Results

Presentation and Analysis of Data

The aim of the present study was to assess the associates of functional status among hospitalized patients with liver cirrhosis. The study sample consisted of 60 adult patients with confirmed diagnosis of liver cirrhosis.

To fulfill the aim of the study, the collected data was analyzed, tabulated and presented in the following order; **First Part** is devoted to represent the analyzed data that are related to sociodemographic variables (table 1), and illness related data& investigative tests (table 2, 3, 4, 5), (figures 1). **Second Part** deals with the analyzed data that are related to informational of functional status of the studied subjects (tables 6). **Third Part** is concerned with the analyzed data that are related to relationship between sociodemographic data (gender, marital status, educational level, occupation and income) & functional status (tables 7, 8, 9), (figure 2&3). As well as, the relationship between history of the disease (duration of the disease and causative agents) & functional status (figure 4 & 5). In addition to the relation between diabetes mellitus, esophageal varices, hepatorenal syndrome, anemia, splenomegaly & functional status (figure 6, 7, 8, &9), (tables 10). As well as, the relation between present complains, physical examinations (weakness, fatigue and encephalopathy) and functional status (tables 11), (figure 10& 11).In addition to the relation between radiological findings (ascites and hepatomegaly) & functional status (tables 12), (figure 12). In addition to mean score of the relation between laboratory results and functional status (tables 13, 14, 15, 16, 17& 18). As well as coefficient correlation between age & functional status of the studied subjects (tables 19).

First Part: table (1) number and percentage distribution of the studied subjects according to their sociodemographic variables (n = 60)

		N	%	Chi-square	
				X^2	P-value
Age	<40	11	18.3	12.267	0.007
	40-50	17	28.3		
	50-60	25	41.7		
	>60	7	11.7		
Gender	Female	19	31.67	8.067	0.005
	Male	41	68.33		
Living place	Urban	8	13.33	32.267	0.000
	Rural	52	86.67		
Marital	married	52	86.67	122.267	0.000
	single	2	3.33		
	divorced	1	1.67		
	widow	5	8.33		
Educational level	illiterate	23	38.33	6.800	0.079
	Read ,write	14	23.33		
	diploma	14	23.33		
	Highly educated	9	15.00		
Occupation	Not work	23	38.33	34.667	0.000
	worker	5	8.33		
	private	2	3.33		
	employer	23	38.33		
	farmer	7	11.67		
Income	<200 EP	19	31.67	23.200	0.000
	200-400 EP	11	18.33		
	400-600 EP	17	28.33		
	600-800 EP	6	10.00		
	800-1000 EP	4	6.67		
	>1000 EP	3	5.00		

EP =Egyptian pound.

N.B. For all statistical tests done; P value > 0.05 insignificant, P value < 0.05 significant, P value < 0.01 highly significant and P value < 0.001 very highly significant.

This table shows that; regarding to age the most frequency of the patients were in between [50-60] year's old (41.7%)., related to sex the most frequency of the patients were males (68.33%)., according to living place the majority of the patients from rural area (86.67%).And as to marital status the majority of the affected patients were married (86.67%), when the less affected group were divorced (1.67%).

Regarding to educational level the most affected patients were illiterate (38.33%) ,when the less affected group were highly educated (15.00%).,as to occupation the most affected patients were not work and employer (38.33%) ,when the less affected patients had a private job (3.33%)., related to income the most frequency of patients had less than 200 EP monthly (31.67%) ,when the minorities of them had more than 1000 EP monthly (5.00%).And all the results is highly statistical significant where p-value < 0.05, except educational level where p-value > 0.05.

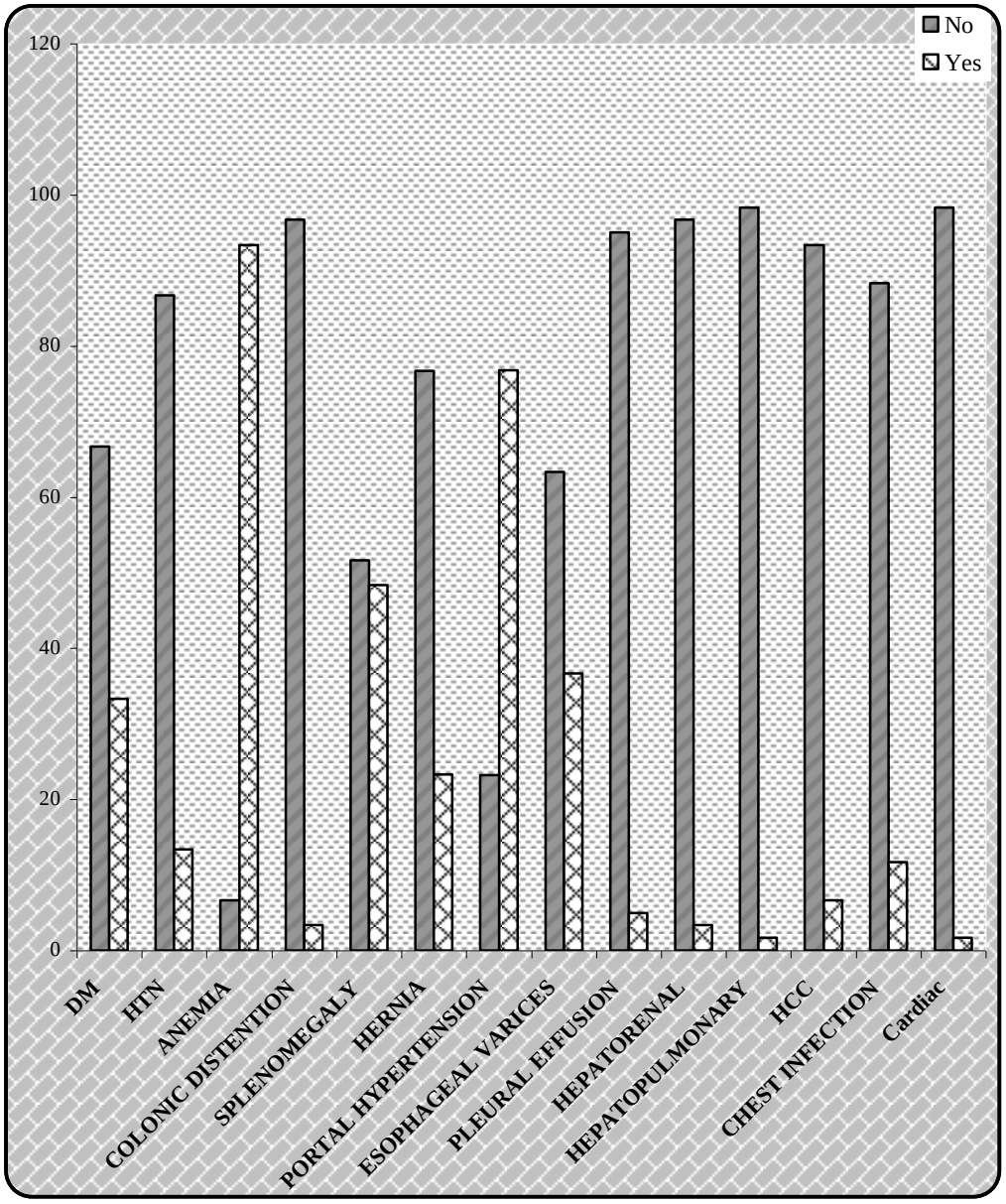
Table (2) number and percentage distribution of the studied subjects according to their history of the disease (n = 60)

		N	%	Chi-square	
				X^2	P-value
Duration	<1y	13	21.67	15.867	0.001
	1-5y	28	46.67		
	5-10y	11	18.33		
	>10y	8	13.33		
Admission (Frequency)	1	43	71.67	41.700	0.000
	2	4	6.67		
	3 or more	13	21.67		
causative agents	Un known	18	30.00	31.833	0.000
	HCV	20	33.33		
	Bilharzias	17	28.33		
	Bilharzias &HCV	2	3.33		
	Biliary disease	1	1.67		
	Fatty liver	2	3.33		
Alcohol	No	58	96.67	52.267	0.000
	Yes	2	3.33		
Drugs	No	57	95.00	48.600	0.000
	Yes	3	5.00		

N.B. For all statistical tests done; P value > 0.05 insignificant, P value < 0.05 significant, P value < 0.01 highly significant and P value < 0.001 very highly significant.

This table reveals that; regarding to duration of the disease the most frequency of the patients had the disease from [1 to less than 5 years] (46.67%) & the minority of the patients from [more than 10 years] (13.33%)., related to admission's frequency the most frequency of the patients were admitted for the first time (71.67%) & the minority of the patients for the second times (6.67%) ., according to the causative agents of the disease the most frequency of the patients had HCV (33.33%) & the minority of the patients had biliary disease (1.67%)., as to alcohol abuse the most frequency of the patients were not alcoholic abuse (96.67%) ., regarding to drugs mis –use or abuse the majority of the patients were not drugs mis –use or abuse (95.00%) .And all the results is very highly statistical significant where p-value < 0.05.

Figure (1) Number and percentage distribution of the studied subjects according to their current diseases (n = 60)



This figure shows that; the most frequency of patients had not (DM, HTN, colonic distention, splenomegaly, hernia, esophageal varices, plural effusion, hepatorenal, hepatopulmonary, HCC, chest infection or cardiac diseases) but had (anemia and portal hypertension).

Table (3) number and percentage distribution of the studied subjects according to their present complains &physical examinations (n = 6o)

		N	%	Chi-square	
				X^2	P-value
Weakness	No	9	15.00	29.400	0.000
	Yes	51	85.00		
Fatigue	No	9	15.00	29.400	0.000
	Yes	51	85.00		
Abdominal pain	No	15	25.00	15.000	0.000
	Yes	45	75.00		
Dyspnea	No	16	26.67	13.067	0.000
	Yes	44	73.33		
Dyspepsia	No	14	23.33	17.067	0.000
	Yes	46	76.67		
Distension	No	13	21.67	19.267	0.000
	Yes	47	78.33		
Anorexia	No	13	21.67	19.267	0.000
	Yes	47	78.33		
Weight loss	No	13	21.67	19.267	0.000
	Yes	47	78.33		
Bone ache	No	22	36.67	4.267	0.039
	Yes	38	63.33		
Bleeding	No	21	35.00	5.400	0.020
	Yes	39	65.00		
Constipation	No	20	33.33	6.667	0.010
	Yes	40	66.67		
Diarrhea	No	53	88.33	35.267	0.000
	Yes	7	11.67		
Cramps	No	15	25.00	15.000	0.000
	Yes	45	75.00		
Fever	No	52	86.67	32.267	0.000
	Yes	8	13.33		
Cough	No	59	98.33	56.067	0.000
	Yes	1	1.67		

N.B. For all statistical tests done; P value > 0.05 insignificant, P value < 0.05 significant, P value < 0.01 highly significant and P value < 0.001 very highly significant.

