RESULTS

The results of the present study are presented in the following parts:

Part I: Socio–demographic characteristics of the studied sample: Tables (1 & 2)

Part II: Medical history of the studied sample: Table (3)

Part III: Knowledge and practice of clients and their family members about HCV virus and self care problems: Tables (4 -7)

Part IV: Clients and family members' physical, social and psychological stress symptoms levels pre and post program: Tables (8-12)

Part V: Clients self-care management program about HCV pre and post–program: Tables (13-17)

Part VI: Home environment of the studied sample: Table (18)

Part VII: Relation between total knowledge, total practice, total self-care management, and psychological stress symptoms of clients about HCV and socio–demographic: Tables (19-23)

Part (I): Socio-Demographic Characteristics

Table (1): Distribution of HCV clients according to their socio-demographic characteristics (n = 100).

Items	%
Sex :	
Male	59.0
Female	41.0
Age	
20-	4.0
30-	30.0
40 +	66.0
Mean + SD	41.20 ± 5.646
Marital status	
Single	15.00
Married	77.00
Widowed	8.00
Educational level	
Illiterate	29.00
Read and write	21.00
Basic education	13.00
Secondary/Diploma	30.00
University education	7.00
Occupation	
Employed	35.00
Housewife	30.00
Private worker	19.00
Others (student- pension & unemployed)	16.00
Income	
Enough and saving	14.00
Enough	12.00
Insufficient	74.00

Table (1) shows socio-demographic characteristics of the studied sample. It was clear that 59.0% of clients were males, regarding to age, 66.0% of them were 40 and more years, with mean age of 41.20 ± 5.646 years. As for marital status, 77.0% of them were married. Regarding to educational levels, 30.0% of them were secondary school. In addition, the table shows that, 35.0% of clients, were employees and 74.0% of them, their income was insufficient.

Table (2): Distribution of family members according to their socio-demographic characteristics (n = 100).

Items	%
Sex	
Male	30.0
Female	70.0
Age	
20-	18.0
30-	46.0
40+	36.0
Mean ± SD	36.8 ± 7.160
Marital status	
Single (unmarried, widowed & divorced)	19.0
Married	81.0
Educational level	
Illiterate	11.0
Read and write	16.0
Basic education	8.0
Secondary/Diploma	49.0
University education	16.0
Occupation	
Employed	34.0
Housewife	42.0
Private worker	10.0
Others (student – pension- & unemployed)	14.0
Place of living	
Living with the clients	84.0
Living near their houses	8.0
Living away	8.0
Relationship	
First-degree relatives as care givers (parents- husband- wife & sister)	95.0
Second-degree relatives (mother in law)	5.0
Family history of viral hepatitis	
Father	40.0
Husband	30.0
Wife	10.0
Brother	5.0
Sister	5.0
None	10.0

Table (2) shows socio-demographic characteristics of the family members. Less than three quarters (70.0%) of family members were females. As regards their age, 46.0% of them were 30 - < 40 years, with a mean age of 36.8 ± 7.16 years. As for marital status, the majority (81.0%) were married. Regarding to educational level, 49.0% were secondary school. As well, the table shows that housewives represented 42.0%. The majority (84.0%) of the family members were living with the clients. As regards consanguinity, most of them (95.0%) of the family members had relationship with the clients from the first degree, and 40.0% of family members suffering from acute viral hepatitis were the fathers.

Part II : Medical History

Table (3): Distribution of clients according to medical history (n=100).

Variables	%
Chronic illness	
Hypertension	41.0
Diabetes	27.0
Kidney disease	45.0
Arthritis	8.0
Anemia	24.0
Heart disease	2.0
Tumors	21.0
Duration of disease	
One year	66.0
Five years and more	34.0
Schistosomiasis	
Schistosoma haematobium	17.0
Schistosoma Mansoni	75.0
No schistosomiasis	8.0
Treatment of Bilharziasis	
Previous treatment	48.0
Until now treatment	40.0
No treatment	12.0
Treatment of Hepatitis C Virus	
Regular	59.0
Irregular	41.0
Reasons of irregularity (n=41):	
The price of treatment is not available	9.70
The same treatment does not exist	29.30
Fear of complications of treatment	61.00
Source of infection:	
Contaminated blood transfusion	30.0
Hemodialysis	25.0
Dental clinic	20.0
Surgical operations	13.0
Other (barbers)	12.0
Hospitalization	
None	190
Once	28.0
Twice more	53.0

*Statistically significant difference (P ≤ 0.05) **Highly statistically significant difference (P ≤ 0.001)

Table (3) indicates that, 45.0% of clients had history of kidney diseases, meanwhile, 66.0% of them had the disease since one year. Three quarters (75.0%) of clients have Schistosoma Mansoni, while 17.0% of them had Schistosoma Haematobium, and only 8.0% of the clients were free from Bilharziasis. Meanwhile 48.0% of them had previous treatment of Bilharziasis. The table also shows that, 41.0% of the clients had irregular treatment of Hepatitis C viruses, as well fear from complications of the treatment was highest (61.0%) cause for irregularity. Contaminated blood transfusion and hemodialysis were 30.0% and 25.0% prevalent causes of transmission of the disease, and 53.0% of the clients had twice more history of hospital admission.

