Results

The results of the current study were presented in the following sequences.

Part I:

- Elderly and caregivers general characteristics and their personal habit . (table 1-3).
- Elderly home environment .(table 4) .

Part II :

Caregiver's knowledge about physiopsychosocial changes of elderly , needs , rights , daily care, and recreational activity .(table 5-8).

Part III:-

Caregiver's care provided for diabetic and hypertensive elderly (table 9-10).

Part IV:-

The relationship between caregiver's age , education and their total knowledge & practice . (table 11-13).

Part I: Elderly and caregivers demographic characteristics and their life style

Table (1) Demographic characteristics of the studied elderly (n=100)

Characteristics	%
Sex	
Male	46.0
Female	54.0
Age	
60-	59.0
70-	36.0
80+	5.0
Marital status	
Single	3.0
Married	87.0
Widow	10.0
Educational level	
Illiterate or read &write	51.0
Basic	8.0
Secondary	37.0
Universal	4.0
Occupation	
Free work	17.0
House wife	50.0
Employee	7.0
Retired	26.0
Income / capita	
Sufficient	6.0
Not sufficient	94.0

Table (1) illustrates the demographic characteristics of the studied elderly. Table shows that 54.0%of studied elderly were female, and 59.0% of them belonged to age group 60-70 years and the rest belonged to 80 years or more. 87%of the elderly were married , 51% were illiterate or read and write. On the other hand 50.0% of elderly were house wives , and 93% of the elderly their income not sufficient .

Table (2) Distribution of elderly according to their daily self care and management of Diabetes or Hypertension condition (n= 100).

Items	Diabetic cases	Hypertensive cases	X^2	P-value#
	%	%		
Smoking				
Yes	17.9	31.8	1.999	.234
No	82.1	68.2		
Number of cigarette				
1-20	64.3	100	3.281	.123
20 -	35.7	0.0		
Attendance to clinic				
No	5.1	0.0	1.175	.573
Yes	94.9	100		
Outpatient follow up				
Every 3weeks	4.0	0.0	.789	.670
Every month	54.1	63.6		
Every 6 months	41.9	36.4		
Treatment intake schedule				
Regular and at right time & dose	69.2	81.8	3.846	.135
When he feel pain only	15.4	18.2		
When its price available	15.4	0.0		
Did you follow diet regimen				
Yes	17.9	31.8	1.999	.234
No	82.1	68.2		
Number of meal / day				
2 times daily	56.4	22.7	14.867	.001
3 times daily	32.1	77.3		
4 times daily	11.5	0.0		
Fluid intake daily				
6-	78.2	100	5.777	.020
8 and more	21.8	0.0		
Daily life activity dependency				
Yes	25.6	27.3	.024	.878
No	74.4	72.7		
Causes of dependency				
Have disease	20.0	0.0	12.480	.005
Diabetic foot	45.0	0.0		
Limb amputation	15.0	0.0		
psychological problem	20.0	100.0		

 # P-value based on chi- square test .

Table (2) shows distribution of elderly according to their personal habit and management of diabetes or hypertension condition .According to table 82.0% of diabetic elderly and 68.2% of hypertensive were nonsmoker , and the rest were smoker . 100.0% of hypertensive smoker elderly smoke 1-20 cigarette daily , while only 64.0% of diabetic elderly smoke 1-20 cigarette daily .

As regarding to studied sample attendance to clinic all hypertensive elderly and 94.9% of diabetic attend clinic , and the rest didn't attend . 54.1% of diabetic elderly, and 63.6% of hypertensive monthly attended for follow up care at clinic .

Concerning to treatment intake 81.8% of hypertensive and 69.2% of diabetic took it regularly and at right dose &time , and 18.4% of hypertensive and 15.4% of diabetic were taken medication only when felt with pain .