This table reveals that; regarding to the presence of weakness the majority of the patients had the complain (85.00%)., related to the presence of fatigue the most frequency of the patients had the complain (85.00%)., according to the presence of abdominal pain the majority of the patients had the complain (75.00%)., as to the presence of Dyspnea the most frequency of the patients had the complain (73.33%).And regarding to the presence of dyspepsia the majority of the patients had the complain (76.67%).

Related to the presence of distension the majority of the patients had the complain (78.33%)., regarding to the presence of anorexia the majority of the patients had the complain (78.33%)., as to the presence of weight loss the majority of the patients had the complain (78.33%)., according to the presence of bone ache the most frequency of the patients had the complain (63.33%).And regarding to the presence of bleeding the most frequency of the patients had the complain (65.00%).

As to the presence of constipation the most frequency of the patients had the complain (66.67%)., regarding to the presence of diarrhea the majority of the patients had not the complain (88.33%)., according to the presence of cramps the majority of the patients had the complain (75.00%)., related to the presence of fever the majority of the patients had not the complain (86.67%)., regarding to the presence of cough the majority of the patients had not the complain (98.33%). And all the results is very highly statistical significant where p-value < 0.05.

Continuo- table (3)

			N	%	Chi-square	
					X^2	P-value
Sleep pattern changes		No	20	33.33	6.667	0.010
		Yes	40	66.67		
Sleepiness		No	36	60.00	2.400	0.121
		Yes	24	40.00		
Insomnia	**Restlessness**	No	58	96.67	52.267	0.000
		Yes	2	3.33		
	Dyspnea	No	56	93.33	45.067	0.000
		Yes	4	6.67		
	Pain	No	50	83.33	26.667	0.000
		Yes	10	16.67		
Encephalopathy		No	29	48.33	0.067	0.796
		Yes	31	51.67		
Weight		Over	24	40.00	18.100	0.000
		Thin	31	51.67		
		Normal	5	8.33		
Vital signs		Stable	41	68.33	8.067	0.005
		Unstable	19	31.67		
Skin	**Dryness**	No	15	25.00	15.000	0.000
		Yes	45	75.00		
	Purpra	No	17	28.33	11.267	0.001
		Yes	43	71.67		
	Darkness	No	45	75.00	30.000	0.000
		Yes	15	25.00		
	Jaundice	No	41	68.33	8.067	0.005
		Yes	19	31.67		
	Itching	No	45	75.00	14.017	0.002
		Yes	15	25.00		
Eye		normal	31	51.67	0.067	0.796
		jaundice	29	48.33		

N.B. For all statistical tests done; P value > 0.05 insignificant, P value < 0.05 significant, P value < 0.01 highly significant and P value < 0.001 very highly significant.

This table shows that; regarding to the presence of sleep pattern changes the most frequency of the patients had the complain (66.67%)., related to the presence of sleepiness the most frequency of the patients had not the complain (60.00%)., according to the presence of insomnia related to restlessness the majority of the patients had not the complain (96.67%)., regarding to the presence of insomnia related to dyspnea the majority of the patients had not the complain (93.33%).And as to the

presence of insomnia related to pain the majority of the patients had not the complain (83.33%).

So we can conclude that the most frequency of the patients had sleepiness rather than insomnia., regarding to the presence of encephalopathy the most frequency of the patients had the complain (51.67%).,related to the weight of the patients the most frequency of the patients had sub-normal weight (51.67%), the minority of them had a normal weight (8.33%)., as to the vital stability of the patients the most frequency of the patients were vitally stable (68.33%). And according to the presence of skin dryness the majority of the patients had the complain (75.00%),

As to the presence of skin purpra the most frequency of the patients had the complain (71.67%)., regarding to the presence of skin darkness the majority of the patients had not the complain (75.00%)., according to the presence of skin jaundice the most frequency of the patients had not the complain (68.33%)., regarding to the presence of skin itching the majority of the patients had not the complain (75.00%)., related to the presence of eye jaundice the most frequency of the patients had not the complain (51.67%) .And all the results is very highly statistical significant where p-value < 0.05, except the presence of sleepiness, encephalopathy and jaundice of the eye where p-value > 0.05.

Continuo- table (3)

			N	%	Chi-square	
					X^2	P-value
Hand	**Palmer erythema**	No	21	35.00	5.400	0.020
		Yes	39	65.00		
	Terry's nails	No	18	30.00	9.600	0.002
		Yes	42	70.00		
	Dupuyteren's contraction	No	59	98.33	56.067	0.000
		Yes	1	1.67		
	Clubbing	No	40	66.67	6.667	0.010
		Yes	20	33.33		
	tremor	No	31	51.67	0.067	0.796
		Yes	29	48.33		
Lower limp	**Leg edema**	No	25	41.67	1.667	0.197
		Yes	35	58.33		
	Muscle wasting	No	57	95.00	48.600	0.000
		Yes	3	5.00		
Spider nevi		No	57	95.00	48.600	0.000
		Yes	3	5.00		
Caput medusa		No	33	55.00	0.600	0.439
		Yes	27	45.00		
Others		Fetor hepaticus	2	3.33	76.00	0.000
		Gynecomastia	8	13.33		
		Amenorrhea	6	10.00		
		Negative	44	73.33		

N.B. For all statistical tests done; P value > 0.05 insignificant, P value < 0.05 significant, P value < 0.01 highly significant and P value < 0.001 very highly significant.

This table shows that; regarding to the presence of palmer erythema the most frequency of the patients had the complain (65.00%)., as to the presence of terry's nails the most frequency of the patients had the complain (70.00%)., related to the presence of dupuyteren's contraction the majority of the patients had not the complain (98.33%)., regarding to the presence of clubbing the most frequency of the patients had not the complain (66.67%) .,according to the presence of tremor the most frequency of the patients had not the complain (51.67%)., according to the presence of lower limp edema the most frequency of the patients had the complain (58.33%)., regarding to the presence of muscle wasting the majority of the patients had not the complain (95.00%).,

related to the presence of spider nevi the majority of the patients had not the complain (95.00%).

As to the presence of caput medusa the most frequency of the patients had not the complain (55.00%)., regarding to the presence of gynecomastia (13.33%), amenorrhea (10.00%), fetor hepaticus (3.33%). And all the results is very highly statistical significant where p-value < 0.05, except the presence of tremor, caput medusa and leg edema where p-value > 0.05.

Table (4) number and percentage distribution of the studied subjects according to their radiological findings (n = 6o)

		N	%	Chi-square	
				X^2	P-value
Ascites	No	16	26.67	13.067	0.000
	Yes	44	73.33		
Hepatomegaly	No	52	86.67	32.267	0.000
	Yes	8	13.33		
Splenomegaly	No	31	51.67	0.067	0.796
	Yes	29	48.33		
liver tumor (HCC)	No	56	93. 33	45.067	0.000
	Yes	4	6. 67		

N.B. For all statistical tests done; P value > 0.05 insignificant, P value < 0.05 significant, P value < 0.01 highly significant and P value < 0.001 very highly significant.

This table illustrates that; regarding to the presence of ascites the most frequency of the patients had the complain (73.33%)., related to the presence of hepatomegaly the majority of the patients had not the complain (86.67%). , as to the presence of splenomegaly the most frequency of the patients had not the complain (51.67%)., according to the presence of liver tumor the majority of the patients had not the complain (93. 33%). And all the results is very highly statistical significant where p-value < 0.05, except the presence of splenomegaly where p-value > 0.05.

Table (5) range, mean and stander deviation of the studied subjects according to their laboratory results (n = 6o)

	Range			Mean	±	SD
ALT	10.00 **U/L**	-	105.00 **U/L**	31.57	±	17.97
AST	7.00 **U/L**	-	250.00 **U/L**	54.43	±	43.76
Bilirubin	0.40 **mg/dl**	-	9.20 **mg/dl**	2.36	±	2.04
Albumin	1.90 **g%**	-	4.40 **g%**	2.62	±	0.50
Urea	17.00 **mg/100ml**	-	276.00 **mg/100ml**	63.23	±	47.16
Creatinine	0.60 **mg/100ml**	-	6.00 **mg/100ml**	1.55	±	1.04
Hemoglobin 'HB'	4.20 **g/dl**	-	13.30 **g/dl**	9.15	±	1.86
White blood cells 'WBCs' x10^3	1.80 **/cmm**	-	30.60 **/cmm**	6.91	±	5.26
Platelets	19.00 **/cmm**	-	302.00 **/cmm**	109.0	±	58.86
Prothrombin time	9.00 **sec.**	-	31.40 **sec.**	18.08	±	3.64
Prothrombin activity	24.00 **%**	-	100.00 **%**	53.98	±	15.05
International normalization ratio 'INR'	0.60	-	4.90	1.87	±	0.74
Random blood sugar 'RBS'	67.00 **mg%**	-	560.00 **mg%**	161.2	±	93.54

N.B. For all statistical tests done; P value > 0.05 insignificant, P value < 0.05 significant, P value < 0.01 highly significant and P value < 0.001 very highly significant.

This Table shows that; regarding to the **liver function tests** [**ALT** mean (31.57) & SD (17.97), **AST** mean (54. 43) & SD (43.76), **bilirubin** mean (2.36) & SD (2.04), **Albumin** mean (2.62) & SD (0.50)]., **kidney function tests** [**Urea** mean (63.23) & SD (47.16), **creatinine** mean (1.55) & SD (1.04)]., **CBC** [**Hb** mean (9.15) & SD (1.86), **WBCs** mean (6.91) & SD (5.26), **platelets** mean (109.50) & SD (58.86)]., **prothrombin time & activity** [**time** mean (18.08) & SD (3.64), **activity** mean (53.98) & SD (15.05), **INR** mean (1.87) & SD (0.74)] .And **RBS** mean (161.42) & SD (93.54).

Second part: table (6) number and percentage distribution of the studied subjects according to their functional status (n = 60)

- Research question (١): What is the functional status among hospitalized patients with liver cirrhosis? (Table 6).

		N	%	Chi-square	
				X^2	P-value
Basic 'ADL'	Weak	19	31.67	8.067	0.005
	Good	41	68.33		
Intermediate 'ADL'	Weak	34	56.67	1.067	0.302
	Good	26	43.33		
Psychological function	Weak	44	73.33	13.067	0.000
	Good	16	26.67		
Social function	Weak	52	86.67	32.267	0.000
	Good	8	13.33		
Social activity	Weak	39	65.00	5.400	0.020
	Good	21	35.00		
Social interaction	Weak	12	20.00	21.600	0.000
	Good	48	80.00		

N.B. For all statistical tests done; P value > 0.05 insignificant, P value < 0.05 significant, P value < 0.01 highly significant and P value < 0.001 very highly significant.

This table reveals that; regarding to the basic 'ADL' the most frequency of the patients in the good zone (68.33%)., related to the intermediate 'ADL' the most frequency of the patients in the weak zone (56.67%)., regarding to the psychological the most frequency of the patients in the weak zone (73.33%)., according to the social function the majority of the patients in the weak zone (86.67%)., regarding to the social activity the most frequency of the patients in the weak zone (65.00%)., as to the social interaction the majority of the patients in the good zone (80.00%). And all the results is very highly statistical

significant where p-value < 0.05, except the intermediate 'ADL' where p-value > 0.05.