Part III: Knowledge and Practice of Clients and their Family Members About HCV Virus and Self Care Problems

Table (4): Knowledge of HCV clients pre and post program (n = 100).

knowledge	Pre- program (%)			Post- program (%)			X^2	P-value
	Good	Average	Poor	Good	Average	Poor		
Meaning of Hepatitis	1.00	9.00	90.00	93.00	7.00	0.00	180.29	<0.000**
Causative agent of HCV	6.00	43.00	51.00	99.00	1.00	0.00	173.46	<0.000**
Modes of transmission	12.00	21.00	67.00	100.00	0.00	0.00	157.14	<0.000**
Types of Hepatitis	5.00	22.00	73.00	96.00	4.00	0.00	167.45	<0.000**
HCV infectious diseases	58.00	0.00	42.00	97.00	0.00	3.00	43.61	<0.000**
Prevalence of HCV in Egypt	61.00	0.00	39.00	97.00	0.00	3.00	39.06	<0.000**
Symptoms of HCV	11.00	35.00	54.00	99.00	1.00	0.00	156.51	<0.000**
Treatment for HCV	1.00	9.00	90.00	91.00	3.00	6.00	134.87	<0.000**
Drugs may harm the liver	0.00	6.00	94.00	100.00	0.00	0.00	200.00	<0.000**
Complications of hepatitis "C"	0.00	9.00	91.00	90.00	9.00	1.00	178.04	<0.000**
Investigations of HCV	0.00	2.00	98.00	88.00	12.00	0.00	193.14	<0.000**
Rest in bed in presence of symptoms	2.00	20.00	78.00	97.00	3.00	0.00	181.727	<0.000**
Follow up	54.00	0.00	46.00	86.00	0.00	14.00	24.00	<0.000**
Smoking from hookah "Goza"	51.00	0.00	49.00	70.00	0.00	30.00	7.553	<0.006*
Actions for tackling problems:								
Constipation	6.00	15.00	79.00	90.00	10.00	0.00	153.500	<0.001**
Diarrhea	2.00	8.00	90.00	96.00	4.00	0.00	181.497	<0.001**
Total Knowledge	Mean ± SD		Range	Mean ± SD		Range	*Paired t- test*	*p-value*
	35.59 ±7.342		0 - 48	59.33 ± 2.731		48 - 63	30.712	<0.001**

* **Statistically significant difference (P ≤ 0.05)**

** **Highly statistically significant difference (P ≤ 0.001)**

Table (4) explains the difference in clients knowledge about HCV pre and post program. As regards the clients knowledge about the modes of infection of HCV, almost two thirds (67.0%) of them had poor knowledge pre-test, but at post-test, all (100.0%) of them had good knowledge. However, in the pre-test, 61.0% of the clients had good knowledge about the prevalence of HCV in Egypt, but after the implementation of the program, this percentage increased and reached 97.0%. Moreover, pre program 94.0% of the clients had poor knowledge about the side effects of HCV drugs on the liver, but after the implementations of the program, the results showed that, all (100.0%) of the clients had good knowledge. In addition, the same table shows that there were highly statistically significant improvements in all items related to knowledge of the HCV clients after implementations of the home health care program, as well, there were highly statistically significant differences related to actions taken in case of problems (constipation & diarrhea).

Table (5): Knowledge of family members regarding HCV pre and post program (n = 100).

Knowledge	Pre- program (%)			Post-t program (%)			X^2	P-value
	Good	Average	Poor	Good	Average	Poor		
Meaning of hepatitis	4.00	6.00	90.00	92.00	8.00	0.00	170.95	<0.001**
Causative agent of HCV	0.00	69.00	31.00	0.00	100.00	0.00	36.69	<0.001**
Modes of transmission	27.00	23.00	50.00	100.00	0.00	0.00	114.96	<0.001**
Types of Hepatitis	8.00	22.00	70.00	92.00	8.00	0.00	147.09	<0.001**
HCV infectious diseases	58.00	0.00	42.00	97.00	0.00	3.00	43.61	<0.001**
Prevalence of HCV in Egypt	68.00	0.00	32.00	99.00	0.00	1.00	34.88	<0.001**
Symptoms of HCV	16.00	32.00	52.00	97.00	3.00	0.00	134.09	<0.001**
Incubation period	0.00	17.00	83.00	96.00	4.00	0.00	187.05	<0.001**
Infective period of HCV	0.00	24.00	76.00	96.00	4.00	0.00	186.29	<0.001**
Vaccine to protect from HCV	10.00	30.00	60.00	88.00	10.00	2.00	126.34	<0.001**
Vaccination for prevention of HAV & HBV	5.00	10.00	85.00	93.00	7.00	0.00	164.55	<0.001**
Treatment for HCV	10.00	20.00	70.00	90.00	10.00	0.00	137.33	<0.001**
Drugs may harm the liver	0.00	4.00	96.00	100.00	0.00	0.00	200.00	<0.001**
Complications of HCV	0.00	5.00	95.00	90.00	10.00	0.00	186.67	<0.001**
Investigations of HCV	0.00	3.00	97.00	79.00	21.00	0.00	189.50	<0.001**
Care of client during hepatic coma	10.00	14.00	76.00	90.00	6.00	4.00	132.000	<0.001**
Regular checkup	10.00	14.00	76.00	95.00	5.00	0.00	149.073	<0.001**
Smoking from hookah"Goza"	3.00	18.00	79.00	98.00	2.00	0.00	181.156	<0.001**
Total Knowledge	Mean ± SD		Range	Mean ± SD		Range	*Paired t- test*	*p-value*
	21.58± 10.858		3 - 49	65.69 ± 3.123		53 - 70	40.400	<0.001**

