RESULTS

Results of the present study will be demonstrated according to the following parts:

Part I: Characteristics of nurses: sociodemorgaphic characteristics of nurses (Table 1).

Part II: Nurse's knowledge before and after the application of an educational health promotion program as regard hepatitis "B" and "C" (Table 2-8).

Part III: Nurse's practice before and after the application of an educational Health promotion program as regard infection control techniques to prevent HBV & HCV infection (Table 9-11).

Part IV: Total knowledge and practice sores as regard HBV & HCV and infection control techniques to prevent it. Table (12,13).

Part V: Relation ship between nurse's knowledge practice and their sociodemographic characteristic before and after application of the program tables (14-22).

Part VI: Assessment of rural health unites supplies and equipments applied to infection control planning tables (23-26).

Part I: Characteristics of nurses.

Table (1): Sociodemographic characteristics of nurses.

Variable	N =100 %
Age group (years)	
20-	42.0
30-	46.0
40-	12.0
Marital status	
Single	1.0
Married	99.0
Qualifications	
Diploma special	2.0
Diploma degree	98.0
Years of experience	
>5	6.0
5-15	61.0
≤15	33.0
Occupation	
Supervisor	2.0
Staff nurse	98.0
Training/HBV & HCV	
Yes	5.0
No	95.0

Table (1) shows that all of nurses (100) were females lives in rural areas. And less than half of nurses (46%) aged from 30 to less than 40 years and more than two fifth (42%) aged from 20 to less than 30 years. As regard marital status, most of nurses were married and had diploma degree and staff nurse (99%,98% and 98%) respectively. As regard years of experience, less than two third of nurses 61%) from 5-15 years. And few of them had training about HBV&HCV.

Part II: Knowledge of nurses regarding hepatitis "B" and "C" and infection control measures to prevent it .

Table (2): Percent distribution of nurse's correct knowledge regarding definition, types and prevalence of hepatitis before and after the application of an educational health promotion program.

Nurse's correct knowledge / Variables	Pre-program N= 100	Post-program N= 100	Z
	Correct	Correct	
	%	%	
Definition of viral hepatitis	69.0	99.0	6.4
Types of viral hepatitis	48.0	84.0	5.8
Prevalence of HBV	2.0	14.0	3.2
Prevalence of HBC	2.0	14.0	3.2

($P<0.05$)

Table (2) shows that before the program about more than two thirds of nurses gave correct knowledge about definition of viral hepatitis (69%) and less than half of them gave correct knowledge about type of viral hepatitis (48%) and few of them (2%) gave correct knowledge about prevalence of HBV & HCV. However after the program all items of correct knowledge improved significantly. ($P<0.05$).

Table (3): Percent distribution of nurse's correct knowledge regarding reservoir of infection case and carriers (characteristic of carrier-carrier secrete viral hepatitis agent) and high risk group susceptible to HBV & HCV before and after the application of an educational health promotion program.

Nurse's correct knowledge	Pre-program N= 100	Post-program N= 100	Z
	Correct	Correct	
	%	%	
Reservoir of infection			
Case	51.0	99.0	9.4
Carriers			
Characteristics of carrier	36.0	70.0	5.2
Carrier secret viral hepatitis agent	36.0	82.0	7.4
High risk group susceptible to HBV & HCV	56.0	98.0	8.1

(P<0.05)

Table (3) shows that before the program about more than half of nurses gave correct knowledge about case (51%) and high risk group susceptible to HBV & HCV (56%). While more than one third of them gave correct knowledge about carrier (36%). However after the program all items of correct knowledge improved significantly (P<0.05).

Table (4): Percent distribution of nurse's correct knowledge regarding mode of transmission of HBV & HCV before and after the application of an educational health promotion program.