On the other hand 82.1% of diabetic elderly and 68.2% of hypertensive didn't follow diet regimen &31.8% of hypertensive and 17.9% of diabetic followed diet regimen .32% of diabetic elderly and 77% of hypertensive one reported they eat 3 meals/day .Also 78.2% of diabetic elderly compared to all hypertensive elderly reported they drink 6 and more cups of fluid / day . Most of the studied subject were dependently on their daily activities (74.4% diabetic & 72.7% hypertensive) , and 45%of diabetic mentioned the reason for their dependency was present of foot problem , while all hypertensive elderly reported the cause was psychic problem .

Table(3) Distribution of socio demographic characteristics of caregiver's (n= 100).

Characteristics	%
Sex	
Male	**9.0**
Female	**91 .0**
Age group	
15-	**10.0**
30-	**50.0**
45 +	**40.0**
Educational level	
Illiterate or Read & write	**14.0**
Basic	**26.0**
Secondary	**39.0**
Universty	**21.0**
Occupation	
Employee	**31.0**
Free work	**4.0**
House wife	**51.0**
Student	**10. 0**
Don't work	**4.0**
Marital status	
Single	**20.0**
Married	**79.0**
Widow	**1.0**
Residence with elderly	
At elderly home	**94.0**
Nearby elderly home	**6.0**
Caregivers Relationship	
Husband / wife	**26.0**
Son / daughter	**27.0**
Daughter in law	**47.0**

Table (3) illustrates that 91.0% of caregivers were female , 50.0% of them were aged 30-40 years ,39.0% had secondary educational level ,51.0% of them were house wives and 31.0% employee, while 4.0% of caregivers had free work and same percent didn't work.

Concerning to marital status 79.0% were married and 94.0% of them residence with elderly at their homes , 47.0% of caregivers were daughter in law .

Table (4) Description of observed elderly home environment (n=100)

Home environment	Good	Moderate	Poor
	%	%	%
Ventilation.	**57.0**	**41.0**	**2.0**
Lightening.	**50.0**	**48.0**	**2.0**
Noise :-			
Outside house.	**8.0**	**61.0**	**31.0**
Inside house.	**63.0**	**29.0**	**8.0**
Cleaning.	**69.0**	**27.0**	**4.0**
Ground coverage.	**47.0**	**50.0**	**3.0**
Furniture.	**32.0**	**51.0**	**17.0**
Bathroom.	**32.0**	**47.0**	**21.0**
Stairs.	**32.0**	**46.0**	**22.0**
Kitchen.	**35.0**	**52.0**	**13.0**

Table (4) shows description elderly home environment . According to the table 57% of elderly homes had good ventilation, 50.0% had good lightening .

Concerning to noise for outside house was 61.0%moderate, while inside house 63.0% were good .And 69.0% of their houses were cleaned well , and 50.0% of their ground covered with moderate coverage ,also 51.0% of them had moderate furniture, and 47.0% were good .

For Bath room 47.0% were moderate clean, and 32.0% were good while only 21.0% were poor . As regard to stairs 46.0% were moderate condition and 22.0% poor .

Also table reveals that 52.0% of elderly kitchen were moderate condition , while only 13.0% poor and the rest good .

Part II : Caregiver's knowledge about physiopsychosocial changes of elderly , needs , rights , daily care, and recreational activity .

Table (5) knowledge of caregiver about elderly normal physio-psychosocial changes (n= 100).

Normal changes	CORRECT & COMPLETE	INCOMPLETE& CORRECT	DONOT KNOW
	%	%	%
Definition of aging.	22 .0	69.0	9.0
Dermatological changes.	20.0	67.0	13.0
Respiratory changes.	10.0	32.0	58.0
Cardiovascular changes.	6.0	76.0	18.0
Digestive changes.	17.0	79.0	4.0
Musculoskeletal changes.	14.0	72.0	14.0
Nervous changes.	4.0	59.0	37.0
Senses changes.	9.0	50.0	41.0
	20.0	77.0	3.0
	30.0	0.0	70.0

Table (5) Represents that 22.0%of caregivers had complete &correct answer about definition of aging while 69.0% of them had correct &incomplete answer , while only 9.0% had no knowledge .