*Statistically significant difference (P ≤ 0.05) **Highly statistically significant difference (P ≤ 0.001)

Table (5) explains the difference in family members' knowledge about HCV pre and post program. As regards the family members' knowledge about the modes of infection of HCV, half (50%) of them had poor knowledge pre-test, but after the post-test, all (100.0%) of them had good knowledge. However, in the pre-test, 32% of the family members had poor knowledge about the prevalence of HCV in Egypt, but after the implementation of the program, this percentage increased and reached almost all (99%). Moreover, pre program 96% of the family members had poor knowledge about the side effects of HCV drugs on the liver, but after the implementations of the program, the results showed that, all (100.0%) of the family members had good knowledge. The same table also show that there were highly statistically significant improvements in all items related to knowledge of family members after implementations of the home health care program.

Table (6): Distribution of HCV clients health practices pre and post program (n = 100)

practice	Program (%)		X^2	P-value
	Pre	Post		
Prevention and control of cross infection:				
Hand washing	55.00	90.00	30.72	<0.001**
Covering the wounds	39.00	97.00	81.411	<0.001**
Use individual shaving articles	8.00	63.00	68.946	<0.001**
Use individual scissors - qassafa & razors	7.00	58.00	62.532	<0.001**
Use individual toothbrush	6.00	56.00	58.913	<0.001**
Use disposable syringe	10.00	53.00	52.105	<0.001**
Use condom for partner	30.00	92.00	81.742	<0.001**
Dispose of needles and razors				
Bent and dump in the trash	32.00	91.00	80.028	<0.001**
Cover and dump in the trash	48.00	92.00	47.654	<0.001**
Cover and dump in a container resistant to perforation	30.00	95.00	96.857	<0.001**
Disinfect blood spots				
Clean with soap and water immediately	51.00	90.00	36.567	<0.001**
Apply an appropriate disinfectant before cleaning	46.00	95.00	57.723	<0.001**
Solution to be used should contain chlorine for domestic cleaning of blood stains that contain the virus	21.00	89.00	93.414	<0.001**

Total Practice	Mean ± SD	Range	Mean ± SD	Range	Paired t- test	p-value
	15.59 ± 2.582	0 - 15	25.72±0.74	9 - 24	22.901	<0.001*

*Statistically significant difference (P ≤ 0.05)

**Highly statistically significant difference (P ≤ 0.001)

As regard in table (6)**,** prevention and control of cross infection as: covering the wound and use condom for partner, at pre – test they were 39.0% and 30.0% respectively. After post – test they were 97.0% and 92.0% respectively. Concerning dispose of needles and razors as: cover and dump in a container resistant to perforation, at pre – program it was 30.0% than post – program it was 95.0%. Also the table indicates that there were highly statistically significant improvements in all practice items towards HCV disease after implementations of the home health care program .

Table (7): Distribution of family members according to their self-Protection practices from HCV pre and post program (n =100)

Practice	Program (%)				X^2	P-value
	Pre		Post			
Prevent and control cross infection						
Hand washing	30.00		87.00		54.714	<0.001**
Covering the wounds	3.00		60.00		89.081	<0.001**
Use individual shaving articles	2.00		65.00		100.75	<0.001**
Use individual scissors - qasafa & razors	10.00		67.00		86.929	<0.001**
Use individual toothbrush	2.00		64.00		48.237	<0.001**
Use disposable syringe	12.00		59.00		100.57	<0.001**
Use condom for partner	7.00		77.00		87.461	<0.001**
Dispose of needles and razors						
Bent and dump in the trash	16.00		90.00		109.91	<0.001**
Cover and dump in a container resistant to perforation	17.00		93.00		116.68	<0.001**
Disinfect blood spots						
Clean with soap and water immediately	35.00		95.00		79.121	<0.001**
Apply an appropriate disinfectant before	38.00		97.00		79.339	<0.001**
cleaning	26.00		97.00		106.45	<0.001**
Contact with contaminated clothes	13.00		86.00		64.245	<0.001**
Contact with contaminated utensils	47.00		84.00		30.291	<0.001**
Contact with contaminated bedding						
Total Practice	Mean ±SD	Range	Mean ± SD	Range	*Paired t- test*	*p-value*
	9.68± 3.882	3 - 21	26.78± 2.773	16-30	41.133	<0.001*

*Statistically significant difference (P ≤ 0.05)

**Highly statistically significant difference (P ≤ 0.001)

As shown in table (7), prevention and control of cross infection as: hand washing and use condom for partner, at pre – test they were 30.0% and 7.0% respectively. While; post test they represented 87.0% and 77.0% respectively. Considering disinfect blood spots as : apply an appropriate disinfectant before cleaning and contact with contaminated utensils at pre 0 program, they were 38.0% and 13.0% respectively, than post-program they were 97.0% and 86.0% respectively. The table also show that there were highly statistically significant improvements in all practice items towards HCV disease after implementations of home health care program.

Part IV: Physical, Social, and Psychological Stress Symptoms of Clients and Family Members

Table (8): Distribution of HCV clients according to their physical symptoms pre and post program (n = 100).