Nurse's correct knowledge / Variables	Pre-program N= 100	Post-program N= 100	Z
	Correct	Correct	
	%	%	
Mode of transmission of (HBV&HCV)			
Through blood	53.0	94.0	7.5
Through contaminated blood donors.	51.0	80.0	4.5
contaminated instruments	53.0	83.0	4.8
needle stricken	51.0	82.0	4.9
from infected mother to fetus	9.0	22.0	2.5
renal dialysis	50.0	81.0	4.8
sexual transmission	49.0	80.0	4.8
organ transplantations	47.0	78.0	4.7

($P<0.05$)

Table (4) shows that before the program about more than half of nurses gave correct knowledge about mode of transmission through blood, contaminated blood donors, contaminated instruments, needle stricken and , renal dialysis (53% , 51%, 53%, 51%, and 50%) respectively and less than half of them gave correct knowledge about mode of transmission through sexual and organ transplantation (49% and 47%) respectively while few of them (9%) gave correct knowledge about transmission from infected mother to fetus. However after the program all items of correct knowledge improved significantly ($P<0.05$).

Table (5):Percent distribution of nurse's correct knowledge regarding incubation period and beginning of infection and clinical manifestation of in acute stage of HBV&HCV before and after the application of an educational health promotion program.

Nurse's correct knowledge / Variables	Pre-program N= 100	Post-program N= 100	Z
	Correct	Correct	
	%	%	
Incubation period of HBV	51.0	93.0	7.5
Incubation period of HCV	36.0	96.0	11.5
Beginning of infection	34.0	99.0	13.5
Clinical manifestation of HBV & HCV in acute stage	28.0	82.0	9.2

(P<0.05)

Table (5) shows that before the program about more than half of nurses gave correct knowledge about incubation period of HBV (51%) and more than one third of them gave correct knowledge about incubation period of HCV and Beginning of infection (36%, 34%) respectively while more than quarter of them gave correct knowledge about clinical manifestation in acute stage of HBV & HCV. However after the program all items of correct knowledge improved significantly (P<0.05).

Table (6): Percent distribution of nurse's correct knowledge regarding complication, laboratory investigation and treatment of HBV and HCV before and after the application of an educational health promotion program.

Nurse's correct knowledge / Variables	Pre-program N= 100	Post-program N= 100	Z
	Correct	Correct	
	%	%	
Complication of HBV& HCV			
Chronic HBV & HCV	50.0	76.0	4.3
Hepatocellular carcinoma	35.0	72.0	5.6
Laboratory investigation for HBV & HCV	23.0	100.0	18.3
Treatment of HBV & HCV	45.0	76.0	4.7

(P<0.05)

Table (6) shows that before the program about half of nurses gave correct knowledge about complication of HBV & HCV as chronic HBV & HCV (50%), more than one third of them gave correct knowledge about hepatocellular carcinoma (35%), less than one quarter of them gave correct knowledge about laboratory investigation for HBV & HCV (23%) and less than half of them gave correct knowledge about treatment of HBV & HCV (45%) However After the program all items of correct knowledge improved significantly (P< 0.05).

Table (7): Percent distribution of nurse's correct knowledge regarding vaccination of HBV before and after the application of an educational program.

Nurse's correct knowledge / Variables	Pre-program N= 100	Post-program N= 100	Z
	Correct	Correct	
	%	%	
HBV vaccination			
Schedule for vaccination	70.0	72.0	0.3
Route of administration	70.0	72.0	0.3
Sites of administration	70.0	72.0	0.3
Booster dose of HBV vaccine	62.0	65.0	0.4
Storage of the vaccine	69.0	71.0	0.3
Pre test before vaccination	73.0	79.0	1.0
Side effects of HBV vaccine	88.0	91.0	0.7

(P>0.05)

Table (7) shows that before the program about more than two thirds of nurses gave correct knowledge about HBV vaccinations as regard (schedule for vaccination, Route and sites of administration, booster dose, storage of the vaccine, pre-test before vaccination and side effects of HBV vaccine) with no significant after the program (P> 0.05).

Table (8): Percent distribution of nurse's correct knowledge regarding infection control measures to prevent infection from HBV &HCV before and after the application of an education health promotion program.

