travel to medical facilities, especially if appropriate transportation services are not available. Also, limited health literacy can lead to confusion about appointment scheduling, or following medical instructions, resulting in missed appointments. This is in accordance with a study performed in Egypt by Mohamed et al., (2022), who revealed that the majority of study subjects were had difficulty to reach to medical health services.

Regarding to use of assistive devices, the research presented that nearly two thirds of studied older adults were using assistive devices. This may be justified as individual's age; they are more likely to experience age-related health challenges, chronic conditions, and disabilities that can significantly impact their daily lives. Many of these conditions, such as arthritis, vision and hearing impairments, and mobility issues, often necessitate the use of assistive devices. Contradictory to the result of the present study, a study done in India by Thakur, Kalia, Kaur, & Sharma, (2018), who found that, the majority of studied subjects sometime use assistive devices. Contradictory with a study done in China by Yu, et al., (2022) and a study done in Turkey by Simsek, Yümin, Sertel, Öztürk, & Yümin, (2012), who found that at least every older adult uses assistive technologies.

The most frequently used assistive device was eyeglasses in this study. Because eyeglasses are effective in addressing age-related vision changes, ease of use, customization options, and positive social acceptance. Eyeglasses improve the visual ability of older adults. Similarly, a study done in India by Thakur, Kalia, Kaur, & Sharma, (2018), who found that, the magnifying glasses were the most common among elders. Contradictory to the present finding a study done in Turkey by Simsek, Yümin, Sertel, Öztürk, & Yümin, (2012), who found that the walking stick was most frequently used.

The results of the current study showed that the majority of older adults had poor knowledge about assistive devices. This may be justified by the availability of comprehensive and easily accessible information about different types of assistive devices might be limited. Older adults may not know where to find accurate and reliable information about these devices. Many modern assistive devices incorporate technology, and older adults who are less familiar with technology might struggle to learn about and understand these devices. In the same line of current results, a study done in Egypt by Mohamed et al., (2022), who found also that the majority of study subjects had poor knowledge about assistive devices. In addition, a study done in Australia by Yusif, Soar & Hafeez-Baig, (2016), who found there was general lack of knowledge about the assistive technologies needs of elderly people. In contrast with a study done in India by Thakur, Kalia, Kaur, & Sharma, (2018), who found that, the majority of participants had good awareness regarding using of assistive devices.

The present study showed that, more than two thirds of seniors had neutral attitudes towards use of assistive devices. This may be due to some older adults might not be fully aware of the range of assistive devices available or how these devices can address specific challenges they face and some older adults might prefer to rely on familiar methods or support from others rather than embracing new assistive devices. For this reason, some older adults might provide neutral responses due to a lack of strong feelings or opinions on the topic of assistive devices. This is in agreement with a study done in Sweden by Häggblom-Kronlöf, & Sonn, (2007), who found that there is an ambivalent attitude regarding the use of assistive technology; Depending on where, when, and with whom they are used, older adults' experiences can be both positive and negative. Contrast with a study done in Australia by Yusif, Soar & Hafeez-Baig, (2016) who found that there's negative attitude towards assistive technologies. Also a study done by Fiorini, et al., (2021) who confirmed that most of elders participants showed a positive attitude regarding use of assistive devices.

This study revealed that more than half of the studied older adults were independent in doing activity of daily living. Because many older adults experience a relatively healthy aging process without significant physical or cognitive impairments that would hinder their ability to perform ADLs independently, also the use of assistive devices, such as adaptive tools, can

enhance older adults' ability to perform ADLs independently, even if they have mild limitations. Dissimilarly, a study done in China by Yu, et al., (2022), the majority of participants were independent.

The results of the current study showed a strong relation between knowledge level and demographic traits related to older adult's educational level, current work, and monthly income. This is simply due to older adults with higher education might have developed better skills to acquire and understand new information, including knowledge about assistive devices and older adults who are currently employed might have better access to information due to their engagement in work-related activities and interactions with colleagues, which can expose them to discussions about various topics, including assistive devices. As for, those who are retired might have fewer opportunities for regular interactions and discussions, potentially leading to lower exposure to new information. Higher monthly income can provide greater access to resources, including information sources such as books, internet access, and educational materials. This increased access to resources might contribute to higher knowledge levels. In the same line, a study done in Egypt by Mohamed et al., (2022), also found a significant relation between knowledge level and demographic characteristics regarding older adult's educational level, current work, and monthly income.

The results of the current study, there was highly statistically strong relation was found between knowledge level of studied older adults and their use of assistive devices. This may be justified by knowledgeable older adults are better equipped to understand how assistive devices can improve their quality of life, enhance their independence, and address specific challenges they may be facing. Contradictory with a study done in India by Thakur, Kalia, Kaur, & Sharma, (2018), who found that there were no significant association between awareness and usage of assistive devices.

In addition, the present study revealed that there was highly statistically significant relation between attitudes and demographic characteristics regarding older adult's educational level. This result may reflect that, a positive attitude is obtained from adequate knowledge from education. In the same line, a study done in Egypt by Mohamed et al., (2022), also found a significant relation between attitudes and demographic characteristics regarding older adult's educational level.

This study revealed that there was statistically significant relation between attitude and demographic parameters regarding older adult's current work and monthly income. This may be justified by older adults with higher monthly incomes might have a greater sense of financial security, which can lead to more positive attitudes due to reduced concerns about the costs associated with assistive devices, healthcare services, and support systems. This enhanced access can contribute to a more positive and informed attitude. Contrast with a study done in Egypt by Mohamed et al., (2022), who found that there was no statistically significant relation was found between attitude and demographic characteristics regarding older adult's current work and monthly income.

This study found that there was no statistically significant relationship was found between attitude and demographic parameters regarding older adult's age, sex. Contrast, a research conducted in China by Jiang, Zhang, & Xi, (2019), who found that the attitudes of the seniors regarding assistive technologies show strong differences among different ages and genders. Unlike a study done in Egypt by Mohamed et al., (2022), who found that there was statistically significant relation was found between attitude and demographic characteristics regarding older adult's age, sex, and marital status.

Conclusion

In light of the current study's finding, it can be concluded that more than half of older adults were independent and nearly two thirds of them were using assistive devices. Furthermore, eyeglasses were the most commonly used one. In addition, the majority of elderly people had poor level of knowledge and more than two thirds of them had neutral attitudes towards use of assistive devices. Moreover, there was statistically significant relation between older adult's knowledge and their attitudes towards use of assistive devices and place of residence, older adult's educational level, work before retirement, current work, monthly income, and living arrangement. Also, a positive correlation was found between knowledge and their attitudes towards use of assistive devices.

Recommendations

The study's conclusion lead to the following recommendations:

- 1) To raise awareness among older individuals and their caregivers about the value of using assistive devices simple brochures should be created and distributed.
- 2) Provide hands-on demonstrations, allowing older adults to practice using these devices in a supportive environment.

- 3) Show case role models who have embraced assistive devices in their daily lives.

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