Third part: table (7) the relation between gender and functional status of the studied subjects (n = 60)

- Research question (2): what are the associates of functional status among hospitalized patients with liver cirrhosis? (From table 7 to table19), (From figure 2 to table12).

Functional Status			Gender			Chi-square	
			Female	Male	Total	X^2	P-value
Basic 'ADL'	Weak	N	11	8	19	8.839	0.003
		%	18.33	13.33	31.67		
	Good	N	8	33	41		
		%	13.33	55.00	68.33		
Intermediate 'ADL'	Weak	N	14	20	34	3.279	0.070
		%	23.33	33.33	56.67		
	Good	N	5	21	26		
		%	8.33	35.00	43.33		
Psychological function	Weak	N	17	27	44	3.704	0.054
		%	28.33	45.00	73.33		
	Good	N	2	14	16		
		%	3.33	23.33	26.67		
Social function	Weak	N	17	35	52	0.190	0.663
		%	28.33	58.33	86.67		
	Good	N	2	6	8		
		%	3.33	10.00	13.33		
Social activity	Weak	N	15	24	39	2.378	0.123
		%	25.00	40.00	65.00		
	Good	N	4	17	21		
		%	6.67	28.33	35.00		
Social interaction	Weak	N	4	8	12	0.019	0.890
		%	6.67	13.33	20.00		
	Good	N	15	33	48		
		%	25.00	55.00	80.00		

N.B. For all statistical tests done; P value > 0.05 insignificant, P value < 0.05 significant, P value < 0.01 highly significant and P value < 0.001 very highly significant.

This table illustrates that; males had the best functional status score rather than females. And there was no significant statistical relation between sex and the others parameters where p-value >0.05, but there was a highly significant statistical relation between sex and basic 'ADL' where p-value < 0.05.

Table (8) the relation between marital status and functional status of the studied subjects (n = 60)

Functional Status			Marital					Chi-square	
			Married	Single	Divorced	Widow	Total	X^2	P-value
Basic 'ADL'	Weak	N	14	0	1	4	19	9.023	0.029
		%	23.33	0.00	1.67	6.67	31.67		
	Good	N	38	2	0	1	41		
		%	63.33	3.33	0.00	1.67	68.33		
Intermediate 'ADL'	Weak	N	28	0	1	5	34	7.372	0.061
		%	46.67	0.00	1.67	8.33	56.67		
	Good	N	24	2	0	0	26		
		%	40.00	3.33	0.00	0.00	43.33		
Psychological function	Weak	N	37	1	1	5	44	2.865	0.413
		%	61.67	1.67	1.67	8.33	73.33		
	Good	N	15	1	0	0	16		
		%	25.00	1.67	0.00	0.00	26.67		
Social function	Weak	N	44	2	1	5	52	1.420	0.701
		%	73.33	3.33	1.67	8.33	86.67		
	Good	N	8	0	0	0	8		
		%	13.33	0.00	0.00	0.00	13.33		
Social activity	Weak	N	33	0	1	5	39	6.999	0.072
		%	55.00	0.00	1.67	8.33	65.00		
	Good	N	19	2	0	0	21		
		%	31.67	3.33	0.00	0.00	35.00		
Social interaction	Weak	N	10	0	0	2	12	2.019	0.568
		%	16.67	0.00	0.00	3.33	20.00		
	Good	N	42	2	1	3	48		
		%	70.00	3.33	1.67	5.00	80.00		

N.B. For all statistical tests done; P value > 0.05 insignificant, P value < 0.05 significant, P value < 0.01 highly significant and P value < 0.001 very highly significant.

This Table illustrates that; the married patient had the best functional status score. , mostly the divorced and the single patient had the worst functional status score. And there was no significant statistical relation between marital status and the others parameters where p-value

>0.05, but there was a significant statistical relation between marital status and "basic 'ADL' "where p-value < 0.05.

Table (9) the relation between educational level and functional status of the studied subjects (n = 60)

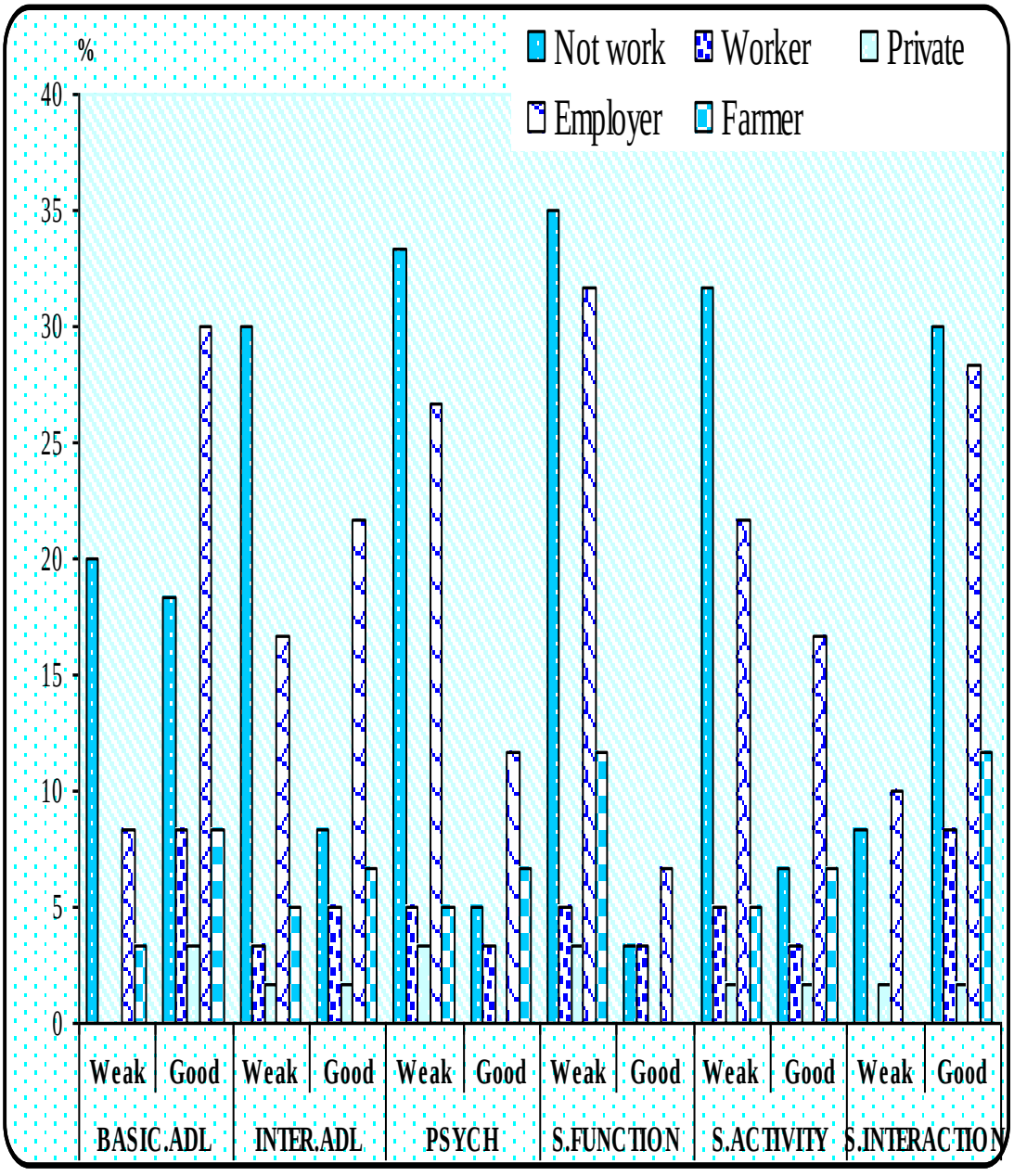
Functional Status			Educational level					Chi-square	
			Illiterate	Read, write	Diploma	Highly educated	Total	X^2	P-value
Basic 'ADL'	Weak	N	13	2	3	1	19	10.956	0.012
		%	21.67	3.33	5.00	1.67	31.67		
	Good	N	10	12	11	8	41		
		%	16.67	20.00	18.33	13.33	68.33		
Intermediate 'ADL'	Weak	N	18	8	7	1	34	12.229	0.007
		%	30.00	13.33	11.67	1.67	56.67		
	Good	N	5	6	7	8	26		
		%	8.33	10.00	11.67	13.33	43.33		
Psychological function	Weak	N	18	11	10	5	44	1.963	0.580
		%	30.00	18.33	16.67	8.33	73.33		
	Good	N	5	3	4	4	16		
		%	8.33	5.00	6.67	6.67	26.67		
Social function	Weak	N	22	11	12	7	52	3.027	0.387
		%	36.67	18.33	20.00	11.67	86.67		
	Good	N	1	3	2	2	8		
		%	1.67	5.00	3.33	3.33	13.33		
Social activity	Weak	N	19	8	7	5	39	5.252	0.154
		%	31.67	13.33	11.67	8.33	65.00		
	Good	N	4	6	7	4	21		
		%	6.67	10.00	11.67	6.67	35.00		
Social interaction	Weak	N	5	2	3	2	12	0.375	0.945
		%	8.33	3.33	5.00	3.33	20.00		
	Good	N	18	12	11	7	48		
		%	30.00	20.00	18.33	11.67	80.00		

N.B. For all statistical tests done; P value > 0.05 insignificant, P value < 0.05 significant, P value < 0.01 highly significant and P value < 0.001 very highly significant.