Concerning physiological changes most of caregiver reported incomplete correct answer related to changes occur in digestive system, cardiovascular , musculoskeletal , urinary tract , hearing and dermatological changes (79% , 76% 78% 77% and 67% , respectively).

Also 67% of caregivers reported incomplete correct answers related to psycho-social changes .

** This table responds on the first research question .

Table (6) Distribution of Caregiver by their knowledge about needs &rights of elderly (n = 100) .

Needs & rights	Complete &correct	Incomplete & correct	Don't know
	%	%	%
Physical needs.	4.0	55.0	41.0
Social needs.	10.0	53.0	37.0
Psychological needs.	8.0	41.0	51.0
Environmental needs.	8.0	58.0	34.0
Bathroom hazards.	11.0	63.0	26.0
Elderly rights.	0.0	39.0	61.0

Table (6) Represents the distribution of Caregiver by their knowledge about needs &rights of elderly .Table shows that 55.0% of caregiver's reported incomplete correct knowledge about physical needs . 53% about social need , while 63% mentioned incomplete correct answer in relation to bathroom hazards , 58% environmental need as safety

As regard elderly rights 61%of caregiver know the elderly rights .

** This table responds on the first research question .

Table (7): Distribution of Caregiver's home care about elderly daily living care (n=100)

Daily living activity	%
Bathing	
Complete bed bath.	**4.0**
Need some help.	**26.0**
Self-bathing.	**70.0**
Transporting	
Bed ridden.	**4.0**
Need support.	**23.0**
Independent move**.**	**73.0**
Movement	
Complete dependent.	**4.0**
Need stick or support.	**26.0**
Walk independently .	**70.0**
Clothing	
Complete dependent.	**4.0**
Need some help.	**20.0**
Clothing by himself .	**76.0**
W.C	
Done in bed.	**4.0**
Need some help to go.	**21.0**
Go alone.	**75.0**
Elimination	
Some situations require help.	**8.0%**
Normal continence.	**92.0%**
Nutrition	
N.G / I.V for feeding.	**5.0**
Need some help.	**7.0**
Feed himself .	**88.0**

Table (7) shows Caregiver's knowledge about elderly daily care .They reported most of elderly independently change clothes ,go to W.C , take transportation alone , and self-bathing (76% ,75%, 73% ,and 70% respectively) .

On the other hand the majority of elderly had normal elimination , and feed themselves (92% ,and 88%).

Table (8) Percent of care giver's according to their answer about recreational activity of elderly (n = 100)

Recreational activity	&
Sporting	
Not done	**95.0**
Done once or twice weekly.	**5.0**
Entertainment	
Watch T.V.	
Yes	**64.0**
No	**36.0**
Listen to Radio.	
Yes	**8.0**
No	**92.0**
Hobbies (Reading & animal braiding)	
Yes	**8.0**
No	**92.0**
playing cards or chess	
Yes	**3.0**
No	**97.0**
Shopping	
Yes	**36.0**
No	**64.0**
Recreation	
Hand making (drawing – fishing – quilting)	
Yes	**13.0**
No	**87.0**
Strummed in music instrument.	
Yes	**2.0**
No	**98.0**

Table (8) indicated that the caregiver's report about elderly recreational activities . The majorities of caregivers reported that the majority of elderly not practice sports or hoppies , or play cards . On the other hand (64%) of elderly watch T.V and (36%) go outside for shopping .

