RESULTS

The results of the present study will be presented under the following parts:

- **Part I:**

  -General Characteristics of the children with thalassemia, tables (1-3).

  -Family history of the disease, table (4).

  -characteristics of the disease, tables (5-7).

- **Part II:**

  Knowledge of the children about thalassemia, tables (8-12) .

- **Part III:**

  Relations between variables of study, tables (13-24).

Part I: General Characteristics of the Study sample

Table (1): Number and Percentage Distribution of Studied Children according to their Demographic characteristics.

Items	No = 102	% 100
Gender:-		
-Male	**52**	**51.0**
-Female	**50**	**49.0**
Age:- In Years		
- 5 < 9 yrs	**37**	**36.3**
- 9 < 13 yrs	**41**	**40.2**
- 13 To 18 yrs	**24**	**23.5**
Mean ± S.D	**11.6 ± 3.95**	
Education:-		
-pre-school	**15**	**14.7**
-Primary School	**45**	**44.1**
-Preparatory School	**27**	**26.5**
-Secondary School	**15**	**14.7**
Ranking:-		
-First	**37**	**36.3**
-Second	**39**	**38.2**
-Third	**22**	**21.6**
-Fourth+	**4**	**3.9**

As shown in table (1) regarding socio-demographic characteristics of children with thalassemia, it was found that, more than one third (40.2%) of them were in age group 9 > 13 years, while (36.3%)were in age group 5>9 years, (23.5%) in age group 13-18 years and the mean age of children was (11.6 ± 3.95 years) .

Regarding sex of children, it was found that, (51%) of them were males, while (49%) were females. In relation to their level of education, it found that, nearly half of them (44.1%) were in primary school, while the minority (14.7%, 26.5%, 14.7%) of them were at preschool, preparatory and secondary school respectively.

Table (2): Number and Percentage Distribution of Studied Children according to their Anthropometric Measurements.

Items	No=102	%100
Weight:-		
-Normal	**27**	**26.5**
-Abnormal	**75**	**73.5**
Height:		
-Normal	**32**	**31.3**
-Abnormal	**70**	**68.7**
Head Circumference:-		
-Normal	**24**	**23.5**
-Abnormal	**78**	**76.5**
Abdominal circumference		
-Normal	**26**	**25.5**
-Abnormal	**76**	**74.5**

As illustrated in table (2) regarding anthropometric measurements of the children with thalassemia, it is found that, more than two thirds (73.5%, 68.7%, 76.5% and 74.5%) of them had abnormal weight, height, head circumference and abdominal circumference respectively.

Table (3): Number and Percentage Distribution of Studied Children according to their Vital Signs Measurements.

Items	No=102	%100
Temperature:-		
-Normal	**37**	**36.2**
-Abnormal	**65**	**63.8**
Pulse:-		
-Normal	**27**	**26.5**
-Abnormal	**75**	**73.5**
Respiration:-		
-Normal	**24**	**23.5**
-Abnormal	**78**	**76.4**
Blood Pressure:		
-Normal	**38**	**37.2**
-Abnormal	**64**	**62.7**

In relation to vital signs of children with thalassemia, the majority (63.8%, 73.5%, 76.4% and 62.7%) of them had abnormal temperature, pulse, respiration and blood pressure respectively .

Table (4): Number and Percentage Distribution of Studied Children according to their Family History of Thalassemia.

Item	No =102	%100
Parent Relation:-		
-Yes	**39**	**38.2**
-No	**63**	**61.8**
Family History Of Thalassemia:-		
-Yes	**26**	**25.5**
-No	**76**	**74.5**
In Case Of Yes:-	**No= 26**	**%**
-Mother	**7**	**26.9**
-Father	**4**	**15.4**
-Siblings	**15**	**57.7**

Regarding to the family history of children with thalassemia, table (4) reveals that nearly two thirds (61.8%) of them had no parent consanguinity and more than two thirds (74.5%) of them were reported negative history of thalassemia.

Table (5): Number and Percentage Distribution of Studied Children according to their previous Neonatal problem.

Items	No=102	%100
Neonatal Problems:		
-Yes	**15**	**14.7**
-No	**87**	**85.3**
In Case Of Yes:-	**No= 15**	**%100**
-Jaundice	**3**	**20.2**
-Cyanosis	**2**	**13.3**
-Hypoglycemia	**2**	**13.3**
-Low Birth Weight (LBW)	**2**	**13.3**
-Infection	**2**	**13.3**
-Respiratory Distress (RD)	**2**	**13.3**
-Others	**2**	**13.3**

As observed from table (5) regarding previous neonatal problems of the studied children, the present study showed that, the majority (85.3%) of them did not have neonatal problems, while minority (14.7%) of them had neonatal problems such as jaundice, cyanosis, hypoglycemia, low birth weight, infection and respiratory distress.