This table reveals that; the patient who can read &write had the best functional status score. , mostly the highly educated patient had the worst functional status score. And there was no significant statistical relation between educational level and the others parameters where p-value >0.05, but there was a highly significant statistical relation

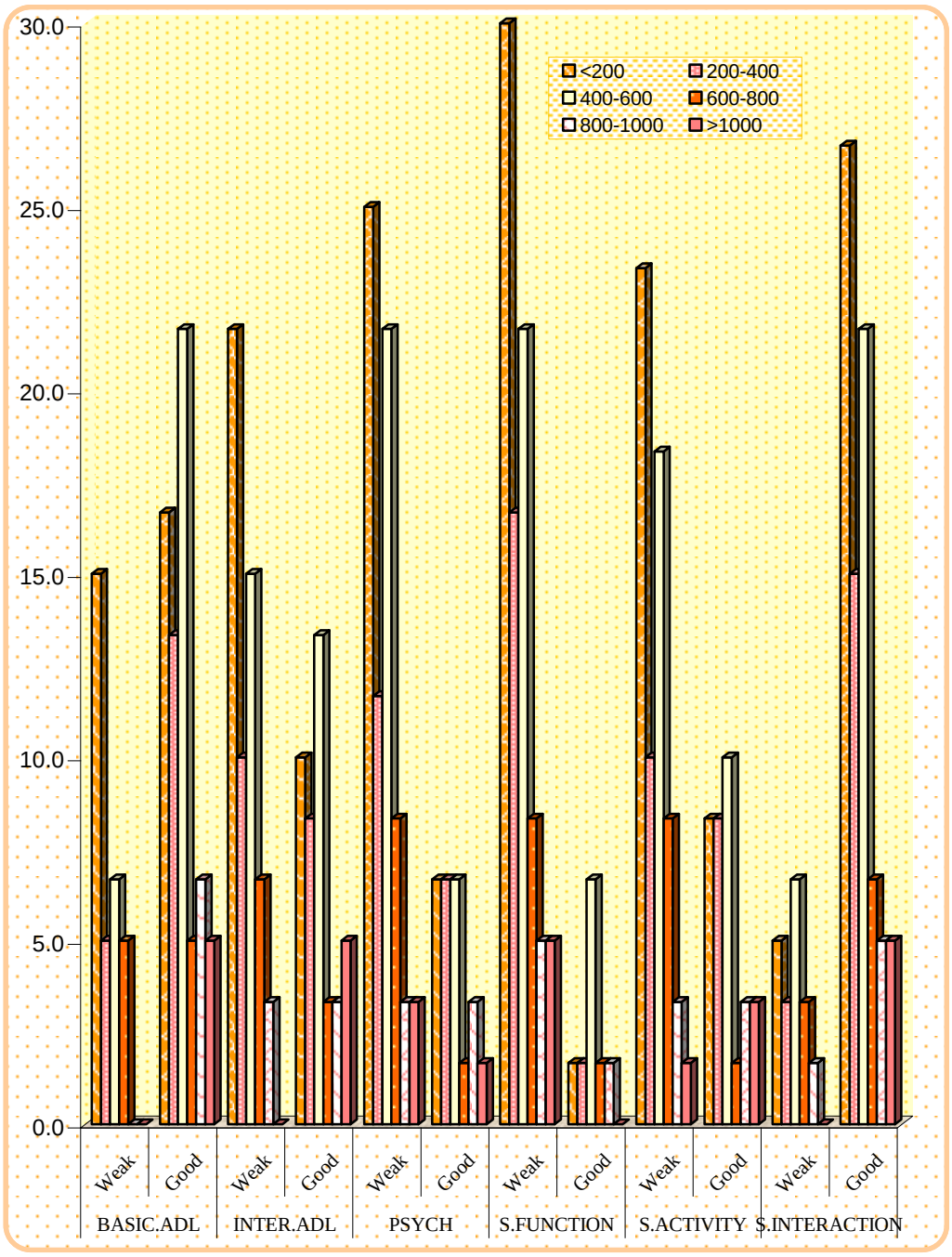
between educational level and "basic 'ADL' and intermediate 'ADL' where p-value < 0.05.

Figure (2) the relation between occupation and functional status of the studied subjects (n = 60)



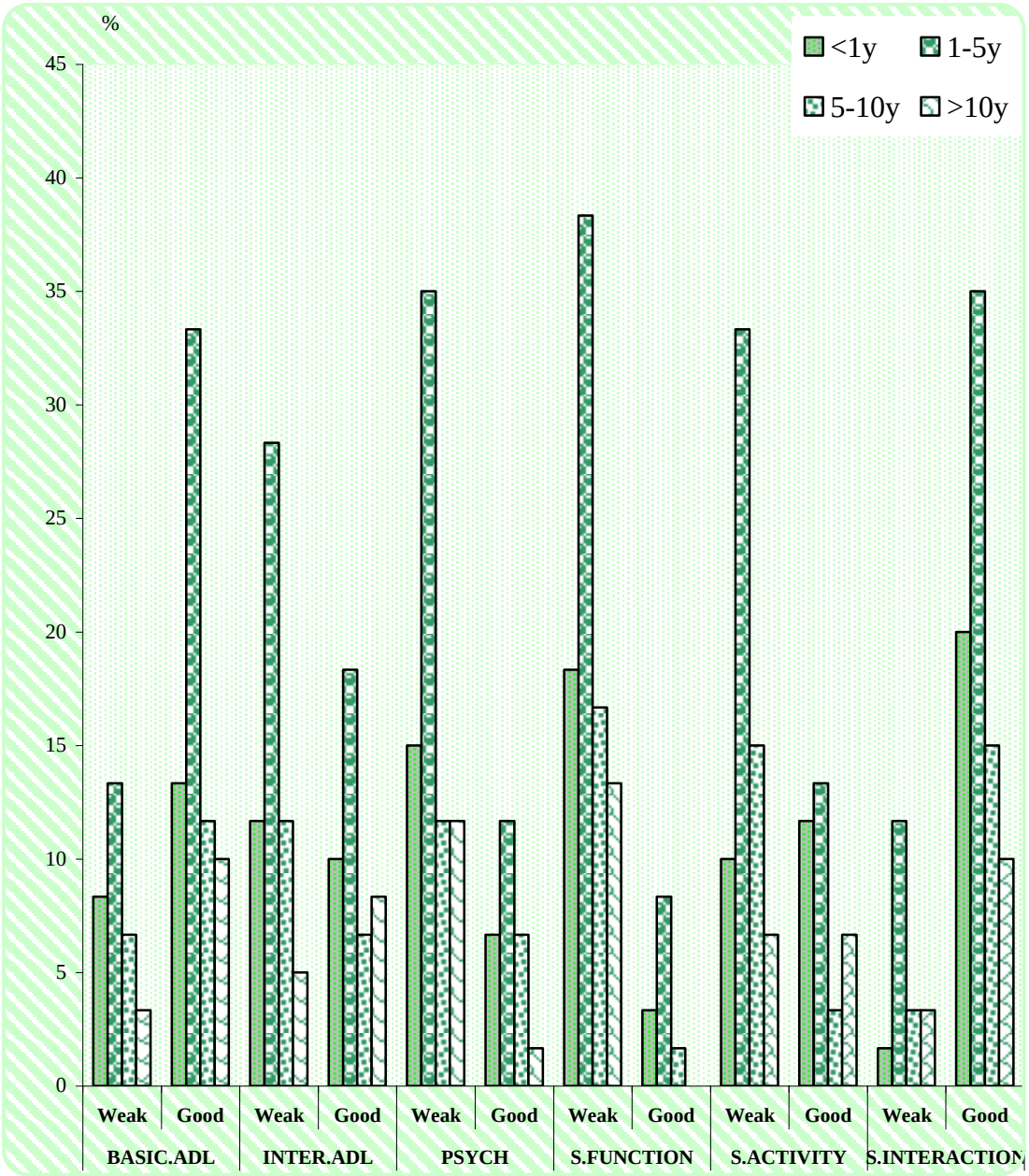
This figure shows that; the patient who was an employer had the best functional status score. , mostly the patient who had a private work had the worst functional status score. And there was no significant statistical relation between occupation and the others parameters where p-value >0.05.

Figure (3) the relation between income and functional status of the studied subjects (n = 60)



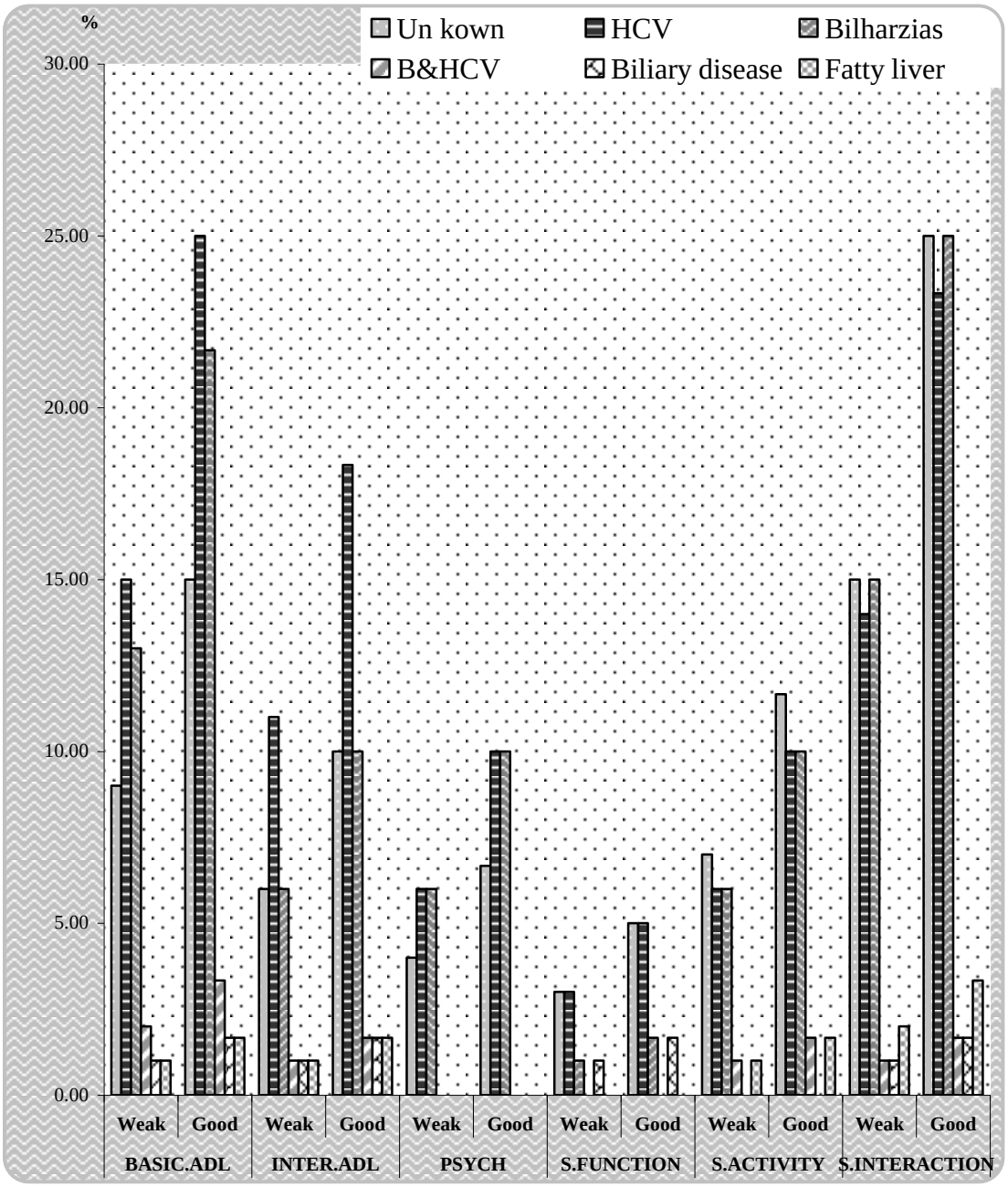
This figure illustrates that; the patient who had income (400-600) had the best functional status score. , mostly the patient who had income (600-800 and >1000) had the worst functional status score. And there was no significant statistical relation between income and the others parameters where p-value >0.05.