Physical symptoms	Pre-program (%)			Post- program (%)			X^2	P-value
	Always	Sometimes	Rarely	Always	Sometimes	Rarely		
Headache	69.00	26.00	5.00	0.00	5.00	95.00	164.226	<0.001**
Pain in the muscles	70.00	11.00	19.00	0.00	4.00	96.00	124.823	<0.001**
Pain in the joints	80.00	7.00	13.00	0.00	0.00	100.00	153.982	<0.001**
Pain in the abdomen	85.00	8.00	7.00	0.00	0.00	100.00	173.832	<0.001**
Pain in the stomach	87.00	6.00	7.00	0.00	3.00	97.00	165.885	<0.001**
General Malaise	10.00	12.00	78.00	0.00	1.00	99.00	21.799	<0.001**
Tired fast	43.00	0.00	57.00	0.00	6.00	94.00	58.066	<0.001**
Loss of appetite	87.00	0.00	13.00	0.00	0.00	100.00	153.982	<0.001**
Fever	87.00	2.00	11.00	0.00	2.00	98.00	156.440	<0.001**
Nausea	43.00	0.00	57.00	0.00	0.00	100.00	54.777	<0.001**
Vomiting	75.00	12.00	13.00	0.00	7.00	93.00	136.693	<0.001**
Constipation	11.00	12.00	77.00	0.00	0.00	100.00	25.989	<0.001**
Diarrhea	87.00	0.00	13.00	0.00	5.00	95.00	154.259	<0.001**
Dark urine	69.00	0.00	31.00	0.00	6.00	94.00	106.752	<0.001**
Jaundice	75.00	2.00	23.00	0.00	2.00	98.00	121.488	<0.001**
Itching	87.00	7.00	6.00	0.00	0.00	100.00	177.358	<0.001**
Rashes	75.00	0.00	25.00	0.00	1.00	99.00	120.161	<0.001**
Sensitivity	70.00	11.00	19.00	0.00	0.00	100.00	136.134	<0.001**
Influenza	75.00	11.00	14.00	0.00	2.00	98.00	144.231	<0.001**
Slow heart beat	85.00	8.00	7.00	0.00	0.00	100.00	173.832	<0.001**
Drowsy	70.00	12.00	18.00	0.00	3.00	97.00	129.670	<0.001**
Total Physical Symptoms Level	Mean ± SD		Range	Mean ± SD		Range	*Paired t-test*	*p-value*
	68.413±14.735		32 - 89	28.626 ± 3.250		69 - 82	24.637	<0.001**

*Statistically significant difference (P ≤ 0.05)

**Highly statistically significant difference (P ≤ 0.001)

regarding table (8), less than two thirds 69.0% of the studied sample always were complaining of headache at pre – program, while; post-program 95.0% rarely complaining from it. Concerning their complaining of constipation at pre-test they accounted for only 11.0%, however; after program implementation at post-test they amounted for all of them (100.0%). The same table also reveals that, there were highly statistically significant improvements in all items of the physical symptoms after implementations of the home health care program.

Table (9): Distribution of HCV clients according to their social symptoms pre and post program (n =100).

Social symptoms	Pre-program (%)		Post-program (%)		X^2	P-value
	Yes	No	Yes	No		
Change the work's relationship	47.00	53.00	49.00	51.00	0.080	0.777
Improvement in social relations	7.00	93.00	56.00	44.00	55.637	<0.001**
Loneliness	8.00	92.00	28.00	72.00	13.550	0.001**
Insecurity	0.00	100.00	2.00	98.00	2.020	0.155
Difficulty in confrontation	94.00	6.00	28.00	72.00	17.151	<0.001**
Total Social Symptoms Level	Mean ± SD	Range	Mean ± SD	Range	*Paired t- test*	*p-value*
	10.01± 1.352	6 - 12	7.560±1.713	4 - 12	8.769	<0.001*

*Statistically significant difference (P ≤ 0.05)

**Highly statistically significant difference (P ≤ 0.001)

Table (9) viewed the Improvement in social relations were pre-program test 7.0% reported "yes" while; after implementation of the program 26.0% reported "yes". Concerning loneliness at pre-test minority of them (8.0%) reported "yes". While after program implementation (28.0%) reported "yes". The same table reveals that, there were highly statistically significant improvements in all items of the social symptoms after implementations of the health care program except for the items of change the work's relationship, and insecurity, which showed a statistically insignificant differences pre/post program (p >0.05).

Table (10): Distribution of family members according to their social symptoms pre and post program (n =100).

Social symptoms	Pre- program (%)		Post- program (%)		X^2	P-value
	Yes	No	Yes	No		
Improvement in the family relationship	6.00	94.00	28.00	72.00	17.151	<0.001**
Inability to take decisions in some situation	92.00	8.00	42.00	58.00	30.827	<0.001**
Inability to complete the work	2.00	98.00	3.00	97.00	0.205	0.651
Inability to solve problems	90.00	10.00	28.00	72.00	10.526	<0.001**
Total Social Symptoms Level	Mean ± SD	Range	Mean ± SD	Range	*Paired t- test*	*p-value*
	9.82±1.452	6 - 11	6.378±1.356	5 - 12	8.532	<0.001*

*Statistically significant difference (P ≤ 0.05)

**Highly statistically significant difference (P ≤ 0.001)

As shown in table (10), the minority of them (6.0%) at pre-program test the improvement in the family relationship answered "yes". while; after implementation of the program 28.0% answered "yes". Concerning in ability to take decisions in some situation at pre-test the most of them (92.0%) answered "yes" while; after program implementation (42.0%) answered "yes". The same table reveals that, there were highly statistically significant improvements in all items of the social symptoms after implementations of the home health care program except for the item of inability to complete the work, which viewed a statistically insignificant difference pre/post program (p >0.05).

