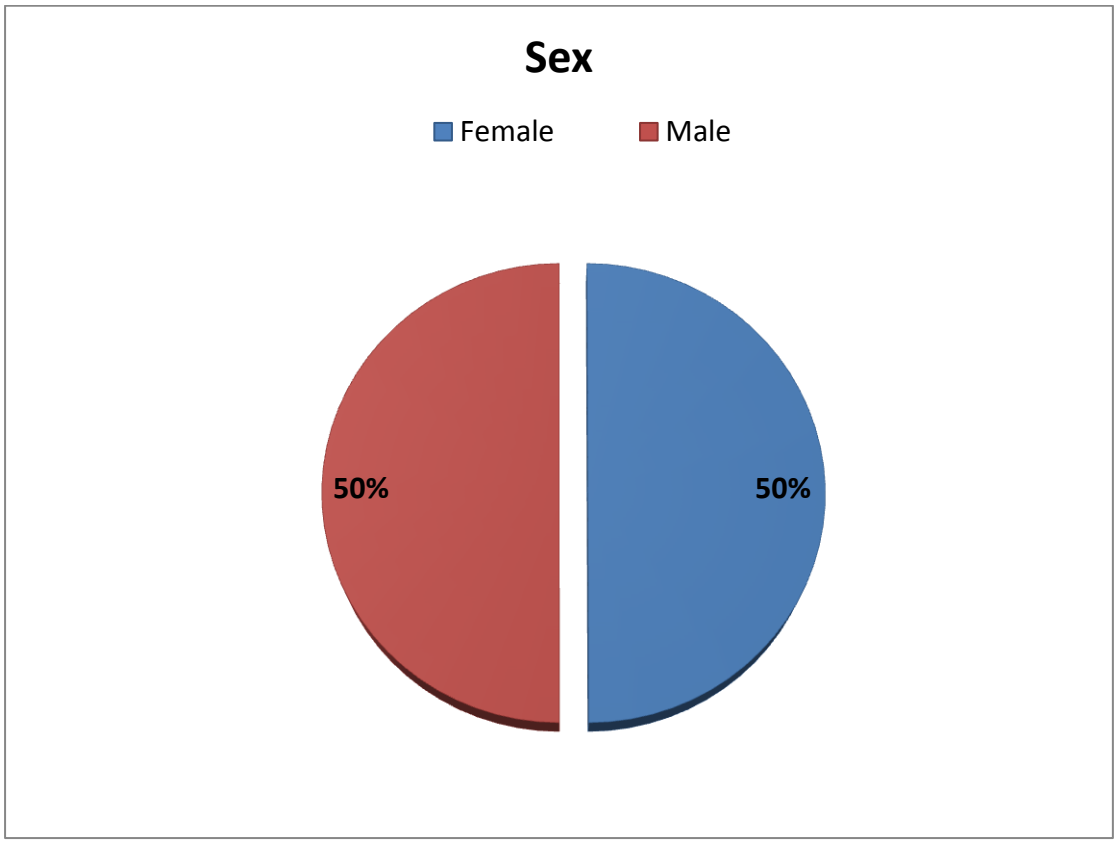
Table (1): Distribution of studied group according to sex:

Sex	No.	%
Female	475	50.0%
Male	475	50.0%
Total	950	100.0%

Table (1) shows the total number of registered school children included in the study which was 950. Out of them 475 (50%) were males and 475 (50%) were females.

Figure (1)



Distribution of studied group according to sex

Table (2): Distribution of studied group according to age groups:

Age	No.	%
6-<8	472	49.7%
8-<10	156	16.4%
10-14	322	33.9%
Total	950	100.0%

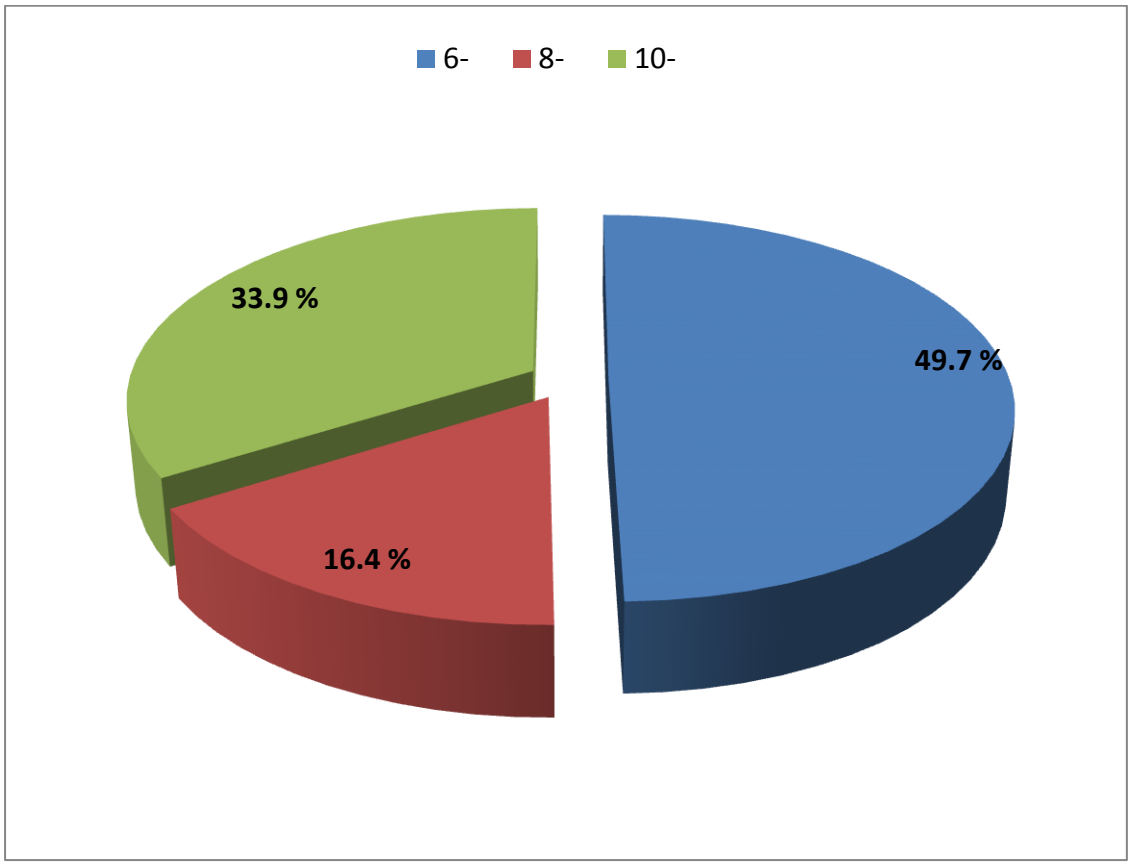
Table (2) shows different age groups included in our study:

6 - <8 years ⟶ 49.7%.

8 - <10 years ⟶ 16.4%.

10-14 years ⟶ 33.9%.