Figure (4) the relation between duration of the disease and functional status of the studied subjects (n = 60)



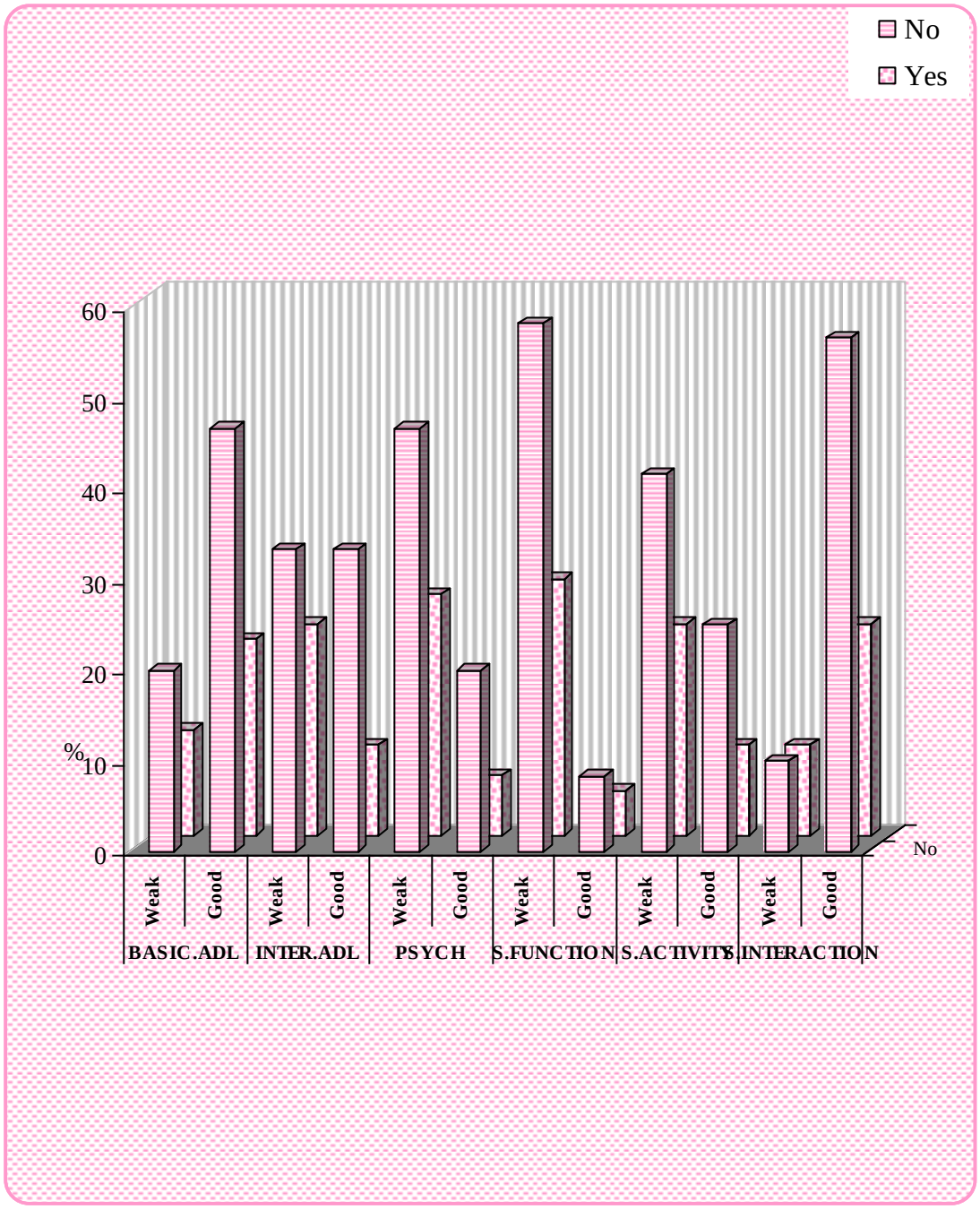
This figure shows that; the patient who had the disease from (1-5) had the best functional status score. , mostly the patient who had the disease from (>10) had the worst functional status score. And there was no significant statistical relation between duration of the disease and the others parameters where p-value >0.05.

Figure (5) the relation between causative agents of the disease and functional status of the studied subjects (n = 6o)



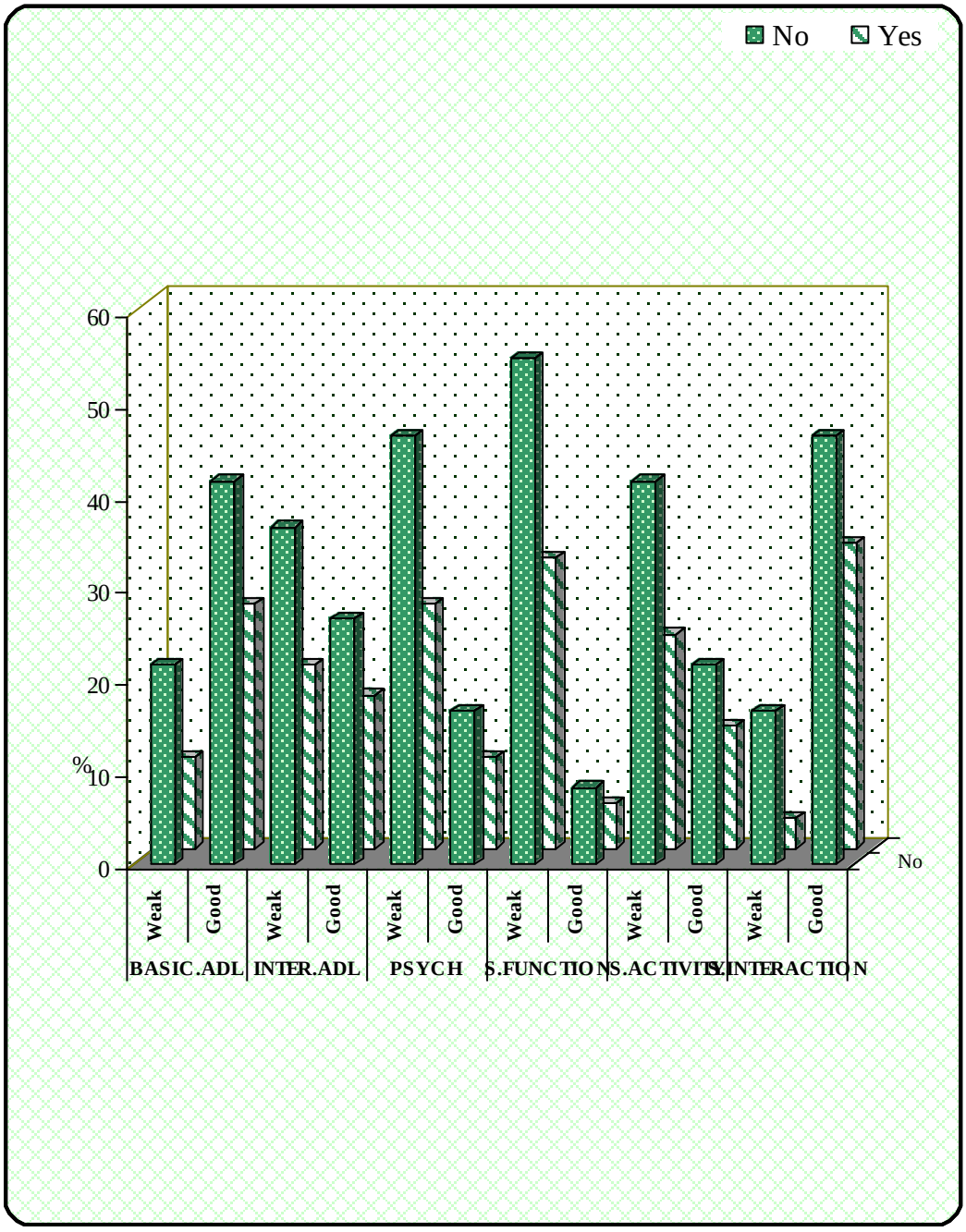
This figure shows that; the patient who had HCV had the best functional status score. , mostly the patient who had fatty liver had the worst functional status score. And there was no significant statistical relation between history of the disease and the others parameters where p-value >0.05.

Figure (6) the relation between diabetes mellitus and functional status of the studied subjects (n = 60)



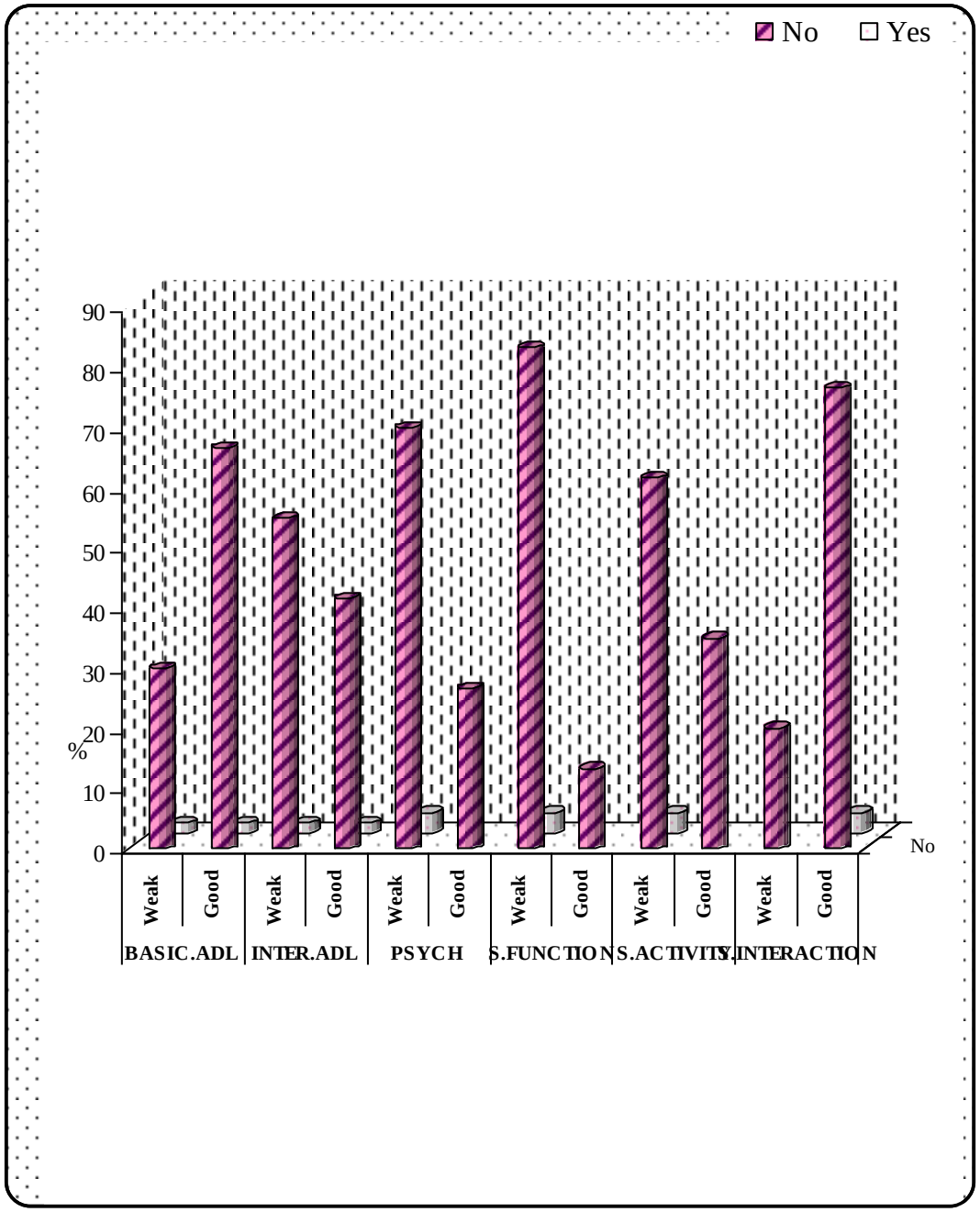
This figure shows that; the patient who hadn't DM had the best functional status score. And there was no significant statistical relation between DM and the others parameters where p-value >0.05.