Nurse's correct knowledge / Variables	Pre-program N= 100 Correct %	Post-program N= 100 Correct %	Z
Hand washing before & after dealing with any procedures	61.0	99.0	7.6
Hand washing with water, soap for 3 minutes	16.0	98.0	22.2
Antiseptic solution will be use in infected cases	33.0	94.0	18.5
Sterilization of surgical instrument and dressing drum.	10.0	96.0	23.9
Universal precautions for infection	33.0	68.0	5.3
Precautions regarding dealing with body fluids	52.0	95.0	6.4
Dealing with any individual as infected case	53.0	83.0	4.8
Using gloves in cleaning process	53.0	71.0	2.7
Using Clorox for cleaning of the spots blood	44.0	79.0	5.5
Infected nurses contact with individuals	47.0	67.0	2.9

($P<0.05$)

Table (8) shows that before the program about less than two thirds of nurses gave correct knowledge about hand washing before and after dealing with any procedures (61%), more than half of them gave correct knowledge about precautions regarding dealing with body fluids, dealing with individuals as infected case and using gloves in cleaning process (52% , 53% and 53%) respectively. Less than half of them gave correct knowledge about using Clorox for cleaning of the spots blood and infected nurses contact with individuals (44% and 47%) respectively , one third of them gave correct knowledge about antiseptic solution will be use in infected case and universal precautions for infection (33%) and 10% and 16% of them gave correct knowledge about sterilization of surgical instruments and hand washing with water, soap for 3minutes. However after the program improved significantly ($P< 0.05$).

Part III: Practice of nurses regarding infection control of hepatitis "B" & "C"

Table (9): Percent distribution of nurse's correct practice as regard cleaning and sterile hand washing, masking, gloving, gowning technique before and after the application of an educational health promotion program.

Nurse's correct practice / Variables	Pre-program N= 100	Post-program N= 100	Z
	Correct	Correct	
	%	%	
Cleaning hand washing technique	22.0	72.0	8.2
Sterile hand washing	20.0	80.0	10.5
Masking technique	36.0	80.0	7.1
Gowning technique	35.0	73.0	5.9
Gloving technique	44.0	66.0	3.2

(P<0.05)

Table (9) shows that before the program less than quarter of nurses done correct cleaning and sterile hand washing technique (21% and 20%) respectively, more than one third of them done correct masking and gowning technique (36% and 35%) respectively and more than two fifth done correct gloving technique (44%). However after the program all items of correct practice improved significantly (P<0.05).

Table (10): Percent distribution of nurse's correct practice as regard collection of blood specimen, urine specimen and stool specimen techniques before and after the application of an educational health promotion program.

Nurse's correct practice / Variables	Pre-program N= 100	Post-program N= 100	Z
	Correct	Correct	
	%	%	
Collection of			
Blood specimen technique	49.0	87.0	6.3
Urine specimen technique	37.0	75.0	5.9
Stool specimen technique	36.0	75.0	6.0

(P<0.05)

Table (10) shows that before the program about less than half of nurses done correct collection of blood specimen technique (49%), and more than one third of them done correct collection of urine specimen and stool specimen techniques (37% and 36%) respectively. However after the program all items of correct practice improved significantly (P< 0.05).

Table (11): Percent distribution of nurse's correct practice as regard dressing, sterilization of instruments and equipment, perineal swabbing, and double bagging techniques before and after the application of an educational health promotion program.

Nurse's correct practice / Variables	Pre-program N= 100	Post-program N= 100	Z
	Correct	Correct	
	%	%	
Dressing technique	38.0	76.0	5.9
Sterilization of instruments and equipment technique	43.0	87.0	7.3
Perineal swabbing technique	36.0	72.0	7.2
Double bagging technique	49.0	80.0	4.8

(P<0.05)

Table (11) shows that before the program about more than on third of nurses done correct dressing and perineal swabbing techniques (38% and 36%) respectively and less than half of them done correct sterilization of instruments, equipment and double bagging technique (43% and 49%) respectively. However after the program al items of correct practice improved significantly (P<0.05).

Part IV: Total Knowledge and practice score.

Table (12): Total Knowledge scores (X ± SD) of nurses as regard viral Hepatitis B and C.