Figure (2)



Distribution of studied group according to age groups

Table (3): Mean and SD of age of study group:

	No.	Minimum	Maximum	Mean	Std. Deviation
Age	950	6	14	8.81	2.151

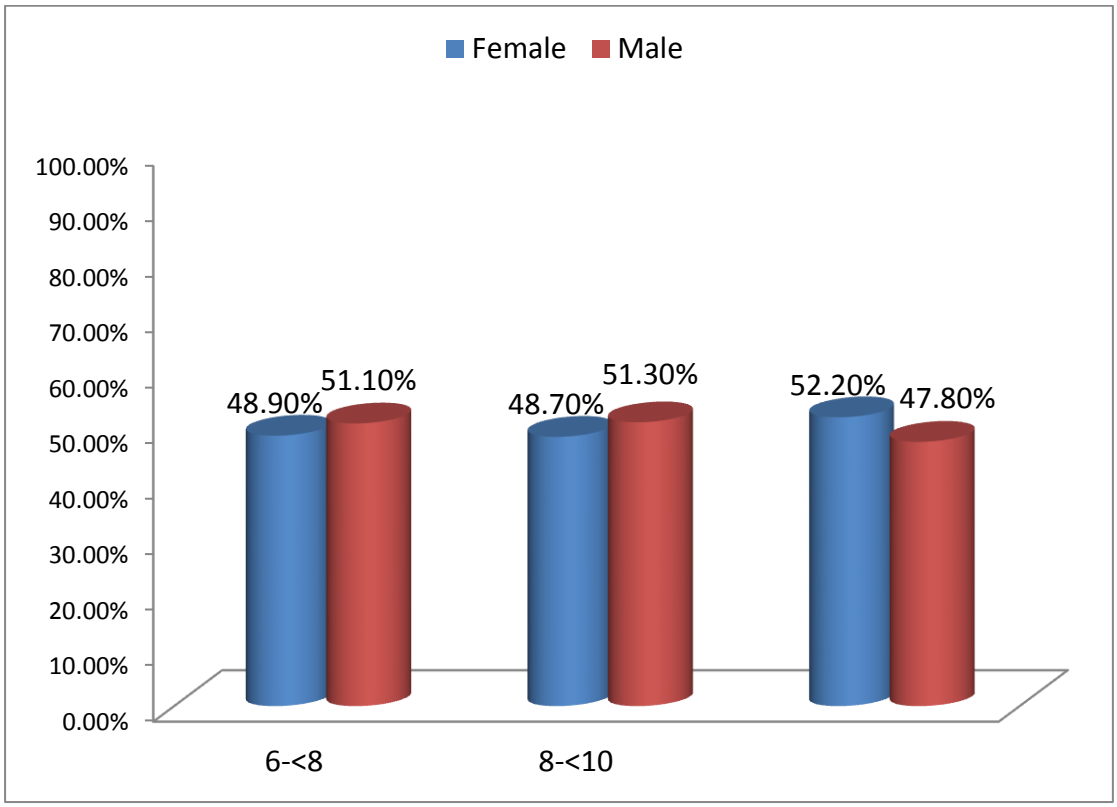
Table (4): Age and sex distribution of the studied population:

Age Group	Sex					
	Female		Male		Total	
	No.	%	No.	%	No.	%
6-<8	231	48.9%	241	51.1%	472	100.0%
8-<10	76	48.7%	80	51.3%	156	100.0%
10-14	168	52.2%	154	47.8%	322	100.0%
Total	475	50.0%	475	50.0%	950	100.0%

$X^2 = 0.9$ $p>0.05$

Table (4) shows male and female distribution of different age groups with no statistically significant difference.

Figure (4)



Age and sex distribution of the studied population

Table (5): Distribution of studied group according to BCG vaccination:

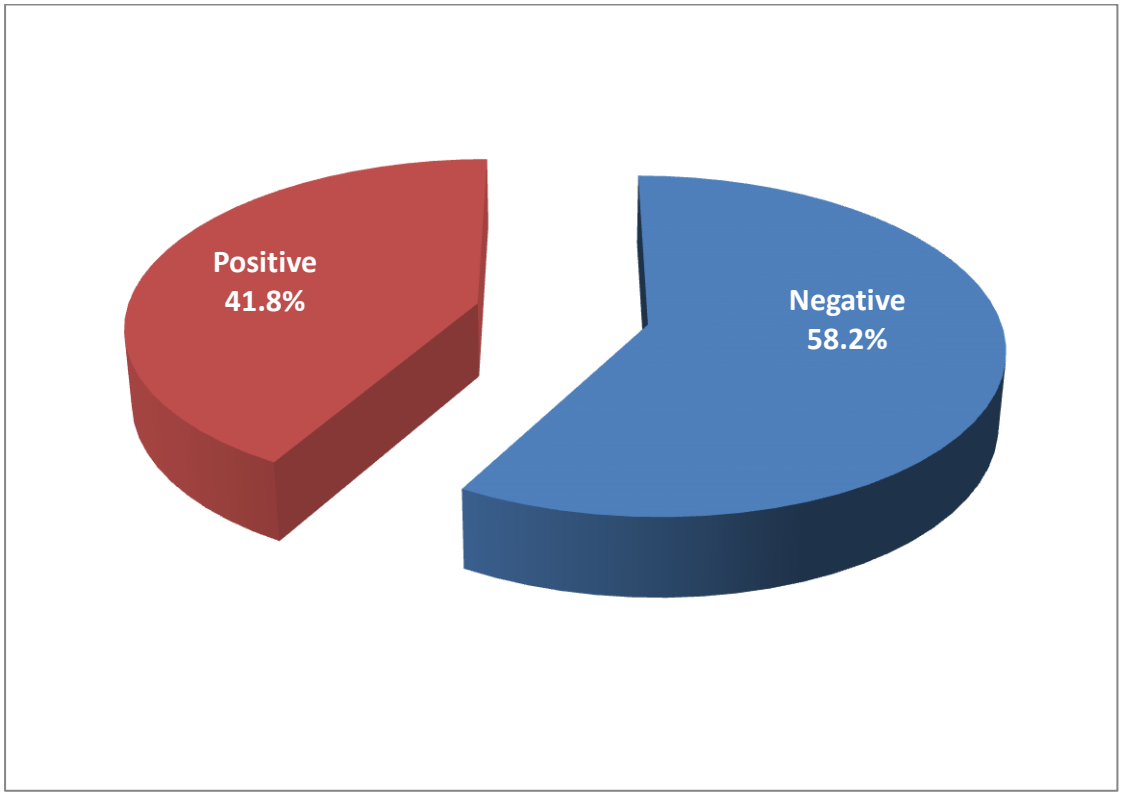
BCG scar	No.	%
Negative	553	58.2%
Positive	397	41.8%
Total	950	100.0%

Table (5) shows the distribution of children according to presence or absence of BCG scar which is considered the only evidence of BCG vaccination:

Children with scar (positive) ⟶ 41.8%

Children without scar (negative) ⟶ 58.2%

Figure (5)