Figure (7) the relation between esophageal varices and functional status of the studied subjects (n = 60)



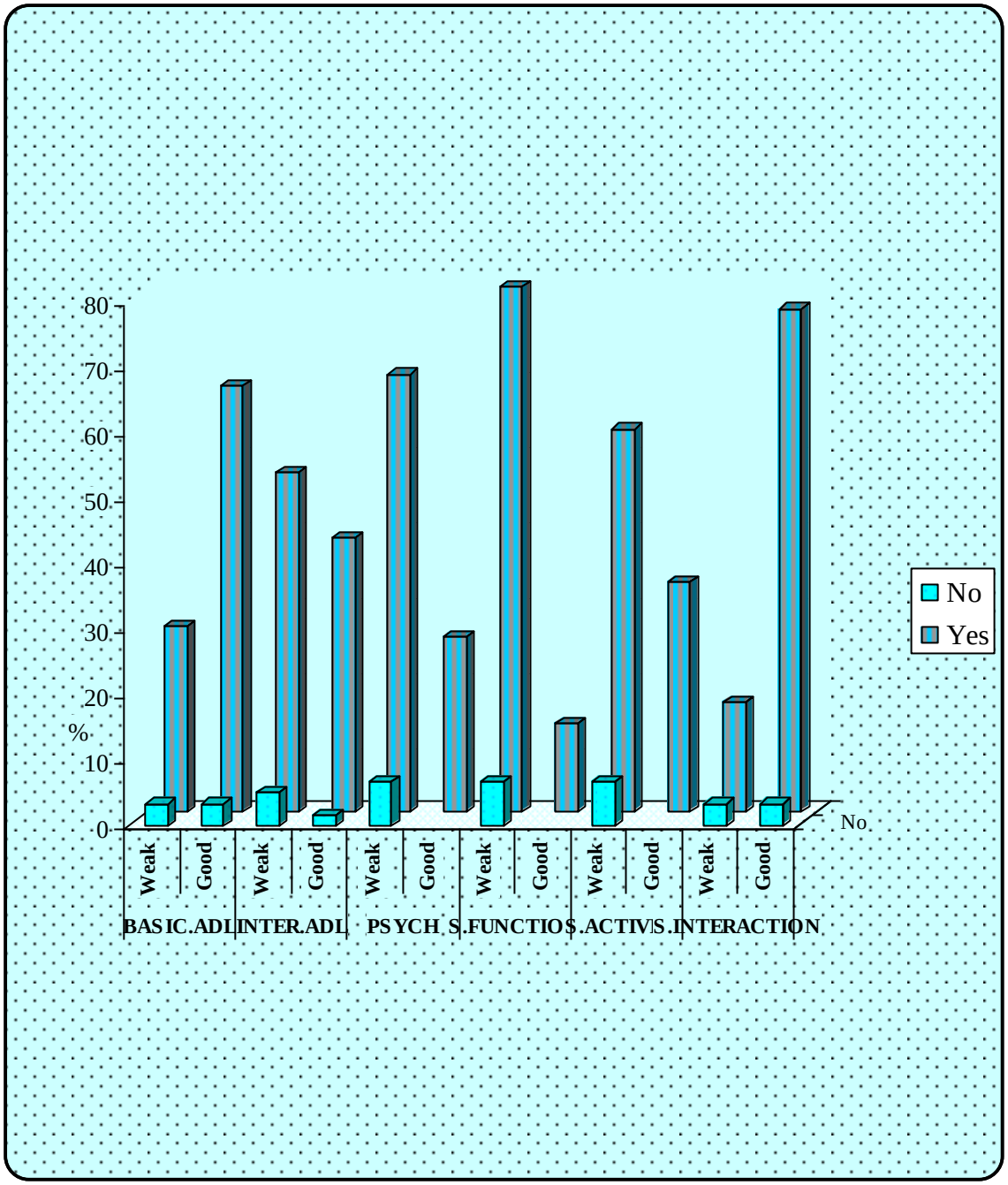
This figure shows that; the patient who hadn't esophageal varices had the best functional status score. And there was no significant statistical relation between esophageal varices and the others parameters where p-value >0.05.

Figure (8) the relation between hepatorenal syndrome and functional status of the studied subjects (n = 60)



This figure illustrates that; the patient who hadn't hepatorenal had the best functional status score. And there was no significant statistical relation between hepatorenal and the others parameters where p-value >0.05.

Figure (9) the relation between anemia and functional status of the studied subjects (n = 60)



This figure reveals that; the patient who had anemia had the best functional status score. And there was no significant statistical relation between anemia and the others parameters where p-value >0.05.

Table (10) the relation between splenomegaly and functional status of the studied subjects (n = 60)

Functional Status			Splenomegaly			Chi-square	
			No	Yes	Total	X^2	P-value
Basic 'ADL'	Weak	N	13	6	19	3.126	0.077
		%	21.67	10.00	31.67		
	Good	N	18	23	41		
		%	30.00	38.33	68.33		
Intermediate 'ADL'	Weak	N	21	13	34	3.204	0.073
		%	35.00	21.67	56.67		
	Good	N	10	16	26		
		%	16.67	26.67	43.33		
Psychological function	Weak	N	25	19	44	1.753	0.185
		%	41.67	31.67	73.33		
	Good	N	6	10	16		
		%	10.00	16.67	26.67		
Social function	Weak	N	28	24	52	0.742	0.389
		%	46.67	40.00	86.67		
	Good	N	3	5	8		
		%	5.00	8.33	13.33		
Social activity	Weak	N	24	15	39	4.348	0.037
		%	40.00	25.00	65.00		
	Good	N	7	14	21		
		%	11.67	23.33	35.00		
Social interaction	Weak	N	7	5	12	0.267	0.605
		%	11.67	8.33	20.00		
	Good	N	24	24	48		
		%	40.00	40.00	80.00		

N.B. For all statistical tests done; P value > 0.05 insignificant, P value < 0.05 significant, P value < 0.01 highly significant and P value < 0.001 very highly significant.

This table illustrates that; the patient who had splenomegaly had the best functional status score. And there was no significant statistical relation between splenomegaly and the others parameters where p-value >0.05, but there was a highly significant statistical relation between splenomegaly and social activity where p-value < 0.05.

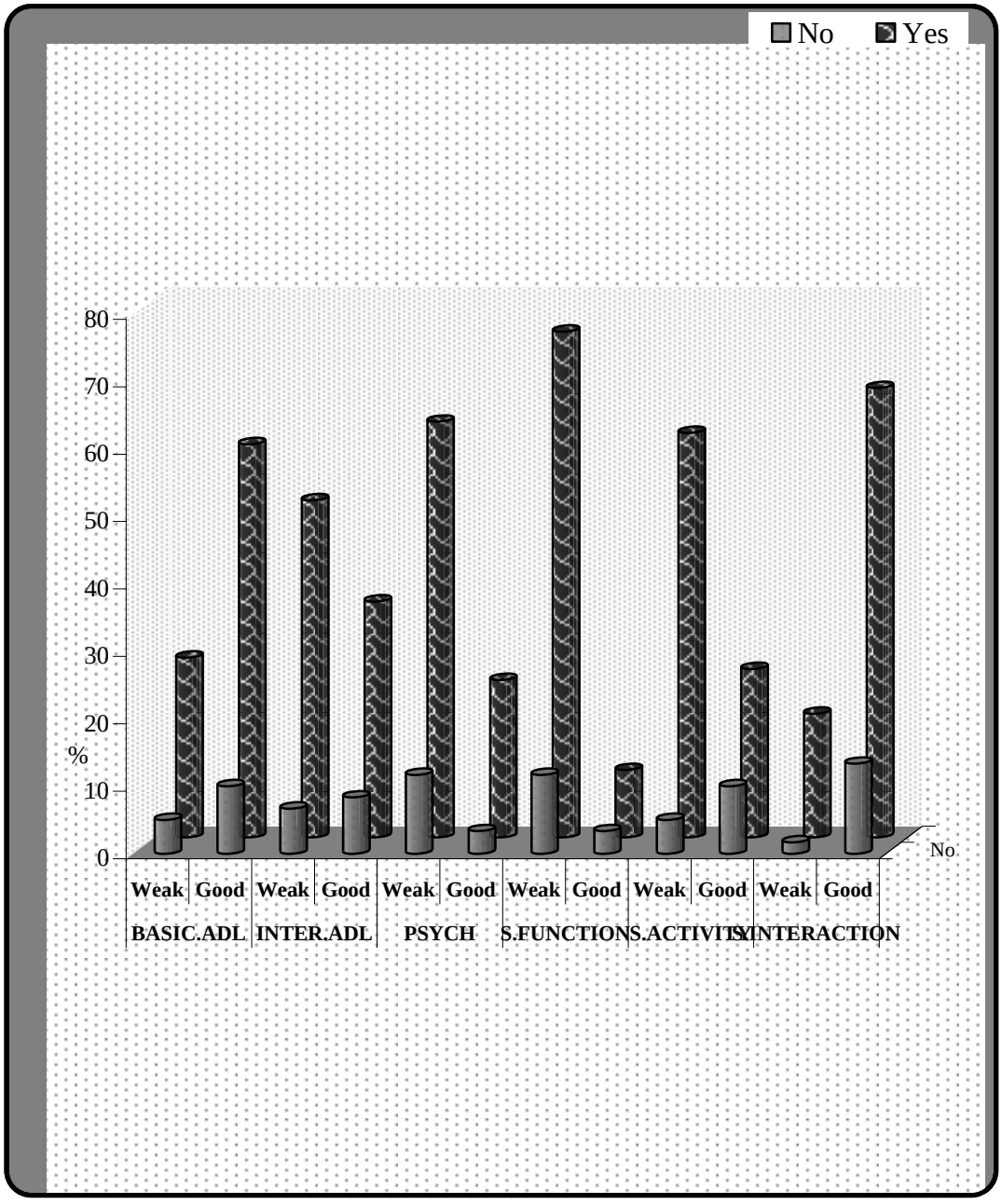
Table (11) the relation between weakness and functional status of the studied subjects (n = 60)

Functional Status			Weakness			Chi-square	
			No	Yes	Total	X^2	P-value
Basic 'ADL'	Weak	N	3	16	19	0.014	0.907
		%	5.00	26.67	31.67		
	Good	N	6	35	41		
		%	10.00	58.33	68.33		
Intermediate 'ADL'	Weak	N	4	30	34	0.644	0.422
		%	6.67	50.00	56.67		
	Good	N	5	21	26		
		%	8.33	35.00	43.33		
Psychological	Weak	N	7	37	44	0.107	0.744
		%	11.67	61.67	73.33		
	Good	N	2	14	16		
		%	3.33	23.33	26.67		
Social function	Weak	N	7	45	52	0.724	0.395
		%	11.67	75.00	86.67		
	Good	N	2	6	8		
		%	3.33	10.00	13.33		
Social activity	Weak	N	3	36	39	4.667	0.031
		%	5.00	60.00	65.00		
	Good	N	6	15	21		
		%	10.00	25.00	35.00		
Social interaction	Weak	N	1	11	12	0.523	0.470
		%	1.67	18.33	20.00		
	Good	N	8	40	48		
		%	13.33	66.67	80.00		

N.B. For all statistical tests done; P value > 0.05 insignificant, P value < 0.05 significant, P value < 0.01 highly significant and P value < 0.001 very highly significant.