Table (11): Distribution of HCV clients according to their psychological stress symptoms pre and post program (n = 100).

Psychological stress symptoms	Pre program (%)			Post program (%)			X^2	P-value
	Always	Sometimes	Rarely	Always	Sometimes	Rarely		
Feeling confused	0.00	8.00	55.00	0.00	28.00	25.00	21.660	<0.001**
Feeling worried	85.00	5.00	2.00	0.00	24.00	2.00	88.092	<0.001**
Feeling anger	87.00	8.00	0.00	0.00	44.00	7.00	116.218	<0.001**
Feeling lazy and tired	5.00	2.00	44.00	0.00	12.00	32.00	13.596	<0.001**
Constantly frustrated	75.00	0.00	20.00	0.00	30.00	31.00	104.947	<0.001**
Feeling depressed	87.00	2.00	6.00	0.00	12.00	26.00	100.713	<0.001**
Feeling stress	82.00	11.00	0.00	0.00	56.00	0.00	109.807	<0.001**
Total Psychological Stress Symptoms Level	Mean ± SD		Range	Mean ± SD		Range	*Paired t- test*	*p-value*
	67.760 ± 13.238		26 - 77	33.900 ± 7.096		23 - 43	23.749	<0.001*

* **Statistically significant difference (P ≤ 0.05)**

** **Highly statistically significant difference (P ≤ 0.001)**

As regard in table (11) the majority of the studied sample **(**(87.0%), were always feeling of anger at pre–test. While, post-program (7.0%) rarely complaining from it. Concerning feeling of depressed at pre-program it represented (87.0%), however; after program implementation at post–test it was (26.0%). The same table reveals that, there were highly statistically significant differences between pre/post home health care program regarding to all psychological stress symptoms of HCV clients.

Table (12): Distribution of family members according to their psychological stress symptoms pre and post program (n = 100).

Psychological stress symptoms	Pre program (%)			Post program (%)			X^2	P-value
	Always	Sometimes	Rarely	Always	Sometimes	Rarely		
Difficult to sleep	5.00	8.00	40.00	0.00	58.00	1.00	79.884	<0.001**
Difficult to relax	75.00	0.00	12.00	0.00	30.00	5.00	104.748	<0.001**
Difficult to concentrate during the play	75.00	2.00	12.00	0.00	18.00	0.00	94.136	<0.001**
Feeling worry about the prospect of receiving a disaster	7.00	0.00	32.00	0.00	18.00	31.00	24.192	<0.001**
Feeling Nervous	5.00	2.00	34.00	0.00	14.00	45.00	12.703	<0.002*
Feeling compressed	68.00	5.00	14.00	1.00	7.00	5.00	32.923	<0.001**
Total Psychological Stress Symptoms Level	Mean ± SD		Range	Mean ± SD		Range	*Paired t- test*	*p-value*
	66.270 ± 12.456		25 - 77	32.900 ± 6.864		22 - 42	22.749	<0.001*

* **Statistically significant difference (P ≤ 0.05)**

** **Highly statistically significant difference (P ≤ 0.001)**

Table (12) revealed that three quarters (75.0%) of the studied sample were always difficult to relax at pre-program. While, post-program the minority of them (5.0%) rarely. Regarding feeling of compressed at pre-test it represented (68.0%), however; after program implementation at post-test they accounted for only (5.0%). Moreover, there were highly statistically significant differences between pre/post home health care program regarding to all psychological stress symptoms of family members of HCV clients.

Part (V) : Self-care Management About HCV

Table (13): Distribution of HCV clients self-care management regarding nutrition pre and post program (n = 100).

Nutrition	Pre program (%)			Post program (%)			X^2	P-value
	Always	Sometimes	Never	Always	Sometimes	Never		
Drinking fluids e.g.water & juices	18.00	54.00	28.00	87.00	12.00	1.00	97.208	<0.001**
Avoiding drinking fluids containing caffeine such as (coffee, tea & nescafe)	36.00	62.00	2.00	97.00	3.00	0.00	83.531	<0.001**
Eating foods containing vitamin "C" (as limon, orange & guava).	12.00	12.00	76.00	95.00	5.00	0.00	33.150	<0.001**
Eating fresh vegetables and fruits	62.00	38.00	0.00	99.00	1.00	0.00	43.606	<0.001**
Small intake of carbohydrates (rice pasta)	1.00	18.00	81.00	99.00	0.00	1.00	192.089	<0.001**
Small intake of fatty foods as (meat, oil, ghee, butter & cream)	1.00	18.00	81.00	99.00	0.00	1.00	192.089	<0.001**
Small intake of foods containing proteins as (meat, birds & fish)	47.00	20.00	33.00	82.00	17.00	1.00	39.857	<0.001**
Avoiding salty and spicy foods as (Pickles, salinity & alvesik)	62.00	26.00	12.00	82.00	18.00	0.00	16.232	<0.001**
Moderate intake of sugars (such as cakes chocolate, desserts & cake)	58.00	30.00	12.00	97.00	1.00	2.00	44.085	<0.001**
Small, frequent meals during the day	1.00	23.00	76.00	94.00	5.00	1.00	175.665	<0.001**
Committed to a healthy food system	10.00	25.00	65.00	99.00	0.00	1.00	159.730	<0.001**
Having cooked food	12.00	19.00	69.00	82.00	17.00	1.00	118.296	<0.001**
Having half cooked foods	60.00	26.00	14.00	76.00	19.00	5.00	7.234	<0.027*
Avoiding eating manufactured foods as (lanshon basterma etc.)	42.00	0.00	58.00	99.00	0.00	1.00	78.110	<0.001**
Total Nutrition	Mean ± SD		Range	Mean ± SD		Range	*Paired t- test*	*p-value*
	27.670±4.767		18 - 42	40.720 ± 2.771		21- 42	-21.37	<0.001*