Part III: Caregiver's observed practicees provided for diabetic and hypertensive elderly

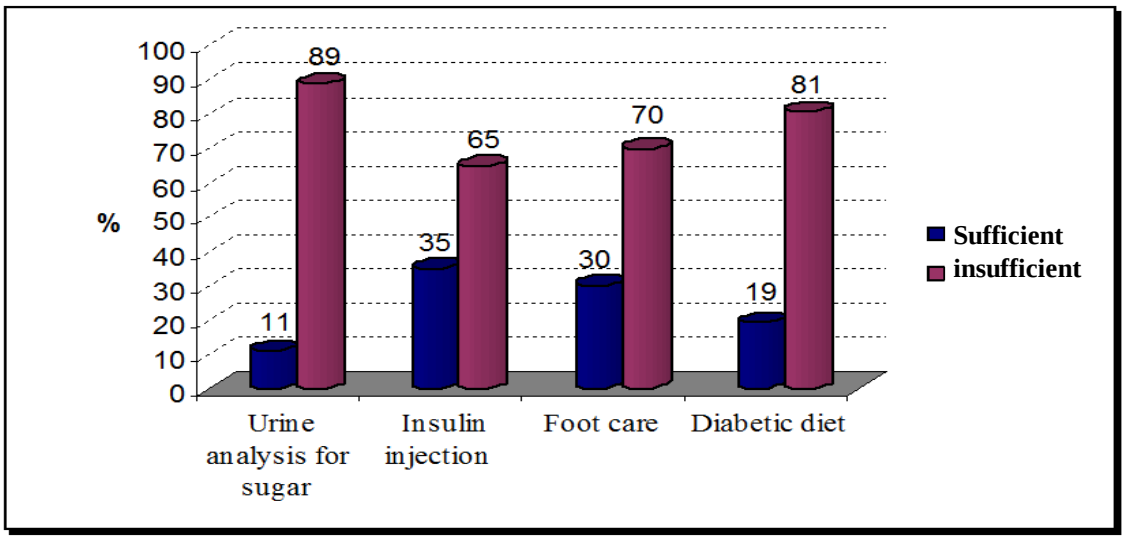

Figure (1) Percentage of observed caregiver 's practices regarding home care for diabetic elderly (n=78) .

(*) there were 32 who receive oral hypoglycemic medication .

Figure (1) illustrated the caregiver's observed practice of home care for diabetic elderly . According to the figure caregivers had insufficient care provided to diabetic cases .The minority practice adequately insulin injection , provide special diet for diabetic elderly , and performed urine analysis for sugar(20.5%,19% , and 11.5% respectively), while 29.5% provided foot care

Table (9) Distribution of Caregivers according to their reported care practice for hypertensive elderly (n=22)

Reported care practice	No	%
Measuring Bl.p		
Yes	**22**	**100.0**
No	**0**	**0.0**
Times of measuring BL.p		
Weekly	**13**	**59.1**
Monthly	**9**	**40.9**
where measuring BL.p		
Health center	**16**	**72.7**
Private clinic	**2**	**9.1**
Pharmacy	**4**	**18.2**
Have special diet		
Yes	**18**	**81.8**
No	**4**	**18.2**
What is it		
Right answer	**14**	**63.6**
Wrong answer	**4**	**18.2**
Didn't know	**4**	**18.2**
Follow up		
Yes	**4**	**18.2**
No	**3**	**13.6**
Some times	**15**	**68.2**
If yes		
Weekly	**4**	**21.1**
Monthly	**15**	**78.9**
Medication taken		
Yes	**18**	**81.8**
No	**4**	**18.2**
If no causes		
Careless	**4**	**100.0**

Table (9) Reflects that all of hypertensive elderly measure blood pressure, 59.1% measure it weekly, 72.7% of them measured it at health centers .

Concerning diet 81.8 % of caregivers reported that hypertensive elderly needed special diet, while only 63.6% of them mentioned right answer about the kind of special diet .Only 18.2% of them went for follow up care , 78.9% of them went monthly

Concerning medication 81.8% of them take their medication , while only 18.02 % didn't take it due to their careless.

Part V: Statistical relation between caregiver age , education and their total knowledge & practice .