Knowledge	Pre program N = 100 %	Post program N = 100 %	t value
Pre-program:			
>49 (point)	81	2	
49-68	14	9	
69-98	5	89	
X`± SD	28.4±13.8	80.1±10.7	28.7

(P<0.001)

Table (12) shows that total knowledge scores of nurses as regard viral hepatitis B and C differ highly significant after the application of an educational health promotion program (P<0.001).

Table (13): Total practice scores (X±SD) of nurses as regard infection control techniques to prevent infection from HBV & HCV.

Practice	Pre program N = 100 %	Post program N = 100 %	t value
Pre-program:			
>85 (point)	94	4	
85-118	6	18	
119-170	0	78	
X`± SD	47±13.2	132.7±24.7	30.6

(P<0.001)

Table (13) shows that total practice scores of nurses as regard infection control techniques to prevent infection from HBV & HCV differ highly significant after the application of an educational health promotion program (P<0.001).

Part V: Nurse's knowledge and practice scores according to sociodemographic characteristics.

Table (14): Mean total correct knowledge scores of nurses about HBV & HCV before and after the application of an educational health promotion program according to their of occupation.

Occupation / Knowledge		Supervisor N = 2 %	Staff nurse N = 98 %	t	p
Pre-program:					
>49 (point)	81	2	79		
49-68	14	0	14		
69-98	5	0	5		
	X`± SD	25±0.0	32.8±16.7	4.6	P<0.05
Post program:					
>49 (point)	2	2	0		
49-68	9	0	9		
69-98	89	2	87		
	X`± SD	83.5±0.0	80±10.8	3.2	P<0.05

Table (14) shows that before the program majority of nurses were staff nurses associated with higher correct knowledge scores (32.8±16.7) than supervisor nurses (25±0.0) while after the programs supervisor nurses associated with higher correct knowledge scores (83.5±0.0) than staff nurses (80±10.8) with statistical significant (P<0.05).

Table (15): Mean total correct practice scores of nurses about HBV & HCV before and after the application of an educational health promotion program according to their occupation.

Practice \ Occupation		Supervisor N = 2 %	Staff nurse N = 98 %	t	p
Pre-program:					
>85 (point)	94	2	92		
85-118	6	0	6		
119-170	0	0	0		
	X`± SD	43±0.0	46.6±14.1	2.6	P<0.05
Post program:					
>85 (point)	4	0	4		
85-118	18	0	18		
119-170	78	2	76		
	X`± SD	144.5±0	132.5±24.9	4.8	P<0.05

Table (15) shows that before the program majority of nurses were staff nurse associated with higher correct practice scores (46.6±14.1) than supervisor nurses (43±0.0) while after the program supervisor nurses were associated with higher correct practice scores (144.5±0) than staff nurses (132.5± 24.9) with statistical significant (P<0.05).

Table (16): Mean total correct knowledge scores of nurses about HBV & HCV before and after the application of an educational health promotion program according to their age.

Age / Knowledge	20- N = 42 %	30- N = 46 %	40- N = 12 %
***Pre-program:**			
>49 (point) 81	32	39	10
49-68 14	7	5	2
69-98 5	3	2	0
X`± SD	34.8±18.6	31.1±15.4	30.6±13.0
	t_1=1.5 p_1>0.05	t_2=1.8 p_2>0.05	
Post program:			
>49 (point) 2	0	0	2
49-68 9	5	3	1
69-98 89	37	43	9
X`± SD	81.9±6.2	80.5±8.2	71.7±22.9
	t_1=1.3 p>0.05	t_2=3.7 p<0.05	

t_1 : relationship between age 20 to less than and 30 to less than 40
t_2 : relationship between age 20 to less than 30 and 40 to less than 60

Table (16) shows that before the program correct knowledge scores were higher among age group 20 to less than 30 (34.8±18.6) and lower among age group 40 to less than 60 (30.6±13.0) with no statistical significant similarly after the program with statistical significant difference (P<0.005).

Table (17): Mean total correct practice scores of nurses about HBV & HCV before and after the application of an educational health promotion program according to their age.