Table (6): Number and Percentage Distribution of Studied Children according to their Duration of Thalassemia.

Items	No=102	%100
Duration of Illness by Years:-		
-1< 3	**20**	**19.6**
-3< 6	**30**	**29.4**
-6< 9	**20**	**19.6**
-9<12	**20**	**19.6**
-More Than 12 Years	**12**	**11.8**
Mean ± S.D	**6.1 ± 2.4 years**	

In relation to duration of illness of children with thalassemia, it was found that nearly one third (29.4%) of them were having illness for 3-<6years.

Table (7): Number and Percentage Distribution of Studied children according to their treatment of thalassemia.

Items	No=102	%100
Treatment:-		
-Blood Transfusion	**8**	**7.8**
-Drugs and Blood Transfusion	**94**	**92.2**
Frequency of Blood Transfusion:-		
-Twice /Month	**45**	**44.1**
-Once / Month	**46**	**45.1**
-Once / 2 Month	**5**	**4.9**
-Others	**6**	**5.9**

As regards treatment of children with thalassemia, it was found that, the great majority (92.2%) of them was received drugs and blood transfusion, while the minority (7.8%) of them was received only blood transfusion. On the other hand 45.1% and 44.1% of children were receiving blood transfusion once and twice per month respectively.

Part II: Knowledge of the children about thalassemia and its management.

Table (8): Number and Percentage Distribution of Studied Children according to their Knowledge about Concept and Causes, of Thalassemia.

Knowledge	No=102	100%
Definition of Thalassemia		
-Known	**69**	**67.6**
-Unknown	**33**	**32.4**
Causes of Illness:-		
-Known	**44**	**43.1**
-Unknown	**58**	**56.9**

As regards Children's knowledge about concept and causes of thalassemia, it was found that, nearly two thirds (67.6%) of them had knowledge related to the concept of thalassemia, while more than half (56.9%) of them had no knowledge related to causes of thalassemia.

Table (9): Number and Percentage Distribution of Studied Children according to their Knowledge about Complication and method of prevention of it.

Items	No=102	%100
Complication of thalassemia	*	
-Growth Retardation	**87**	**93.5**
-Loss of Weight	**56**	**60.2**
-Liver complication	**18**	**19.3**
-Spleen complication	**5**	**5.4**
- Renal complication	**5**	**5.4**
Prevention of thalassemia complication	*	
-Early Diagnosis	**86**	**84.3**
-Follow up	**63**	**61.8**
-Take folic acid and desferal	**14**	**13.7**
-spleen examination	**5**	**4.9**
-Unknown	**24**	**23.5**

N.B: * Total Numbers Is Not Mutually Exclusive

As clear in table (9) in relation to children's knowledge about complication of thalassemia, it was found that, more than two thirds (93.5%) of them reported growth retardation, liver complication (18%) and renal complication (5%).

As regarding knowledge about prevention of complications, it was found that, the majority (84.3%) of children had done early diagnosis.

Table (10): Number and Percentage Distribution of Studied Children according to their Knowledge about Prevention of Thalassemia.

Items	No=102	%100
Thalassemia prevention	*	
--Premarital Examinations	**32**	**39.0**
-Unmarried Carriers persons	**63**	**76.8**
-Unmarried Sick persons	**9**	**10.9**
-Avoid Relative Marriage	**63**	**76.8**
-Antenatal Examination	**18**	**21.9**
- Unknown	**31**	**37.8**

N.B: * Total Numbers Is Not Mutually Exclusive

As illustrated in table (10) as regards children's knowledge about prevention of thalassemia, it was found that, more than two thirds (76.8%) of them reported unmarried carrier persons and avoid relative marriage.

Table (11): Number and Percentage Distribution of Studied Children According to their Total Knowledge.

Total Knowledge	No=102	%100
- Poor < 50	**13**	**12.7**
- Average 50 < 70	**68**	**66.7**
- Good >75	**21**	**20.6**

This table illustrated that more than half (66.7%) of children with thalassemia who had average level of total knowledge about thalassemia. Meanwhile, less than quarter (12.7% and 20.6%) of them who had poor and good knowledge respectively.

Table (12): Number and Percentage Distribution of Studied Children according to their Total QOL.

Total QOL	No=102	%100
- Poor < 50	**13**	**12.7**
- Average 50 < 70	**49**	**48.1**
- Good >75	**40**	**39.2**

This table illustrated that the majority (87.3%) of children with thalassemia who had average and good level of total knowledge about thalassemia. Meanwhile, less than quarter (12.7%) of them who had poor knowledge.