Table (10) Relation between total level of caregiver's knowledge about elderly care and their age group & educational level (n=100)

Items	Total knowledge		X^2	P.value#
	Unsatisfactory	Satisfactory		
	%	%		
Age / years				
15-	**50.0**	**50.0**	**5.590**	**.061**
30-	**16.0**	**84.0**		
45+	**25.0**	**75.0**		
Educational level				
Illiterate or Read &write	**92.9**	**7.1**	**23.423**	**.000***
Basic education	**100.0**	**0.0**		
Secondary education	**74.4**	**25.6**		
University education	**42.9**	**57.1**		

p. value based on chi- square test .

* P< 0.01 (highly significant).

Table (10) indicate relation between total level of caregiver's knowledge and their age and educational level . The table illustrate that the caregivers aged 30 to less than 45 years old had satisfactory level of knowledge (84.0%) . As regard to caregiver's education and level of knowledge about caring for elderly .The table presents the caregivers who had secondary education or university degree had high level of satisfactory knowledge about elderly care (25.0% and 57.1% respectively) . The difference in level of education & satisfactory level of knowledge was statistically significant (P< 0.000).

Table (11) Relationship between caregiver's total practice provided for diabetic elderly & their age & education (n = 78)

Items	Total practice				total	X^2	P-value #
	unsatisfactory		satisfactory		No		
	No	%	No	%			
Age / years							
15-	6	85.7	1	14.0	7	6.278	.043
30-	35	79.5	9	20.5	44		
45+	27	100.0	0	0.0	27		
Educational level							
Illiterate or Read and write	11	100.0	0	0.0	11		
Basic education	23	88.5	3	11.5	26		
Secondary education	21	80.7	5	19.2	26	2.615	.650
University education	13	86.7	2	13.3	15		

P. value based on chi-square test .

Table (11) represent relation between caregiver's total practice related to elderly Diabetes mellitus and their age & educational level . According to table the caregiver's age 30- to less than 45 years old 79.5% had unsatisfactory level of practice about diabetic care (79.5%) . The difference between these age groups were statistically significant . P=.043 .

As regard caregiver's education and their level of practice provided to diabetic elderly . The table showed that caregivers who had basic education and secondary education has unsatisfactory level of practice about diabetic care (88.5% and 80.7%respectively) . While 13.3% of caregivers who had university education had satisfactory level of practice about diabetic care .

* This table responds on the second research question .

Table (12) : Relationship between caregiver's age , education and their total practice as reported about care provided for hypertensive elderly . (n=22)

Items	Total reported care practice				total		X^2	P-value #
	unsatisfactory		satisfactory		No	%		
	No	%	No	%				
Age / years								
15-	1	33.3	2	66.7	3	100.0		
30-	1	16.7	5	83.3	6	100.0	710	1.000
45+	4	30.8	9	69.2	13	100.0		
Educational level								
Illiterate or Read &write	3	100.0	0	0.0	3	100.0		
Basic	3	100.0	0	0.0	3	100.0	8.509	.014 *
Secondary	3	23.1	10	76.9	13	100.0		
University	0	0.0	3	100.0	3	100.0		

P- value based on fisher exact test .

* P < 0.01 (highly significant) .

Table (12) represent relation between caregiver's age, education & their total practice related to care given for hypertensive elderly . Table Shows that 83.3% of caregivers aged 30 to less than 45 years old had satisfactory of level knowledge related to practice (88.3%) . The finding was statistically not significant P=1.000 .It mean that there is no relation between caregiver's age and their knowledge related practice for caring with hypertensive elderly .

Concerning to educational level and level reported practice .Table shows that the caregivers who had secondary education and university education had high level of satisfactory reported practice about caring for hypertensive elderly (76.9% and 100% respectively) . There is statistically significant relation between caregiver's education and their reported practice for caring with hypertensive elderly .P = 0.014

* This table responds on the second research question .