Distribution of studied group according to BCG vaccination

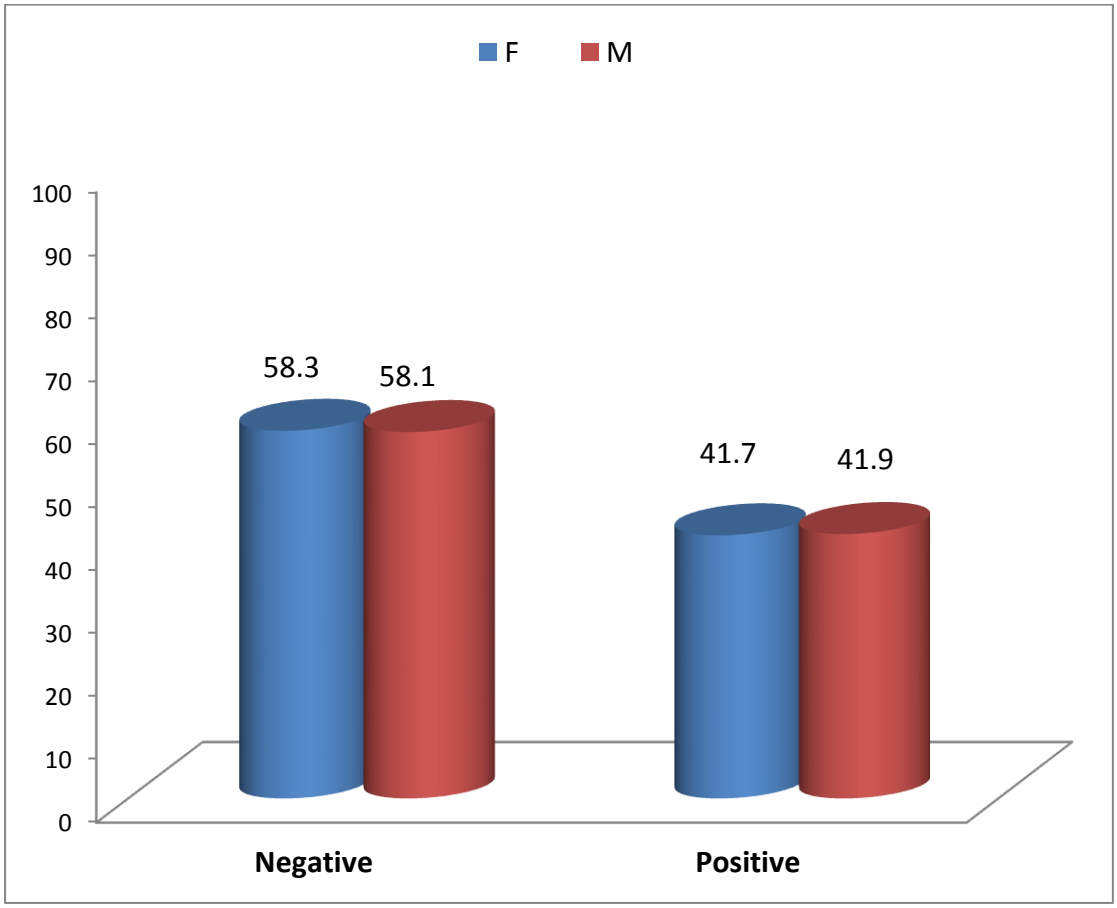
Table (6): Distribution of BCG vaccination according to sex:

BCG scar	F		M		Total	
	No.	%	No.	%	No.	%
Negative	277	58.3%	276	58.1%	553	58.2%
Positive	198	41.7%	199	41.9%	397	41.8%
Total	475	100.0%	475	100.0%	950	100.0%

$X^2 = 0.04$ $p>0.05$

Table (6) shows the relationship between sex and BCG vaccination coverage. There was no significant difference (p>0.05) between males (41.9%) and females (41.7%) regarding the presence of BCG scar.

Figure (6)



Distribution of BCG vaccination according to sex

Table (7): Comparison of BCG in different age groups:

Age	BCG					
	Negative		Positive		Total	
	No.	%	No.	%	No.	%
6-<8	284	60.2%	188	39.8%	472	100.0%
8-<10	87	55.8%	69	44.2%	156	100.0%
10-14	182	56.5%	140	43.5%	322	100.0%
Total	553	58.2%	397	41.8%	950	100.0%

$X^2 = 1.5$ $p>0.05$

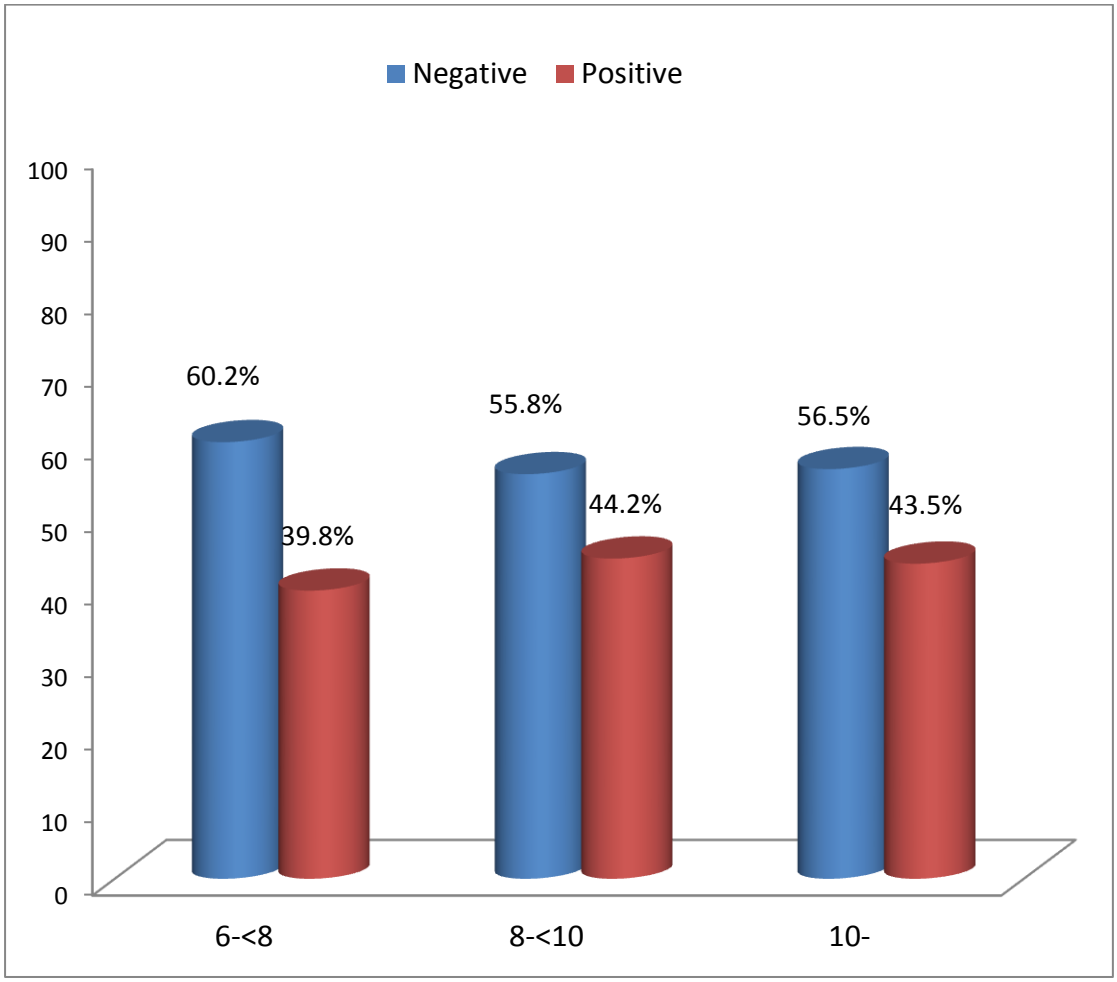
Table (7) shows BCG coverage in relation to different age groups. No significant difference between different groups.