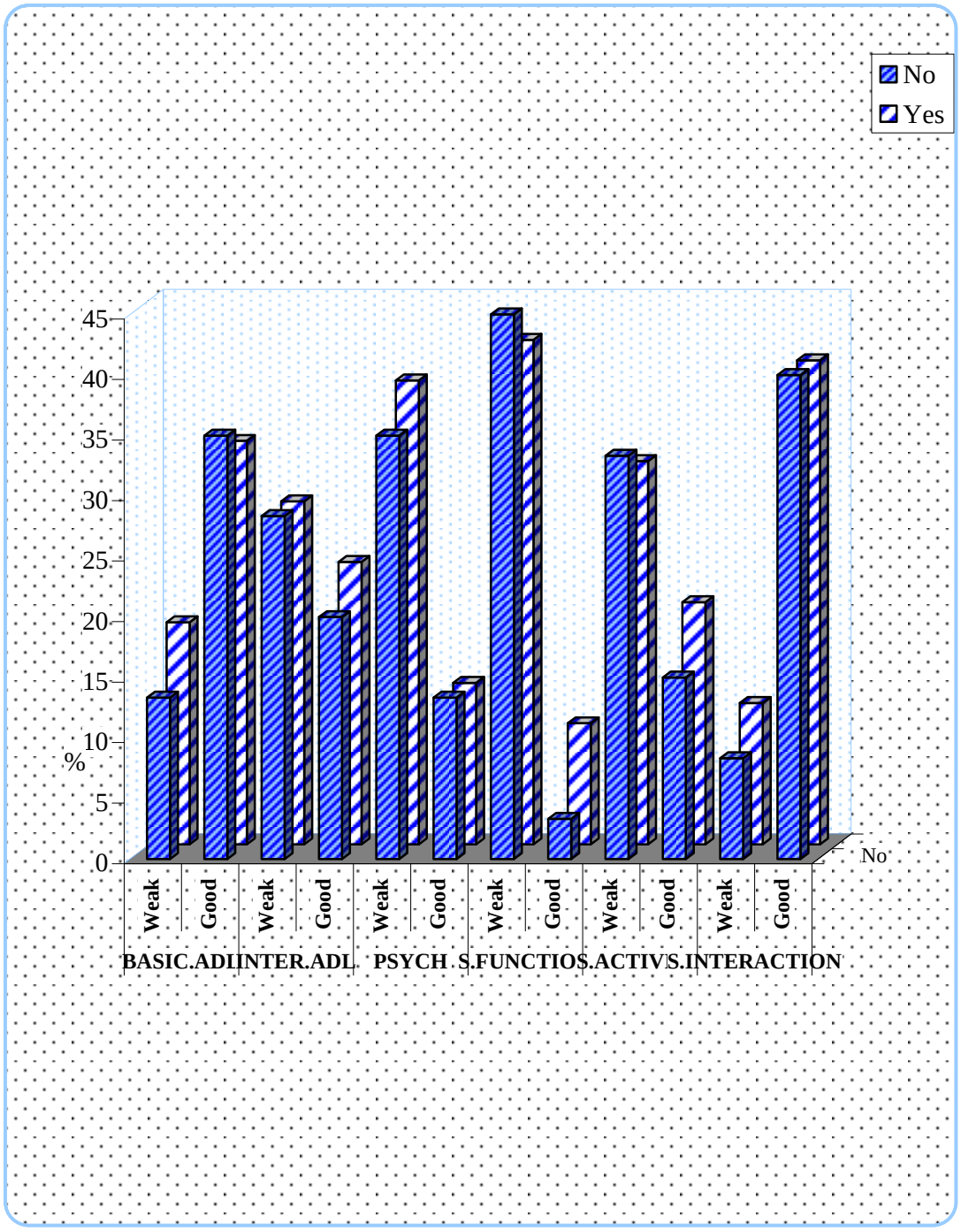
This table shows that; the patient who had weakness had the best functional status score. And there was no significant statistical relation between weakness and the others parameters where p-value >0.05, but there was a highly significant statistical relation between weakness and social activity where p-value < 0.05.

Figure (10) the relation between fatigue and functional status of the studied subjects (n = 6o)



This figure reveals that; the patient who had fatigue had the best functional status score. And there was no significant statistical relation between fatigue and the others parameters where p-value >0.05, but there was a highly significant statistical relation between fatigue and social activity where p-value < 0.05.

Figure (11) the relation between encephalopathy and functional status of the studied subjects (n = 60)



This figure illustrates that; the patient who had encephalopathy had the best functional status score. And there was no significant statistical relation between encephalopathy and the others parameters where p-value >0.05.

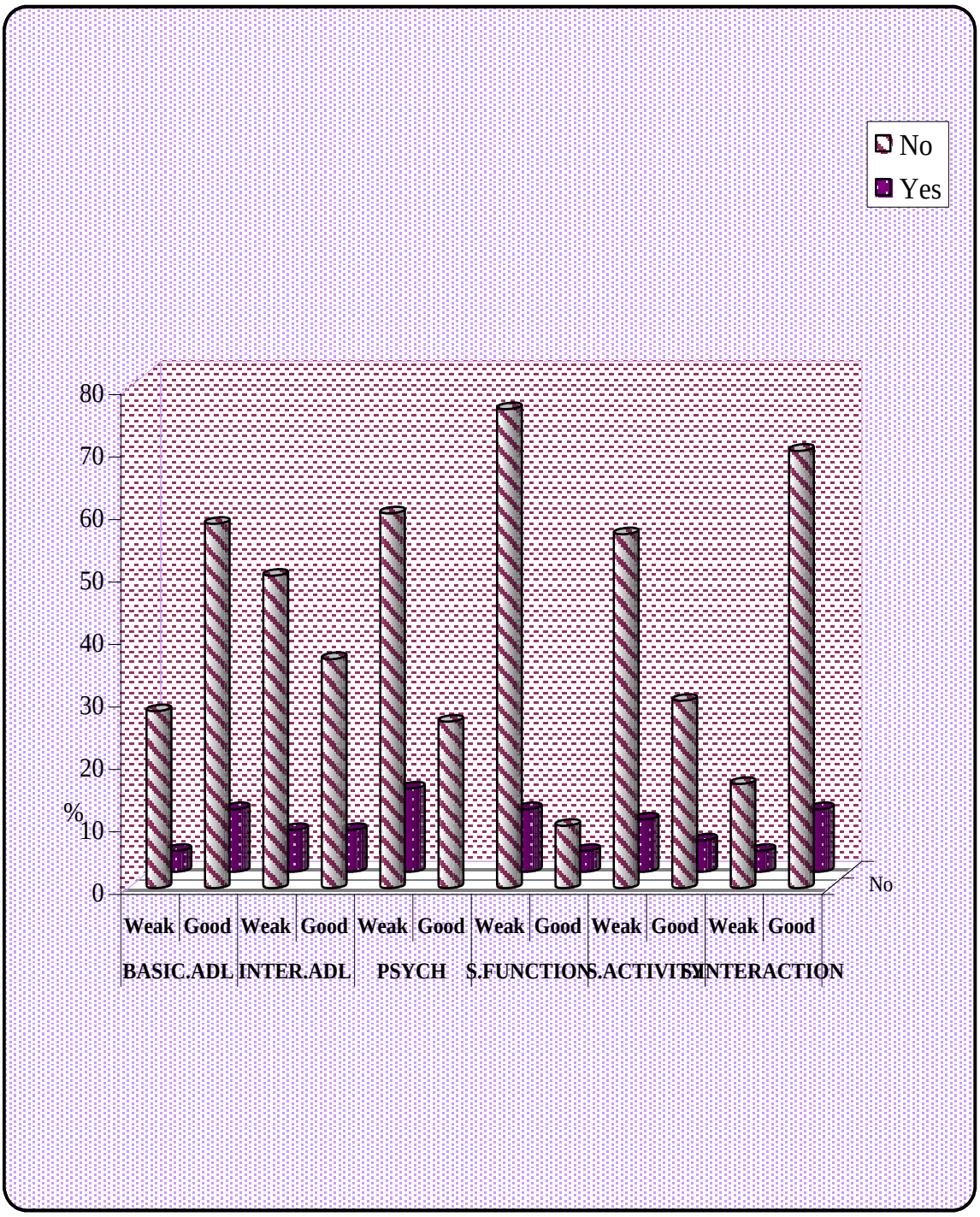
Table (12) the relation between ascites and functional status of the studied subjects (n = 60)

Functional Status			Ascites			Chi-square	
			No	Yes	Total	X^2	P-value
Basic 'ADL'	Weak	N	2	17	19	3.704	0.054
		%	3.33	28.33	31.67		
	Good	N	14	27	41		
		%	23.33	45.00	68.33		
Intermediate 'ADL'	Weak	N	3	31	34	12.774	0.000
		%	5.00	51.67	56.67		
	Good	N	13	13	26		
		%	21.67	21.67	43.33		
Psychological	Weak	N	12	32	44	0.031	0.860
		%	20.00	53.33	73.33		
	Good	N	4	12	16		
		%	6.67	20.00	26.67		
Social function	Weak	N	10	42	52	11.027	0.001
		%	16.67	70.00	86.67		
	Good	N	6	2	8		
		%	10.00	3.33	13.33		
Social activity	Weak	N	6	33	39	7.253	0.007
		%	10.00	55.00	65.00		
	Good	N	10	11	21		
		%	16.67	18.33	35.00		
Social interaction	Weak	N	1	11	12	2.578	0.108
		%	1.67	18.33	20.00		
	Good	N	15	33	48		
		%	25.00	55.00	80.00		

N.B. For all statistical tests done; P value > 0.05 insignificant, P value < 0.05 significant, P value < 0.01 highly significant and P value < 0.001 very highly significant.