Age / Knowledge		20- N = 42 %	30- N = 46 %	40- N = 12 %
Pre-program:				
> 85 (point)	94	39	39	11
85-118	6	3	5	1
119-170	0	0	2	0
X`± SD		47.9±16.9	47.2±15.2	45.5±12.1
		t_1=1 p=>0.05	t_2=1.1 p=>0.05	
Post program:				
> 85 (point)	4	0	0	2
85-118	18	5	3	6
119-170	78	37	43	4
X`± SD		140.4±12.8	132.6±25.3	106.1±35.7
		t_1=3.2 p<0.05	t_2=9.03 p<0.001	

t_1 : relationship between age 20 to less than and 30 to less than 40
t_2 : relationship between age 20 to less than 30 and 40 to less than 60

Table (17) shows that before the program correct practice scores were higher among age group 20 to less than 30 (47.9±16.9) and lower among age group 40 to less than 60 (45.5±12.1) with no statistical significant difference. Similarly after the program with statistical significant difference (P<0.001)

Table (18): Mean total correct knowledge scores of nurses about HBV & HCV before and after the application of an educational health promotion program according to their years of experience.

Years of experience / Knowledge		> 5 y N = 6 %	5 -15 y. N = 61 %	≤ 15 N = 33 %
Pre-program:				
>49 (point)	81	1	51	29
49-68	14	3	8	3
69-98	5	2	2	1
X`± SD		31.3±14.9	61.3±21.6	29.±13.7
		t_1=0.7 p>0.05	t_2=12.6 p<0.001	
Post program:				
>49 (point)	2	0	0	2
49-68	9	2	6	1
69-98	89	4	55	30
X`± SD		79.2±14.6	81±7.5	75.2±12.9
		t_1=1.06 p>0.05	t_2=2.1 p<0.05	

t_1 : relationship between > 5 years and 5-15 years
t_2 : relationship between > 5 years and < 15 years

Table (18) shows that before the program correct knowledge scores were higher among nurses have years of experience from 5-15 years (61.3±21.6) and lower among < 15 years of experience (29±13.7). Similarly after the program with statistical significant difference (P< 0.001 , P < 0.05).

Table (19): Mean total correct practice scores of nurses about HBV & HCV before and after the application of an educational health promotion program according to their years of experience.

Years of experience / Practice	>5 y. N = 6 %	5-15 y. N = 61 %	≤ 15 y N = 33 %
Pre-program:			
>85 (point) 94	4	58	32
85-118 6	2	3	1
119-170 0	0	0	0
X`± SD	45.9±12.8	62.5±30.2	44.8±10.2
	t_1=0.6 p>0.05	t_2=5.03 p<0.001	
Post program:			
>85 (point) 4	0	1	3
85-118 18	1	10	7
119-170 78	5	50	23
X`± SD	135±20.1	137.3±17.6	126.2±32
	t_1=2.5 p<0.05	t_2=6.0 p<0.001	

t_1 : relationship between > 5 years and 5-15 years
t_2 : relationship between > 5 years and < 15 years

Table (19) shows that before the program correct practice scores were higher among nurses have years of experience from 5-15 yrs (62.5±30.2) and lower among < 15 yr (44.8±10.2). Similarly after the program with statistical significant difference (P<0.001).

Table (20): Mean total correct knowledge scores of nurses about HBV & HCV before and after the application of an education health promotion program according to their work place.