6-8 years ⟶ 39.8%.

8-10 years ⟶ 44.2%.

10-14 years ⟶ 43.5%.

Figure (7)



Comparison of BCG in different age groups

Table (8): Distribution of studied group according to result of first tuberculin test:

Result	No.	%
Negative	400	42.1%
Positive	462	48.6%
Total	862	90.7%
Absent	88	9.3%

Table (8) shows the differentiation between children according to the result of first tuberculin test. The result of 10mm was taken as a cut-off point between reactors and non reactors.

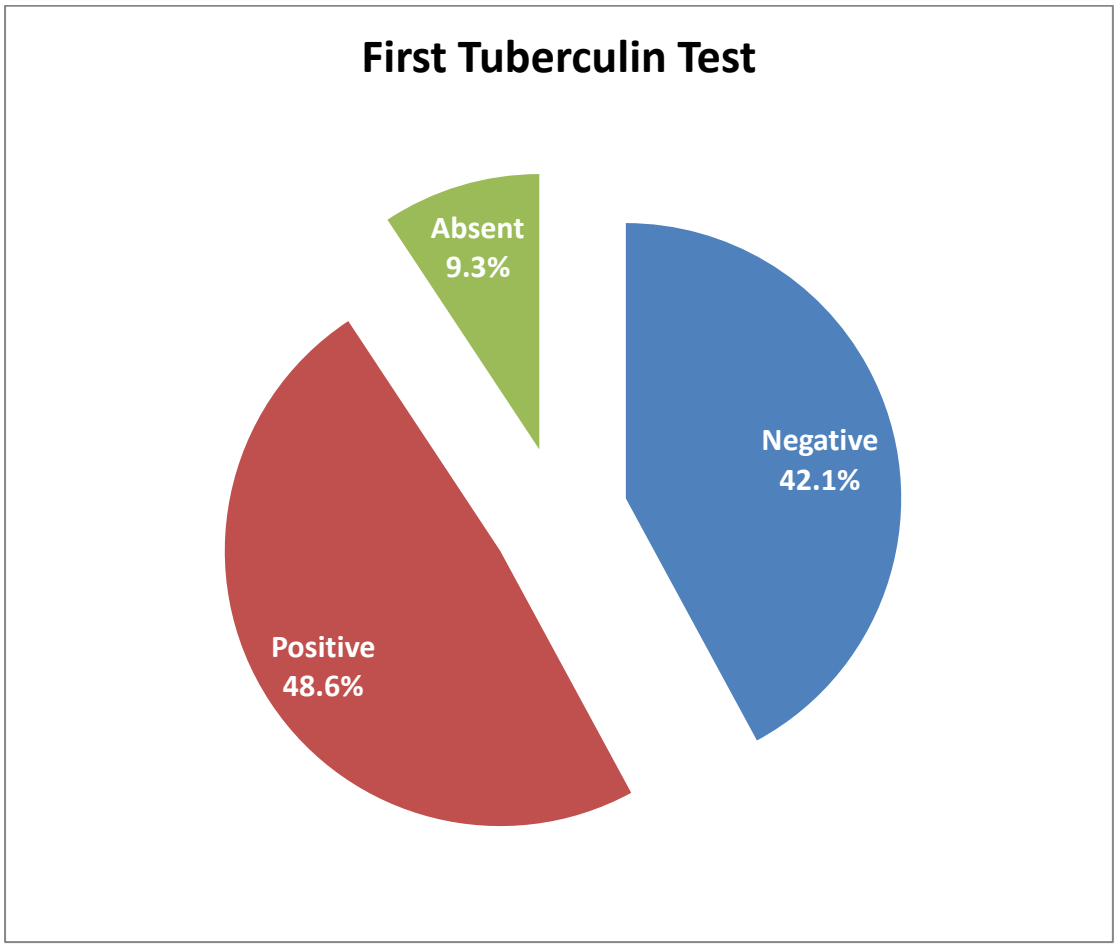
Response ratio was 91%, with 88 children (9%) were absent at time of reading of the test.

Reactors (> 10 mm) ⟶ 48.6% of the total sample.

(Prevalence of TB infection)

Non reactors (< 10mm) ⟶ 41.2%.

Figure (8)



Distribution of studied group according to 1st TST

Table (9): Comparison of first tuberculin test in different age groups:

Age	First Tuberculin Test					
	Negative		Positive		Total	
	No.	%	No.	%	No.	%
6-<8	195	45.1%	237	54.9%	432	100.0%
8-<10	66	45.2%	80	54.8%	146	100.0%
10-14	139	48.9%	145	51.1%	284	100.0%
Total	400	46.4%	462	53.6%	862	100.0%

$X^2 = 1.1$ $p>0.05$

Table (9) shows the relation between the prevalence of tuberculosis infection (tuberculin reactors) and different age groups.