* **Statistically significant difference (P ≤ 0.05)**

** **Highly statistically significant difference (P ≤ 0.001)**

As regard in table (13), less than one third (62.0%) of the studied sample were always eating fresh vegetables and fruits at pre-program. While, post-program, it was (99.0%). Concerning small, frequent meals during day at pre-test, they accounted for only (1.0%), however; after program implementation at post-test they amounted for most of them (91.0%). Also, there were highly statistically significant improvements in all items of the nutrition after implementations of the home health care program.

Table (14): Distribution of HCV clients' self-care management regarding itching pre and post program (n = 100).

Itching	Pre program (%)			Post program (%)			X^2	P-value
	Always	Sometimes	Never	Always	Sometimes	Never		
Bathing with soap	11.00	17.00	72.00	97.00	2.00	1.00	149.378	<0.001**
Keeping skin dry and clean	88.00	12.00	0.00	93.00	7.00	0.00	1.454	0.228
Avoiding rubbing of the skin	62.00	38.00	0.00	99.00	1.00	0.00	43.606	<0.001**
Cutting nails	12.00	16.00	72.00	99.00	0.00	1.00	153.244	<0.001**
Staying away from high temperature places as direct exposure to sun	88.00	0.00	12.00	100.00	0.00	0.00	12.766	<0.001**
Avoiding wearing polyester's underwear (containing fibers)	68.00	20.00	12.00	95.00	5.00	0.00	25.472	<0.001**
Putting cold compresses to moisten the rubbing places	42.00	44.00	14.00	92.00	3.00	5.00	58.686	<0.001**
Putting topical analgesic ointments under the guidance of a physician	9.00	17.00	74.00	97.00	2.00	1.00	155.952	<0.001**
Total Itching	Mean ± SD		Range	Mean ± SD		Range	*Paired t- test*	*p-value*
	17.240 ± 3.235		10 - 24	23.640 ± 1.283		16 - 24	16.88	<0.001*

* **Statistically significant difference (P ≤ 0.05)**

****Highly statistically significant difference (P ≤ 0.001)**

As shown in table (14), the minority(12.0%) of the studied sample were always cutting nails at pre-test, while, after program implementation, at post-test they represented almost all of them (99.0%). Concerning putting topical analgesic ointments under the guidance of a physician at pre-program, the minority of them (9.0%), while; post-program it was (97.0%). Moreover, there were highly statistically significant improvements in all items of the itching after implementations of the home health care program except for the item of keeping skin dry and clean where the difference between pre and post program was insignificant ($p > 0.05$).

Table (15): Distribution of HCV clients self–care management regarding fatigue pre and post program (n = 100).

Fatigue	Pre program (%)			Post program (%)			X^2	P-value
	Always	Sometimes	Never	Always	Sometimes	Never		
Asking for help from others if needed	57.00	41.00	2.00	95.00	5.00	0.00	39.674	<0.001**
Managing time through the day	59.00	41.00	0.00	90.00	10.00	0.00	25.293	<0.001**
Arrangement of the work	15.00	85.00	0.00	89.00	11.00	0.00	109.696	<0.001**
Doing one work at a time	25.00	73.00	2.00	87.00	13.00	0.00	78.182	<0.001**
Using body mechanisms properly	45.00	55.00	0.00	92.00	8.00	0.00	51.188	<0.001**
Using suitable tools while cleaning the house	33.00	67.00	0.00	89.00	11.00	0.00	65.910	<0.001**
Keeping on taking periods of rest and relax during the day	33.00	67.00	0.00	89.00	6.00	5.00	81.678	<0.001**
Doing breathing exercises during work	13.00	47.00	40.00	87.00	7.00	6.00	109.520	<0.001**
Keeping exercise constantly and regularly	13.00	47.00	40.00	94.00	5.00	1.00	132.338	<0.001**
Total Fatigue	Mean ± SD		Range	Mean ± SD		Range	*Paired t- test*	*p-value*
	25.590 ± 3.635		22 - 23	31.850± 3.141		22 - 23	9.862	<0.001*

* **Statistically significant difference (P ≤ 0.05)**

** **Highly statistically significant difference (P ≤ 0.001)**

As revealed in table (15),more than half (57.0%)of the studied sample were always asking from others if needed at pre-program, while, post-program, they were (95.0%). Concerning keeping exercising constantly and regularly at pre-test they accounted for only (13.0%), however; after program implementation at post-test they amounted for most of them (94.0%). Also, there were highly statistically significant improvements in all items of fatigue after implementations of the home health care program.