Place of work	Nurses knowledge		t Value	p Value
	Pre program	Post program		
1- met el – Attar	42.1±24.1	83.5±0.0	17.2	P<0.001
2-Gamgra	39.3±22.72	83.5±0.0	19.2	P<0.001
3- warwara	39.3±22.7	83.5±0.0	19.2	P<0.001
4- dalma	35.7±20.3	83.5±0.0	23.6	P<0.001
5- bata	35.7±20.3	83.5±0.0	23.6	P<0.001
6- met El sebaa	27.7±6.0	44.5±20.1	23.3	P<0.001
7- met Rady	27.7±6.0	44.5±20.1	23.3	P<0.001
8- Batenda	27.3±5.5	83.5±0.0	93.7	P<0.001
9- met El . Hofen	26.95.1	83.5±0.0	111.0	P<0.001
10- Al shemot	25.0±0.0	76.0±18.4	27.7	P<0.001
11- degwy	25.0±0.0	76.0±18.4	27.7	P<0.001
12- megol	25.0±0.0	76.0±18.4	27.7	P<0.001
13- Gezert bely	25.0±0.0	66.3±27.1	15.2	P<0.001
14- El- Ramla	25.0±0.0	74.5±20.1	24.6	P<0.001
15- kafer Attalla	25.0±0.0	62.8±28.7	13.04	P<0.001
16-kafr elhamam	25.0±0.0	74.5±20.1	24.6	P<0.001
17- pokera	22.6±2.3	81.4±2.04	189.7	P<0.001

Table (20) shows that before and after the program correct knowledge scores were higher among Nurses working in Rural health units (Met Elatar. Gamgara- warwara damalo and Bata) and lower among nurses working in urual Health units (El Ramla kafer El Hamam – kafer atalla and pokera) with higher significantly improved in correct knowledge scores after the application of the program ($P < 0.001$).

Table (21): Mean total correct practice scores of nurses about before and after the application of an educational health promotion program according to their work place.

Place of work	Nurses knowledge			
	Pre program mean±SD percentage	Post program mean±SD percentage	t Value	p Value
1- Met el – Attar	57.6±27.1	144.5±0.0	32.1	P<0.001
2-Gamgra	57.6±27.1	144.5±0.0	32.1	P<0.001
3- warwara	54.7±26.2	135.9±19.2	17.9	P<0.001
4- dalma	52.8±23.9	144.5±0.0	38.2	P<0.001
5- bata	43.0±0.0	138.4±16.3	58.5	P<0.001
6- met El sebaa	43.0±0.0	137.3±17.6	52.4	P<0.001
7- met Rady	43.0±0.0	130.2±22.2	39.6	P<0.001
8- Batenda	43.0±0.0	113.3±40.4	17.4	P<0.001
9- met El . Hofen	43.0±0.0	113.3±40.4	17.4	P<0.001
10- Al shemot	43.0±0.0	113.3±40.4	17.4	P<0.001
11- degwy	43.0±0.0	135.9±19.2	48.4	P<0.001
12- megol	43.0±0.0	135.9±19.2	48.4	P<0.001
13- Gezert bely	43.0±0.0	107.0±41.7	15.2	P<0.001
14- El- Ramla	43.0±0.0	135.9±19.2	48.4	P<0.001
15- kafer Attalla	43.0±0.0	127.3±23.6	35.1	P<0.001
16-kafr elhamam	41.8±2.5	143±2.5	145.0	P<0.001
17- pokera	41.0±2.5	143.3±2.5	145.0	P<0.001

Table (21) shows that before and after the program correct practice scores were higher among Nurses working in Rural health units (Met Elatar- Gamagra – warwara – damalo and Bata) and lower among nurses working in rural health units (El Ramla – Kafer El Hamam – kafer atalla and pokera) with higher significantly improved in correct practice scores after the application of the program (P<0.001).

Table (22): Total correct knowledge scores and correct practice scores of nurses about HBV & HCV before and after the application of an education health promotion program.

Knowledge level	Performance level						total
	> 85		85-118		119-170		
	No	%	No	%	No	%	
Pre-program:							
>49	81		0		0		81
49-68	11		3		0		14
69-98	2		3		0		5
	94		6		0		100
	r_1(between pre.program. knowledge. & practice.) = 0.999						
Post program:							
>49 (point)	2		0		0		2
49-68	1		6		2		9
69-98	1		12		76		89
	4		18		78		100
	r_2(between post -program. knowledge. & practice.) = 0.994						

Table (22) shows that before the program correct knowledge and correct practice scores were > 49 (> 50%) in the majority of nurses (81) while after the program correct knowledge and correct practice scores were from 69-98 (70%-100%). In the majority of nurses (78) with highly association between correct knowledge and correct practice scores before and after application the program (r_1= 0.999, r_2 \ 0.994).