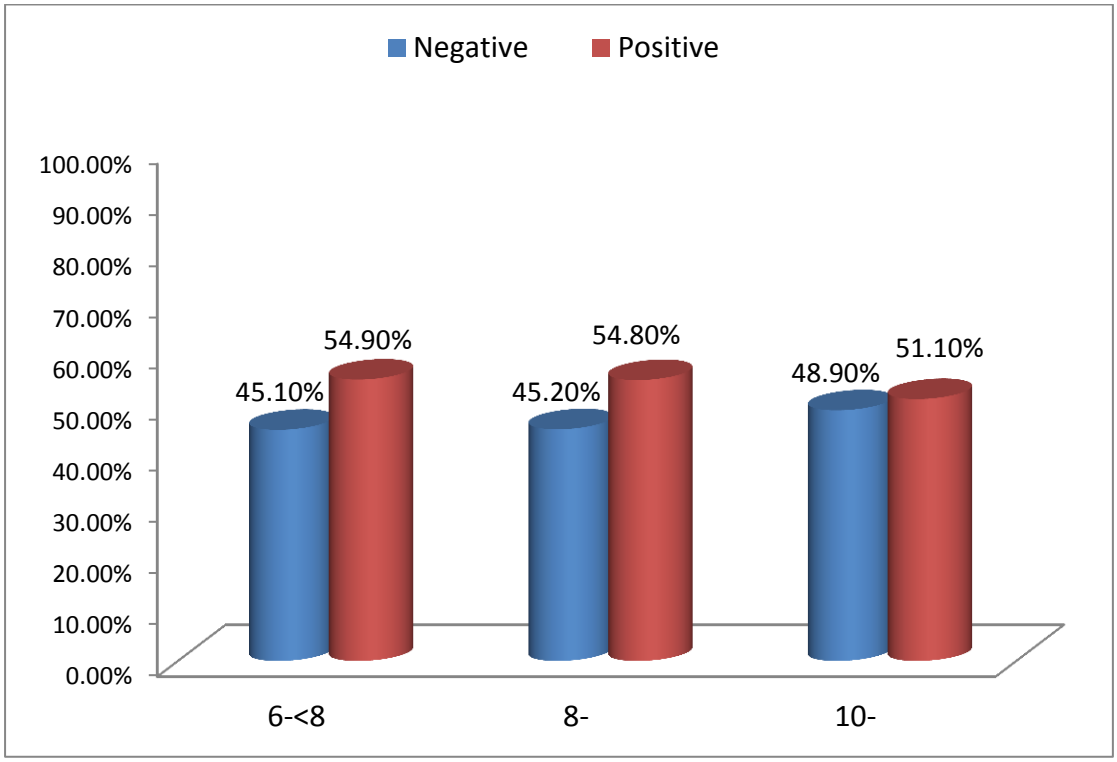
There was no significant difference ($p>0.05$) in infection prevalence with change of age in studied population.

6-8 years ⟶ 54.9%

8-10years ⟶ 54.8%

10-14 years ⟶ 51.1%

Figure (9)



Comparison of 1st TST in different age groups

Table (10): Comparison of first tuberculin test according to sex:

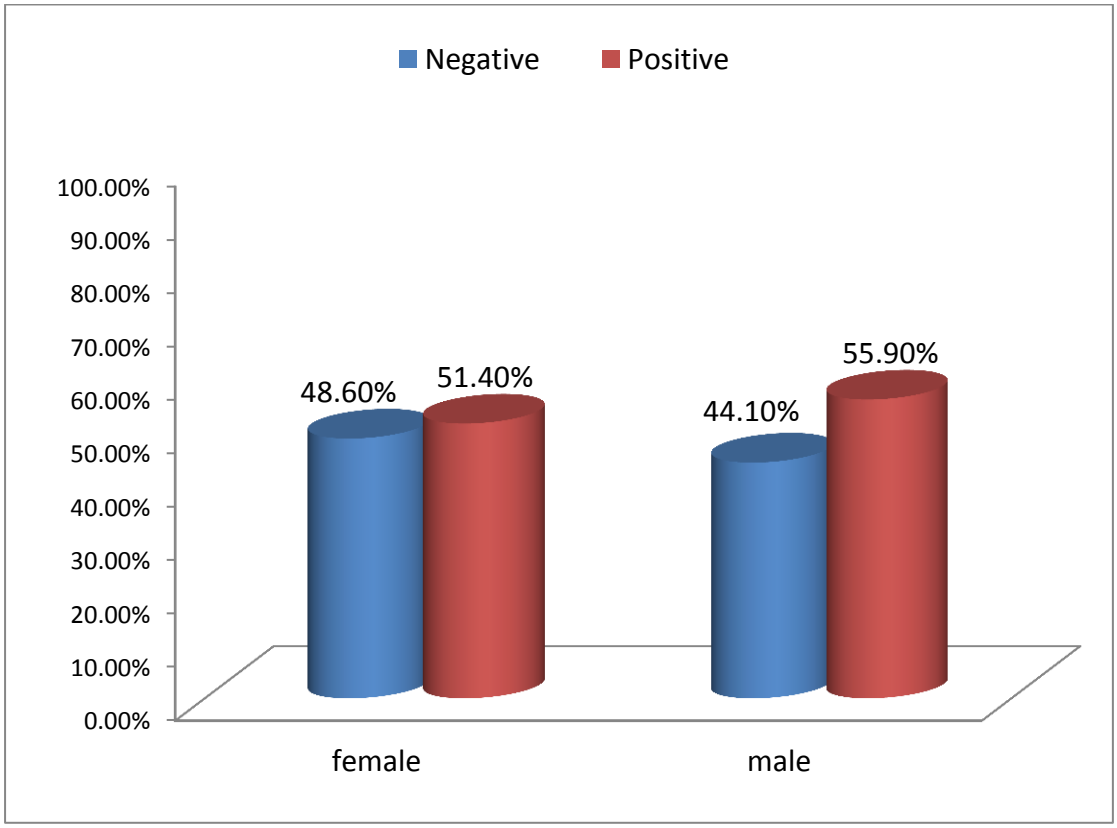
Sex	First Tuberculin Test					
	Negative		Positive		Total	
	No.	%	No.	%	No.	%
Female	214	48.6%	226	51.4%	440	100%
Male	186	44.1%	236	55.9%	422	100%
Total	400	46.4%	462	53.6%	862	100%

$X^2 = 1.8$ $p>0.05$

Table (10) shows the relation between the prevalence of tuberculosis infection (tuberculin reactors) and gender.

Statistically insignificant difference ($p>0.05$) in tuberculosis prevalence was present between males (55.9%) and females (51.4%) in the studied group.

Figure (10)



Comparison of 1st TST according to sex

Table (11): Comparison of first tuberculin test according to BCG status:

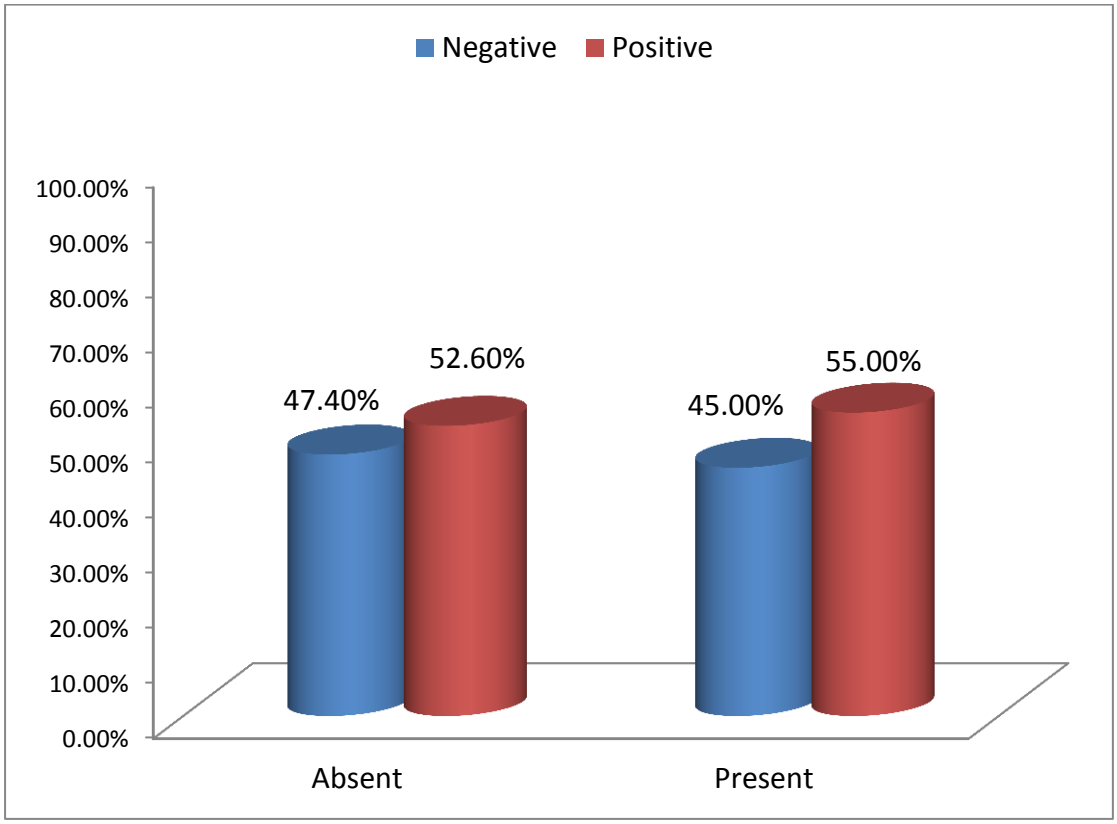
BCG Scar	First Tuberculin Test					
	Negative		Positive		Total	
	No.	%	No.	%	No.	%
Absent	240	47.4%	266	52.6%	506	100%
Present	160	45.0%	196	55.0%	356	100%
Total	400	46.4%	462	53.6%	862	100%

$X^2 = 67.4$ $p>0.05$

Table (11) shows the change of prevalence of tuberculosis in the studied population in relation to the BCG status.

BCG vaccinated group (55%) had statistically insignificant higher prevalence than non-vaccinated group (52.6%).

Figure (11)



Comparison of 1st TST according to BCG status

Table (12): Distribution of studied group according to 2nd tuberculin test:

Result	No.	%
Negative	311	77.8%
Positive	3	0.7%
Total	314	78.5%
Absent	86	21.5%

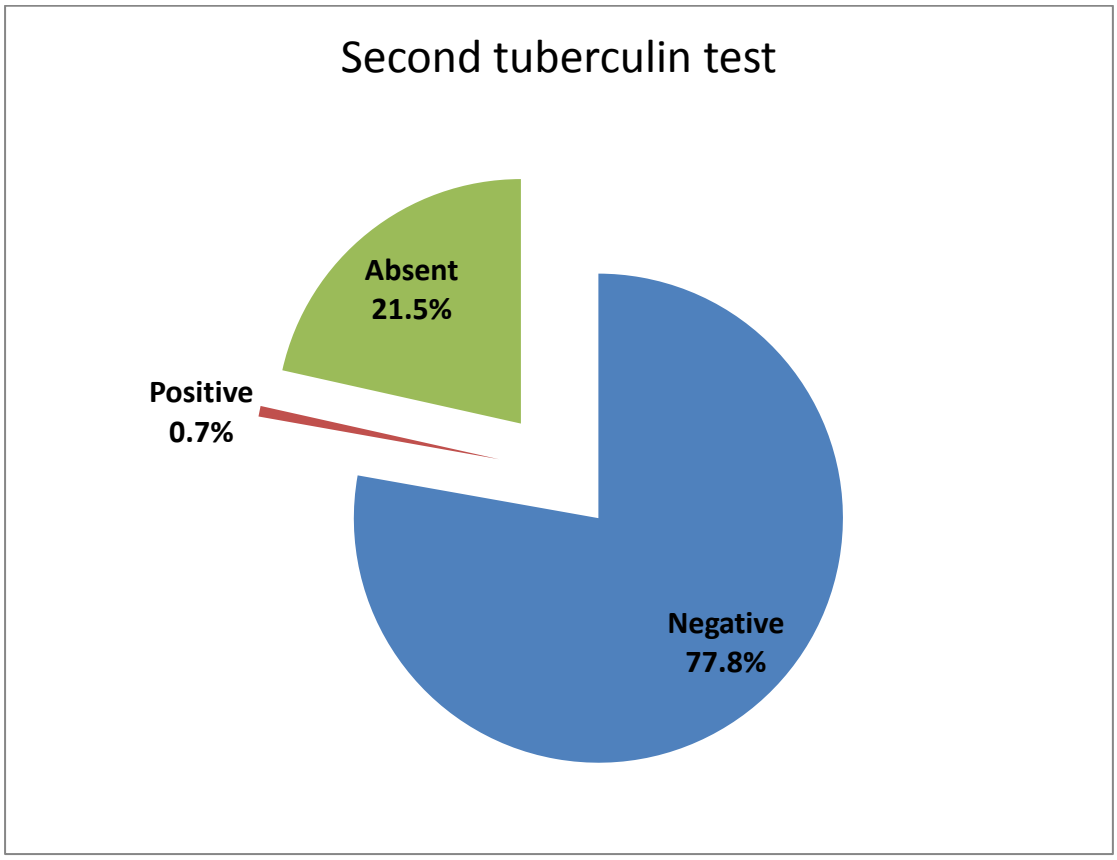
Table (12) shows the distribution of results of the second tuberculin test performed in children found non reactors in the previous test:

77.8% ⟶ remained negative (< 10mm).

0.7% ⟶ converted from negative to positive (>10mm).

86 children (21.5%) were absent at time of reading.

Figure (12)



Distribution of studied group according to 2nd TST

Table (13): Comparison of 2nd tuberculin test in different age groups:

Age	2nd Tuberculin Test					
	Negative		Positive		Total	
	No.	%	No.	%	No.	%
6-<8	158	100.0%	0	0%	158	100.0%
8-<10	99	99.0%	1	1.0%	100	100.0%
10-14	54	96.4%	2	3.6%	56	100.0%
Total	311	99.0%	3	1.0%	314	100.0%

$X^2 = 5.7$ P>0.05

Table (13) shows different conversion rates (2nd TST > 10mm) in different age groups:

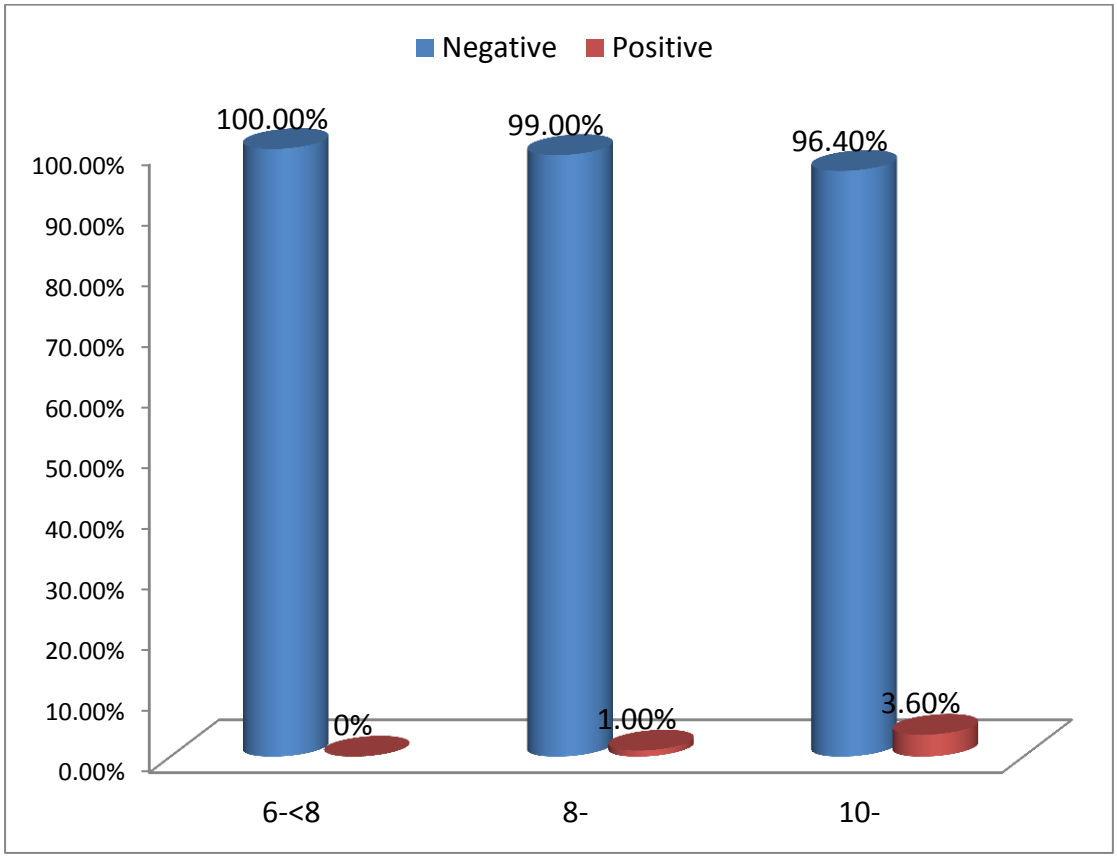
6-8 years ⟶ 0% converted.

8-10 years ⟶ 1% converted.

10-14 years ⟶ 3.6% converted.

The difference was statistically insignificant (p>0.05).

Figure (13)



Comparison of 2nd TST in different age groups

Table (14): Comparison of second tuberculin test according to sex:

Sex	2nd tuberculin test					
	Negative		Positive		Total	
	No.	%	No.	%	No.	%
F	174	100%	0	0%	174	100%
M	137	97.8%	3	2.2%	140	100%
Total	311	99.0%	3	1.0%	314	100%

$X^2 = 3.8$ $p>0.05$

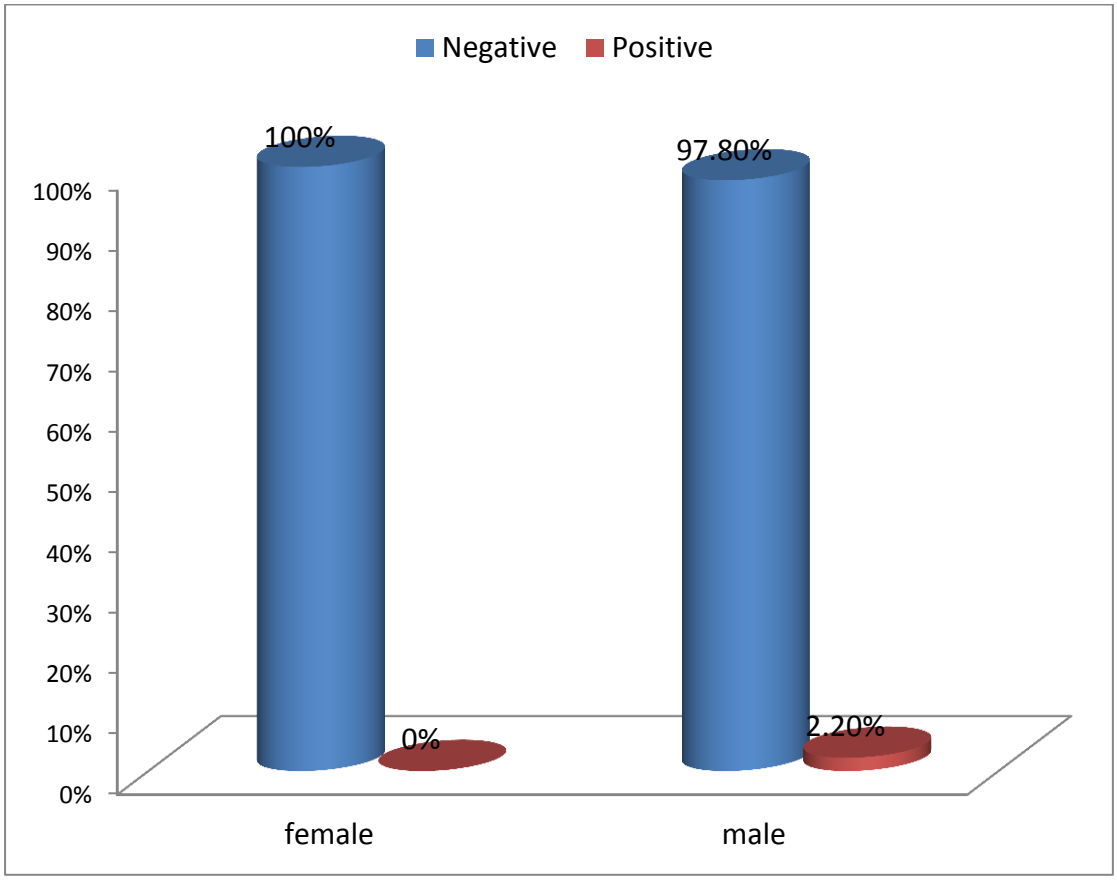
Table (14) shows the relation between the conversion rate and sex in studied group:

Females ⟶ 0%

Males ⟶ 2.2%

} the difference was statistically insignificant.