This table reveals that; the patient who had ascites had the best functional status score. And there was a very highly significant statistical relation between ascites and "intermediate 'ADL', social function and social activity" where p-value < 0.05, but there was no significant statistical relation between ascites and the others parameters where p-value >0.05.

Figure (12) the relation between hepatomegaly and functional status of the studied subjects (n = 6o)



This figure illustrates that; the patient who hadn't hepatomegaly had the best functional status score. And there was no significant statistical relation between hepatomegaly and the others parameters where p-value >0.05 in all parameters.

Table (13) the relation between laboratory results and basic 'ADL' of the studied subjects (n = 6o)

Laboratory results	Basic 'ADL'							
	Weak			Good			T-test	
	Mean	±	SD	Mean	±	SD	t	P-value
ALT	37.000	±	19.765	29.049	±	16.733	1.616	0.112
AST	58.053	±	46.920	52.756	±	42.711	0.433	0.667
Urea	74.211	±	66.043	58.146	±	35.127	1.233	0.223
Creatinine	1.547	±	1.286	1.546	±	0.915	0.004	0.997
RBS	166.895	±	77.447	158.878	±	100.922	0.306	0.760
Bilirubin	2.847	±	2.634	2.137	±	1.689	1.262	0.212
Albumin	2.532	±	0.432	2.659	±	0.523	-0.921	0.361
Hb	9.174	±	1.871	9.134	±	1.883	0.076	0.940
WBCs	6.700	±	4.792	7.000	±	5.522	-0.204	0.839
INR	1.853	±	0.819	1.873	±	0.709	-0.099	0.921
Platelets	107.789	±	63.048	110.293	±	57.621	-0.152	0.880
Prothrombin time	18.126	±	3.832	18.054	±	3.593	0.071	0.943
Prothrombin activity	53.895	±	13.370	54.024	±	15.919	-0.031	0.976

N.B. For all statistical tests done; P value > 0.05 insignificant, P value < 0.05 significant, P value < 0.01 highly significant and P value < 0.001 very highly significant.

This table illustrates that; there was no significant statistical relation between basic 'ADL' (weak and good) and the others parameters where p-value >0.05 in all parameters.

Table (14) the relation between laboratory results and intermediate 'ADL' of the studied subjects (n = 6o)

Laboratory results	Intermediate 'ADL'							
	Weak			Good			T-test	
	Mean	±	SD	Mean	±	SD	t	P-value
ALT	31.765	±	16.626	31.308	±	19.927	0.097	0.923
AST	49.176	±	38.175	61.308	±	50.081	-1.065	0.291
Urea	70.118	±	55.064	54.231	±	33.132	1.301	0.199
Creatinine	1.626	±	1.292	1.442	±	0.552	0.680	0.499
RBS	169.941	±	102.929	150.269	±	80.223	0.805	0.424
Bilirubin	2.391	±	2.161	2.323	±	1.913	0.127	0.899
Albumin	2.591	±	0.469	2.654	±	0.537	-0.482	0.632
Hb	9.247	±	1.884	9.015	±	1.864	0.474	0.637
WBCs	6.700	±	5.702	7.173	±	4.725	-0.342	0.733
INR	1.779	±	0.702	1.981	±	0.783	-1.047	0.299
Platelets	116.882	±	66.394	99.846	±	46.774	1.113	0.270
Prothrombin time	17.909	±	3.286	18.296	±	4.109	-0.406	0.686
Prothrombin activity	55.176	±	13.617	52.423	±	16.881	0.699	0.487

N.B. For all statistical tests done; P value > 0.05 insignificant, P value < 0.05 significant, P value < 0.01 highly significant and P value < 0.001 very highly significant.

This table shows that; there was no significant statistical relation between intermediate 'ADL' (weak and good) with others parameters where p-value >0.05 in all parameters.

Table (15) the relation between laboratory results and psychological function of the studied subjects (n = 60)

Laboratory results	Psychological function							
	Weak			Good			T-test	
	Mean	±	SD	Mean	±	SD	t	P-value
ALT	31.568	±	16.500	31.563	±	22.130	0.001	0.999
AST	50.614	±	38.786	64.938	±	55.296	-1.124	0.266
Urea	61.523	±	48.221	67.938	±	45.276	-0.463	0.645
Creatinine	1.525	±	1.124	1.606	±	0.769	-0.267	0.791
RBS	169.205	±	100.984	140.000	±	67.179	1.071	0.289
Bilirubin	2.564	±	2.134	1.806	±	1.694	1.278	0.206
Albumin	2.589	±	0.489	2.700	±	0.523	-0.767	0.446
Hb	9.411	±	1.722	8.419	±	2.094	1.863	0.068
WBCs	7.457	±	5.829	5.388	±	2.866	1.356	0.180
INR	1.866	±	0.803	1.869	±	0.542	-0.013	0.990
Platelets	109.977	±	56.946	108.188	±	65.807	0.103	0.918
Prothrombin time	18.041	±	3.944	18.175	±	2.727	-0.125	0.901
Prothrombin activity	54.477	±	14.518	52.625	±	16.836	0.419	0.677

N.B. For all statistical tests done; P value > 0.05 insignificant, P value < 0.05 significant, P value < 0.01 highly significant and P value < 0.001 very highly significant.

This table illustrates that; there was no significant statistical relation between psychological function (weak and good) and the others parameters where p-value >0.05 in all parameters.

Table (16) the relation between laboratory results and social function of the studied subjects (n = 60)

Laboratory results	Social function							
	Weak			Good			T-test	
	Mean	±	SD	Mean	±	SD	t	P-value
ALT	30.942	±	15.754	35.625	±	29.866	-0.683	0.497
AST	51.404	±	36.575	74.125	±	76.678	-1.378	0.174
Urea	61.615	±	40.327	73.750	±	82.165	-0.674	0.503
Creatinine	1.490	±	0.913	1.913	±	1.669	-1.075	0.287
RBS	162.212	±	91.765	156.250	±	111.164	0.166	0.868
Bilirubin	2.442	±	2.064	1.838	±	1.918	0.778	0.440
Albumin	2.573	±	0.434	2.913	±	0.764	-1.838	0.071
Hb	9.219	±	1.878	8.675	±	1.806	0.766	0.447
WBCs	6.602	±	5.052	8.875	±	6.510	-1.140	0.259
INR	1.875	±	0.754	1.813	±	0.671	0.221	0.826
Platelets	111.827	±	58.833	94.375	±	60.708	0.778	0.440
Prothrombin time	18.083	±	3.736	18.038	±	3.136	0.032	0.974
Prothrombin activity	53.423	±	14.727	57.625	±	17.614	-0.733	0.467

N.B. For all statistical tests done; P value > 0.05 insignificant, P value < 0.05 significant, P value < 0.01 highly significant and P value < 0.001 very highly significant.

This table reveals that; there was no significant statistical relation between social function (weak and good) and the others parameters where p-value >0.05 in all parameters.

Table (17) the relation between laboratory results and social activity of the studied subjects (n = 60)

Laboratory results	Social activity							
	Weak			Good			T-test	
	Mean	±	SD	Mean	±	SD	t	P-value
ALT	52.949	±	39.951	57.190	±	51.022	-0.355	0.724
AST	61.667	±	49.770	66.143	±	42.906	-0.348	0.729
Urea	1.492	±	1.177	1.648	±	0.716	-0.551	0.584
Creatinine	169.077	±	102.925	147.190	±	73.183	0.863	0.392
RBS	2.290	±	1.931	2.495	±	2.273	-0.369	0.713
Bilirubin	2.623	±	0.533	2.610	±	0.431	0.100	0.921
Albumin	9.577	±	1.700	8.348	±	1.929	2.549	0.013
Hb	6.521	±	5.337	7.619	±	5.175	-0.768	0.445
WBCs	1.892	±	0.824	1.819	±	0.562	0.364	0.717
INR	113.872	±	62.868	101.381	±	51.048	0.781	0.438
Platelets	18.497	±	3.669	17.295	±	3.531	1.226	0.225
Prothrombin time	53.692	±	14.142	54.524	±	16.949	-0.203	0.840
Prothrombin activity	32.051	±	16.569	30.667	±	20.730	0.282	0.779

N.B. For all statistical tests done; P value > 0.05 insignificant, P value < 0.05 significant, P value < 0.01 highly significant and P value < 0.001 very highly significant.

This table shows that; there was no significant statistical relation between social activity (weak and good) and the others parameters where p-value >0.05 in all parameters, but there was a highly significant statistical relation between social activity (weak and good) and albumin where p-value < 0.05.

Table (18) the relation between laboratory results and quality of social interaction of the studied subjects (n = 60)

Laboratory results	Social interaction							
	Weak			Good			T-test	
	Mean	±	SD	Mean	±	SD	t	P-value
ALT	28.917	±	8.273	32.229	±	19.675	-0.568	0.572
AST	35.167	±	19.291	59.250	±	46.881	-1.734	0.088
Urea	77.083	±	70.713	59.771	±	39.502	1.140	0.259
Creatinine	1.933	±	1.654	1.450	±	0.811	1.460	0.150
RBS	169.500	±	133.951	159.396	±	82.236	0.332	0.741
Bilirubin	2.517	±	1.531	2.323	±	2.161	0.292	0.771
Albumin	2.633	±	0.416	2.615	±	0.518	0.116	0.908
Hb	9.683	±	1.630	9.013	±	1.909	1.118	0.268
WBCs	7.817	±	8.300	6.677	±	4.288	0.668	0.507
INR	1.633	±	0.507	1.925	±	0.779	-1.229	0.224
Platelets	120.917	±	75.984	106.646	±	54.378	0.748	0.457
Prothrombin time	17.633	±	2.173	18.188	±	3.929	-0.469	0.641
Prothrombin activity	55.000	±	12.577	53.729	±	15.710	0.260	0.796

N.B. For all statistical tests done; P value > 0.05 insignificant, P value < 0.05 significant, P value < 0.01 highly significant and P value < 0.001 very highly significant.

This table reveals that; there was no significant statistical relation between quality social interaction (weak and good) and the others parameters where p-value >0.05 in all parameters.

Table (19) the correlation between age and functional status of the studied subjects (n = 60)

Functional Status	Age	
	r	P-value
Basic 'ADL'	-0.188	0.151
Intermediate 'ADL'	-0.204	0.118
Psychological	0.068	0.606
Social function	0.019	0.885
Social activity	-0.163	0.212
Social interaction	0.055	0.677

N.B. For all statistical tests done; P value > 0.05 insignificant, P value < 0.05 significant, P value < 0.01 highly significant and P value < 0.001 very highly significant.

This table shows that; there was no correlation between age and the others parameters where p-value >0.05 in all parameters.