Part VI: Assessment of rural health units supplies and equipment applied to infection control measures

Table (23): Assessment of planning applying to infection control measures.

Variable	Yes		No	
	No	%	No	%
Infection control planning	17	100.0	0	0.0
Accretidited political planning	17	100.0	0	0.0
Identifying to all health care workers	17	100.0	0	0.0
Applied of infection control planning	17	100.0	0	0.0
Responsibility of rural unit manager	17	100.0	0	0.0
Nurses responsibility	10	58.8	7	41.2
Routine screening tests	10	58.8	7	41.2
Follow up for infection control planning	10	58.8	7	41.2

Table (23) shows that infection control planning were accretidited political planning applied in all rural health units , identifying to all health care workers and, it was responsibility of rural health unit manager in all of them (100%) while (58.8%) of them was responsibility of nurses, done routine screening tests and followed up for infection control planning.

Table (24): Assessment of supplies and Equipments as regard hand washing and Gloving.

Variable	Available N = 17	
	No	%
Hand washing		
Antiseptic solution	3	17.7
Soap	10	58.8
Paper towels	0	0.0
Sink	17	100.0
Tap	17	100.0
Bath room	17	100.0
Brush	3	17.7
Gloving		
Disposable gloves	8	47.1
Sterile gloves	2	11.8
Different sizes	2	11.8
Safe place for sterile gloves	5	35.3
Basket	7	41.2

Table (24): shows that hand washing equipments as sink, tap, bath room was available in all rural health units (100%), soap was available in more than half of them (58.8%), Antiseptic solution and brush is available in less than one five of them (17.7%) while paper towels not available in all rural health units. Gloving supplies disposable gloves and basket available in less than half of rural health units (47% & 41.2%). Safe place for sterile gloves was available in more than one third of them (35.3%) while sterile gloves and different sizes was available in (11.8%) of them.

Table (25): Assessment of supplies and equipments as regard gowning masks, over head, laundry and sharp wastes.

Variable	Available N = 17	
	No	%
Gowning		
Sterile gowns	2	11.8
Disposable gowns	2	11.8
Different sizes	0.0	0.0
Different colors	0.0	0.0
Masks	5	29.4
Goggles	0	0.0
Cover head	5	29.4
Laundry	0	0.0
Sharp wastes		
Dressing car	17	100.0
Diluted Clorox	6	35.3
Don't discarded usable syringe on the floor	17	100.0
Unsterite syringe in the basket	7	41.2
Containers for sharp wastes	9	52.9

Table (25) shows that gowning supplies as sterile gowns and disposable gowns was available in (11.8%) of rural health units while different size, colors, goggles and laundry not available in all rural health units. Masks and over head was available in more than one quarter of them (29.4%) on the floor dressing care in and don't discarded useable syringe on the floor were available in all rural health units. While containers for sharp wastes was available in more than half of them (52.9%), unsterile syringe in the basket was available in more than two fifth of them (41.2%) and diluted colorx was available in more than on third of them (35.3%).

Table (26): Assessment of supplies and equipments as regard safe wastes and others media.

Variable	Available N = 17		Not available N = 17	
	No	**%**	**No**	**%**
Safe wastes				
Cleaning system	10	58.8	7	41.2
Enough number of cleaning workers	5	29.4	12	70.6
Training workers	0	0.0	17	100.0
Disposable bag	2	11.8	15	88.2
Different colors of disposable bag	2	11.8	15	88.2
Identification cards for disposable bag	0	0.0	17	100.0
Incineration	17	100.0	0	0.0
Other media				
Figures	0	0.0	17	0.0
Booklets	0	0.0	17	0.0
Purchuors	0	0.0	17	0.0
Training programs	0	0.0	17	0.0

Table (26): shows that cleaning system was available in more than half of rural health units (58.8%). Enough number of cleaning workers was available in more than one quarter of them (29.4%). Disposable and different colors bag was available in (11.8%) of them while training workers and identification cards for disposable bag was not available in all rural health units and incineration was available in all rural health units. Figures , book lets , purchuors and training programs was not available in all rural health units.