Part III: Relations between variables of the study

Table (13): Relationship between Gender of Studied Children and their Quality of Life.

Quality Of Life	Gender				x^2	P Value
Total Quality	Male NO=52		Female NO=50		1.759	*P<0.05
Good	5	5.2	2	1.9		
Average	45	44.0	45	44.1		
Poor	2	1.9	3	2.9		

***P< 0.05 Statistical Significant**

In relation to the effect of gender on quality of life for children with thalassemia, as clear in table (13), there is a statistically significant difference ($p<0.05$) between gender and total quality of life, where male children were having good quality of life, while poor quality of life was in female children.

Table (14): Relationship between Ages of Studied Children and their Quality of Life.

Quality Of Life	Age						x^2	P Value
Total Quality:-	5>9		9>13		13-18		4.682	*P<0.05
Good	5	4.9	2	1.9	3	2.9		
Average	30	29.4	36	35.4	17	16.8		
Poor	2	1.9	3	2.9	4	2.3		

***P< 0.05 Statistical Significant**

table (14) reveals that there are a significant relationship ($p<0.05$) between the age and the total quality of life, where children having good quality of life were in age group of 5-<9 years, compared with children who were having poor quality of life in the age group of 13-18 years.

Table (15): Relationship between Educational Level of Studied Children and their Quality of Life.

Quality Of Life	Level of Education								x^2	P Value
Total Quality	**Preschool**		**Primary**		**Preparatory**		**Secondary**			
Good	**2**	**1.9**	**5**	**4.9**	**2**	**1.9**	**4**	**3.9**		
Average	**9**	**8.8**	**37**	**36.4**	**15**	**14.8**	**7**	**6.8**	**19.241**	***P<0.001**
Poor	**4**	**3.9**	**3**	**2.9**	**2**	**1.9**	**10**	**9.8**		

***P< 0.05 Statistical Significant**

table (15) showed that there was statistical significant difference ($p<0.05$) between gender and total quality of life, where children in primary school were having good quality of life, in compared with children in secondary education.

Table (16): Relationship between Birth Order of Studied Children and their Quality of Life.

Quality Of Life	Child Ranking								x^2	P Value
Total Quality:-	First No = 37		Second No =39		Third No = 22		Others No = 4			
Good	5	4.9	2	1.9	2	1.9	1	1.0		
Average	27	26.4	34	33.7	17	16.6	2	1.9	4.475	*P<0.05
Poor	3	2.9	5	4.9	3	2.9	1	1.0		

***P< 0.05 Statistical Significant**

In relation to the effect of ranking of children with thalassemia on quality of life for children with thalassemia, it was clear from table (16) that there was statistical significant difference ($p<0.05$) between birth order and total quality of life, where the first ranked children having good quality of life, while those having poor quality of life were the second ranked children.

Table (17): Relationship between Quality of Life of Studied Children and their Family History of Thalassemia.

Quality Of Life	Family History of Thalassemia				x^2	P Value
Total Quality	Positive family history No = 26		Negative family history No = 76		3.340	*P<0.05
	No	%	No	%		
Good	6	5.8	5	4.9		
Average	15	14.8	69	67.7		
Poor	2	1.9	5	4.9		

***P< 0.05 Statistical Significant**

As clear from table (17) there is statistical significant difference (p<0.05) between family history and total quality of life, where children with positive family history were having good quality of life, in compared with those who have negative family history.

Table (18): Relationship between Duration of Thalassemia for Studied Children and their Quality of Life.

Quality Of Life	Duration Of Illness										x^2	P Value
Total Quality	1< 3 Years No = 20		3<6 Years No = 30		6<9 Years No = 20		9<12 Years No = 20		< 12 Years No = 12			
	No	%	No	%	No	%	No	%	No	%		
Good	4	3.9	7	6.9	5	4.9	5	4.9	3	2.9	2.608	*P<0.05
Average	14	13.8	20	19.7	13	12.7	12	11.8	7	6.9		
Poor	2	1.9	3	2.9	2	1.9	3	2.9	2	1.9		

P > 0.05 No Statistical Significant

In relation to the effect of duration of thalassemia on quality of life for children with thalassemia, it was clear from table (15) that there is insignificant difference (p>0.05) between duration of thalassemia and total quality of life**.**

Table (19): Relationship between Methods of Treatment of Thalassemia for Studied Children and their Quality of Life.