Figure (14)



Comparison of 2nd TST according to sex

Table (15): comparison of second tuberculin test according to BCG:

BCG	Second Tuberculin Test					
	Negative		Positive		Total	
	No.	%	No.	%	No.	%
Negative	229	98.7%	3	1.3%	232	100.0%
Positive	82	100.0%	0	0%	81	100.0%
Total	311	99.0%	3	1.0%	314	100.0%

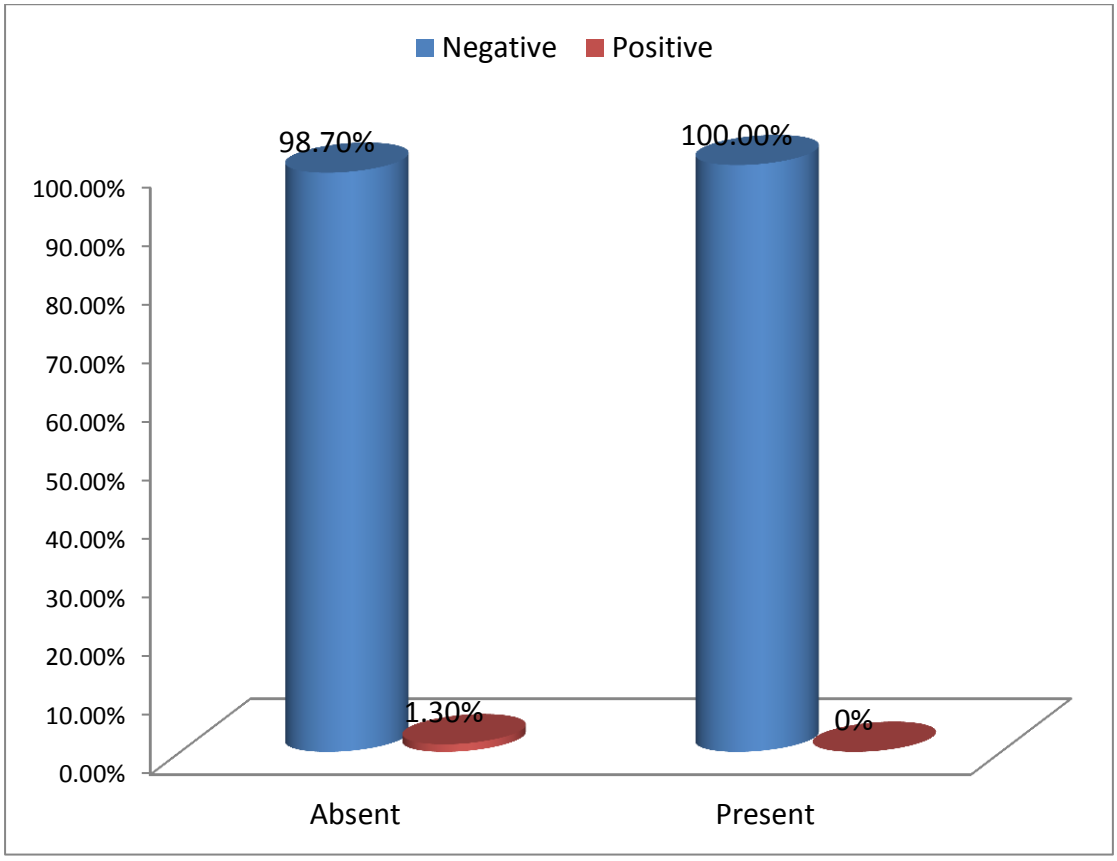
$X^2 = 1.1$ $p>0.05$

Table (15) shows the difference in conversion rate with different BCG status:

Non BCG vaccinated > BCG vaccinated.

(1.3%) (0%)

Figure (15)



Comparison of 2nd TST according to BCG

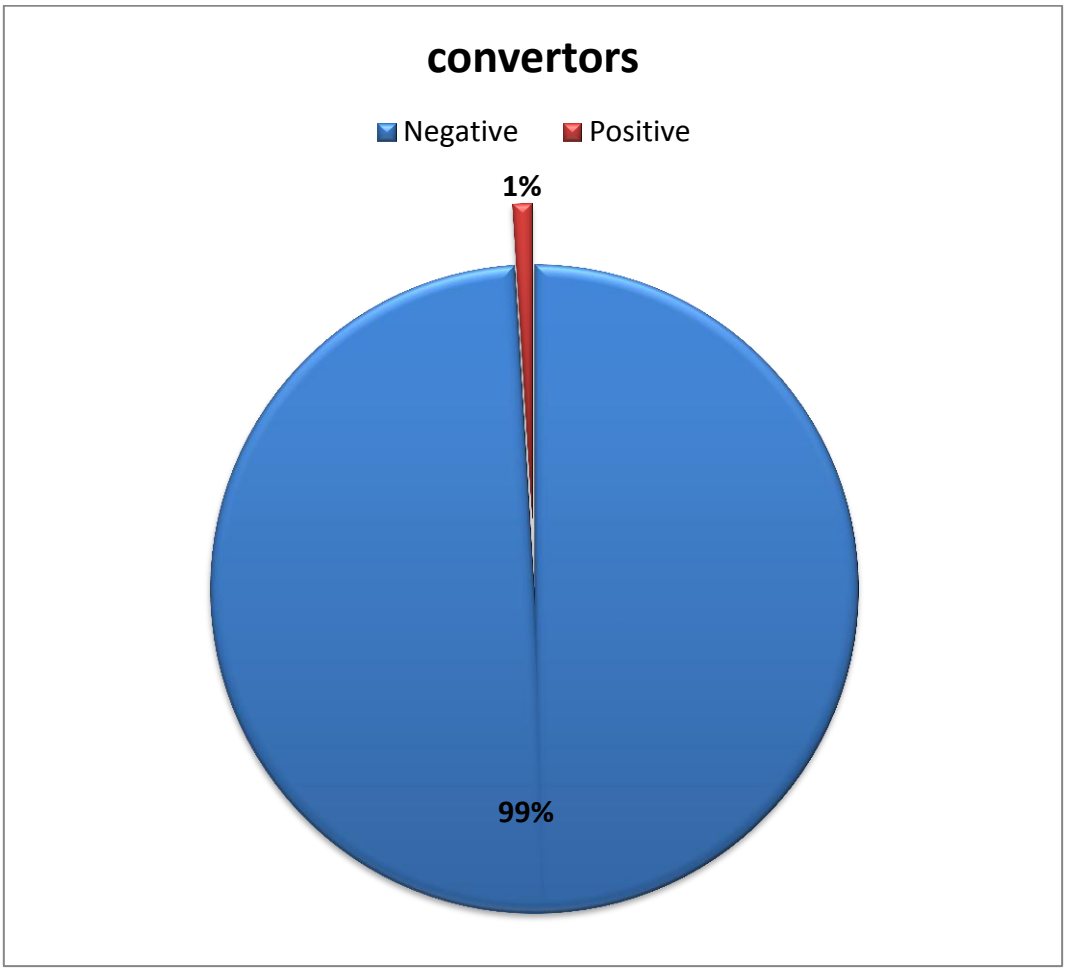
Table (16): Convertors from negative to positive (ARI):

	No.	%
Convertors	3	0.96

Table (16) shows the number and percent of children who converted from a negative result (< 10mm) in the first tuberculin test into a positive result (> 10mm) in the second one, in relation to the total number of children tested and read in the later test. This represented the annual risk of tuberculosis infection in the studied group.

$$\boldsymbol{ARI = \frac{(3)}{(314)} \times 100 = 0.96\%}$$

Figure (16)



Convertors from negative to positive (ARI)