Table (16): Distribution HCV clients self-care management regarding depression and worries pre and post program (n = 100).

Depression and worries	Pre program (%)			Post program (%)			X^2	P-value
	Always	Sometimes	Never	Always	Sometimes	Never		
Talking with someone close about anxieties and fears	57.00	36.00	7.00	93.00	7.00	0.00	35.198	<0.001**
Talking with the client, similar to passed the stage of such as stress and managed to overcome it	59.00	41.00	0.00	88.00	2.00	10.00	51.093	<0.001**
Listening to calm music	31.00	17.00	52.00	87.00	12.00	1.00	76.514	<0.001**
Asking others (friends & family) encouragement, reassurance & compassion	4.00	24.00	72.00	92.00	7.00	1.00	159.044	<0.001**
Accepting health condition and work within the limits of ability	71.00	29.00	0.00	95.00	5.00	0.00	20.411	<0.001**
Enjoying everything beautiful in life as much as possible	53.00	42.00	5.00	90.00	5.00	5.00	38.701	<0.001**
Avoiding thinking or focusing on problems of health	13.00	54.00	33.00	89.00	0.00	11.00	121.627	<0.001**
Exercising any favorite hobby.	18.00	30.00	52.00	89.00	0.00	11.00	103.795	<0.001**
Praying and listening to the Koran	88.00	0.00	12.00	90.00	10.00	0.00	22.022	<0.001**
Total Depression & Worries	Mean ± SD		Range	Mean ± SD		Range	*Paired t-test*	*p-value*
	21.220 ± 3.686		17 - 30	28.720 ± 3.464		18 - 30	11.198	<0.001*

* **Statistically significant difference (P ≤ 0.05)**

** **Highly statistically significant difference (P ≤ 0.001)**

As revealed in table (16), more than half (57.0%)of the studied sample were always taking with someone close about anxieties and fears at pre-program. While, post-program, it was (93.0%). Concerning accepting health condition and work within the limits of ability at pre-test they accounted for (71.0%), however; after program implementation, at post-test they amounted for most of them (95.0%). The same table indicates that, there were highly statistically significant improvements in all items of depression and worries after implementations of the home health care program.

Table (17): Distribution of HCV clients self–care management regarding muscle cramps pre and post program (n = 100).

Muscle cramps	Pre program (%)			Post program (%)			X^2	P-value
	Always	Sometimes	Never	Always	Sometimes	Never		
Using warm water compresses immediately on the pain area	38.00	62.00	0.00	99.00	1.00	0.00	86.224	<0.001**
Taking a rest	88.00	12.00	0.00	100.00	0.00	0.00	12.766	<0.001**
Taking amount of food rich in calcium, but within the limits allowed (such as milk, eggs & cheese)	12.00	18.00	70.00	83.00	17.00	0.00	29.267	<0.001**
Informing the doctor if the number of times of contraction increase	60.00	26.00	14.00	85.00	13.00	2.00	17.644	<0.001**
Taking analgesics for pain as instructed by the doctor	1.00	20.00	79.00	82.00	17.00	1.00	155.341	<0.001**
Doing the laboratory tests as ordered by the doctor	62.00	26.00	12.00	92.00	8.00	0.00	27.374	<0.001**
Total Muscle Cramps	Mean ± SD		Range	Mean ± SD		Range	*Paired t- test*	*p-value*
	14.320 ± 2.318		9 - 18	17.380±1.262		13 - 18	14.554	<0.001*

*Statistically significant difference (P ≤ 0.05)

**Highly statistically significant difference (P ≤ 0.001)

As revealed in table (17), less than half(38.0%) of the studied sample were always using warm water compressing immediately on the pain area at pre-program. While, post program, it was (99.0%). As for taking a rest at pre-test, they accounted for (88.0%), however; after program implementation at post-test they amounted for all of them (100.0%). Also, there were highly statistically significant improvements in all items of muscle cramps after implementations of the home health care program.

Part VI : Home Environment for the Study Sample

Table (18): Distribution of HCV clients and their family members according to home environment (n = 100).

Items	%
Residence	
Rural	89.00
Urban	11.00
Home	
Private	60.00
Shared	40.00
Number of rooms	
1-2	13.00
3-4	79.00
5+	8.00
Ventilation	
Good	81.00
Moderate	16.00
Poor	3.00
Cleaning the house	
Good	84.00
Moderate	13.00
Poor	3.00
Water source	
Inside	94.00
Outside	6.00
Sewage disposal	
Municipal system	31.00
Trench	69.00
Bathroom	
Private	89.00
Shared	11.00
Type of bathroom	
Pit type	81.00
Seat type	19.00
Hygiene of bathroom	
Good	82.00
Moderate	15.00
Poor	3.00
Kitchen	
Good	72.00
Moderate	20.00
Poor	8.00
Collection of garbage refuse	
Using the recycle and then burned in a special box	54.00
Thrown rubbish collected in front of the house	28.00
Thrown rubbish collected in the canal water	18.00

***Statistically significant difference (P ≤ 0.05)** ****Highly statistically significant difference (P ≤ 0.001)**

Table (18) describes the home environment of HCV clients and their family members. The majority (89.0%) of the clients were from rural areas. Most (94.0%) of clients' houses were supplied by source of clean water and 89.0% had a private bathroom and more than two thirds (69.0%) of clients had unsanitary sewage disposal and 81.0% had a pit type of bathroom. In addition, the table shows that the majority of clients had good ventilation, good cleaning of the houses and hygienic bathroom. The same table shows that less than three quarters of them (72.0%) had good clean kitchen and more than half of them (54.0%) had proper collection of garbage refuse in a special box.