Quality Of Life	Methods Of Treatment				x^2	P Value
Total Quality	Blood Transfusion Only No = 8		Drugs &Blood Transfusion No = 94			
	No	%	No	%		
Good	3	2.9	7	6.8	.615	*P<0.05
Average	3	2.9	82	80.5		
Poor	2	1.9	5	4.9		

***P< 0.05 Statistical Significant**

As clear in table (16) there are significant relationship between methods of treatment of thalassemia and total quality of life, where children were receiving drugs and blood transfusion was having good quality of life in compared with those having poor quality of life were receiving blood transfusion only**.**

Table (20): Relationship between Frequency of Blood Transfusion for Studied Children and their Quality of Life.

Quality Of Life	Frequency of Blood Transfusion								x^2	P Value
Total Quality	Once/15 Days No = 45		Once / 30 Days No = 5		Once /60 Days No = 46		Others No =6		.417	*p<0.05
	No	%	No	%	No	%	No	%		
Good	5	4.9	2	1.9	3	2.9	2	1.9		
Average	38	37.3	2	1.9	37	36.7	2	1.9		
Poor	2	1.9	1	1.0	6	5.8	2	1.9		

***P<0.05 Statistical Significant**

In relation to the frequency of blood transfusion for children with thalassemia on quality of life for children with thalassemia, table (17) reveals that, there was statistical significant difference ($p<0.05$) between frequency of blood transfusion for children with thalassemia and total quality of life, where children having good quality of life were receiving blood every 15 days, while those having poor quality of life were receiving blood every 60 days**.**

Table (21): Relationship between Quality of Life of Studied Children and their Knowledge about Thalassemia.

Knowledge about Thalassemia	Total Quality Of Life						x^2	P Value
	Good		Average		Poor			
Definition Of Thalassemia:-	No	%	No	%	No	%		
Known	15	14.7	33	32.4	10	9.8	.163	*P<0.05
Unknown	6	5.8	17	16.7	21	20.6		
Complications Of Illness:-								
Known	18	17.6	36	35.3	2	1.9	.318	*P<0.05
Unknown	3	2.9	4	3.9	39	38.4		

***P < 0.05 Statistical Significant**

Table (18) shows that there are statistical significant difference between ($p<0.05$) knowledge about thalassemia and total quality of life, where children having good quality of life were having knowledge about thalassemia compared with children who were having poor quality of life were having no knowledge about thalassemia .

Table (22): Relationship between Quality of Life of Studied Children and their Knowledge about prevention of Thalassemia.

Knowledge about Thalassemia	Total Quality Of Life						x^2	P Value
Thalassemia prevention	Good		Average		Poor			
	No	%	No	%	No	%		
Premarital Examinations	12	11.7	28	27.4	20	19.6	4.037	*P<0.05
Unmarried Carriers persons	12	11.7	38	37.2	13	12.7		
Unmarried Sick persons	3	2.9	4	3.9	2	1.9		
Avoid Relative Marriage	17	16.6	26	25.4	20	19.6		
Antenatal Examination	5	5.9	8	7.8	5	4.9		
Unknown	7	6.8	10	9.8	3	2.9		

***P < 0.05 Statistical Significant**

Table (19) reveals that there are highly statistically significant difference ($p<0.05$) between knowledge about prevention of thalassemia and total quality of life.

Table (23): Relationship between Quality of Life of Studied Children and their Knowledge about Prevention of Complications of Thalassemia.

Knowledge about Thalassemia	Total Quality Of Life						x^2	P Value
Prevention of Complication	Good		Average		Poor			
	No	%	No	%	No	%		
Early Diagnosis	20	19.6	46	45.0	20	19.6	4.060	P>0.05
Follow Up	21	20.5	32	31.3	10	9.8		
Take Folic Acid & desferal	5	4.9	7	7.8	2	1.9		
Spleen Examination	2	1.9	2	1.9	1	1.0		
Unknown	4	3.9	13	12.7	7	7.8		

*** P > 0.05 No Statistical Significant**

Table (20) as regards Knowledge about prevention of complications of thalassemia on quality of life for children with thalassemia. It is clear that statistical insignificant difference (p>0.05) was observed between knowledge about prevention of complications of thalassemia and total quality of life.

Table (24): Relation between Total Knowledge and Total Q.O.L Score of Studied Children.

Total Knowledge	Total Quality Of Life						x^2	P Value
	Good		Average		Poor			
	No	%	No	%	No	%		
Poor < 50	7	6.9	4	3.9	2	1.9	9.04	P< 0.001
Average 50 < 70	22	21.6	38	37.3	8	7.8		
Good 75 >	11	10.8	7	6.9	3	2.9		

P < 0.001 High Statistical Significant

As observed from this table, there was a highly statistically significant relation (p<0.001) between knowledge about thalassemia and total quality of life.