Part VII : Relations Between Knowledge, Practice, Self Care Management and Socio-Demographic Characteristics

According to the thesis hypothesis:

The self care management programs will improve the healthy practices of the infected clients with HCV and their family members.

Table (19): Correlations between clients total practices and total self-care management.

Items	Self-Care Management	
	r	P-value
Practices	0.731	< 0.001**

*Statistically significant difference (P ≤ 0.05)

**Highly statistically significant difference (P ≤ 0.001)

Table (19) shows that, there was a positive significant correlation between clients total practices and total self-care management

According to the thesis questions No (1).

- May the socio–demographic characteristics of the studied sample from clients and their family members affect on their knowledge and practices towards the self-care management regarding HCV?

Table (20): Relation between clients total scores of knowledge, practice, and self-care management and socio-demographic characteristics.

Socio-Demographic Characteristics / Items	Knowledge Mean ±SD	Practice Mean ±SD	Self-Care Management Mean ±SD	ANOVA	
				f	P-value
Age :					
20-	37.00±6.06	11.75±2.22	54.17±7.55	1.075	0.345
30-	37.10±6.82	13.07±2.61	53.89±7.52	2.294	0.106
40 +	34.82 ±7.61	13.49±2.54	48.39±7.91	4.29	0.021*
Educational level :					
Illiterate	32.83 ± 6.95	10.31±0.81	46.36±3.20	6.644	<0.001*
Read and write	30.10±10.12	10.00±1.41	51.50±8.12	10.009	<0.001*
Basic education	35.08±5.66	9.77±1.69	52.50±4.44		
Secondary/Diploma	38.10±6.37	9.93±1.46	52.37±8.79	2.66	0.04
University education	39.43±6.21	9.57±1.90	55.88±5.33		
Income :					
Enough and saving	37.86±5.40	6.86±2.85	48.64 ± 8.02	0.809	0.448
Enough	35.14±7.50	8.64±2.56	52.66 ± 7.97	5.395	0.007*
Insufficient	35.75±8.35	11.00±2.56	53.00±5.20	1.684	0.191

***Statistically significant difference (P ≤ 0.05)** ****Highly statistically significant difference (P ≤ 0.001)**

Table (20) as evident from the table, there were highly statistically significant relationships between clients total knowledge and their educational level, but it shows insignificant relationships between clients total knowledge and clients age and income. There was highly statistically significant relationship between clients total practice and their educational level and income but not for their age. As regards total self-care management, the same table shows that significant relationships with both age and educational level but for clients income it shows an insignificant relationship.

Table (21): Relation between family members' total scores of knowledge, practice and socio-demographic characteristics.

Socio-Demographic Characteristics / Items	Knowledge Mean ±SD	Practice Mean ±SD	ANOVA	
			f	P-value
Age :				
20-	24.056±11.805	10.111±3.513	0.674	0.512
30-	20.543±10.387	9.043±3.419	1.160	0.318
40 +	21.667±11.069	10.278±4.539		
Educational level :				
Illiterate	20.182±10.787	7.364±4.781		
Read/write	18.188±8.126	8.313±3.995	3.542	0.022*
Basic education	18.500±4.629	9.375±4.373		
Secondary/Diploma	24.163±12.176	11.796±3.208	2.942	0.042
University education	19.563±10.257	13.063±4.711		
Relationship				
With the client home	20.970±10.515	9.597±3.943	0.325	0.72*
Near from house	22.960±10.346	10.120±4.065		
Far from house	22.375±15.711	9.000 ± 2.928	0.294	0.74*

*Statistical significant difference (P ≤ 0.05) **Highly statistical significant difference (P ≤ 0.001)

Table (21): As evident from the table, there was a highly statistically significant relationship between family members' total knowledge and their educational level, but it shows an insignificant relationship between family members' total knowledge and family members' age. There were highly statistically significant relationships between family members total practices and their educational level and relationship but not for their age.

According to the thesis questions No. (2).

- Is the home environmental condition of the studied sample from clients and their family members affecting on their knowledge and practices toward the self care management regarding HCV?

Table (22): Correlation between clients' and their family members total knowledge, total practice and total self-care management and their home environment.

Items	Environment	
	r	P-value
Knowledge	0.804	<0.001**
Practice	0.775	<0.001**
Self Care Management	0.77	< 0.001**

***Statistically significant difference (P ≤ 0.05)**

****Highly statistically significant difference (P ≤ 0.001)**

Table (22) displays the correlations between clients and their family members total knowledge, total practice and total self–care management and their home environment. It shows positive statistically significant correlation between knowledge, practice, self–care management and the clients environment.

According to the thesis questions No. (3)

- May the self-care management alleviate the clients' stress regarding their disease?

Table (23): Correlation between total psychological stress symptoms and total self-care management

Items	Self-Care Management	
	r	P-value
Psychological Stress Symptoms	735	< 0.001**

***Statistically significant difference (P ≤ 0.05)**

****Highly statistically significant difference (P ≤ 0.001)**

Table (23) shows that, highly statistically significant positive correlation between total self–care management and the clients psychological stress symptoms.