

## RESULTS

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As mentioned before 285 school children were included in this study. They were classified into 3 groups:

Group A : 15 cases with chest trouble and were exposed to passive smoking.

Group B : 114 cases of apparent healthy children exposed to passive smoking of the parents.

Group C : 156 control cases of healthy children not exposed to passive smoking.

In table (1) which is concerned with age distribution of the studied groups revealed that :-

(i) A total of 39 children corresponding to 13.68% were present in age group 6 years. They were divided into:

group A containing 6 (40%).

group B       "       4 (3.51%).

group C       "       29 (18.59%).

(ii) A total of 92 children corresponding to 32.16% were present in age group 8-10 years.

They were distributed into:

group A containing 4 (26.67%).

group B " 40 (35.09%).

group C " 48 (30.77%).

(iii) As for the third group 154 children were present  
in age group 10-12 years corresponding to 54.43%.

They were distributed into:

group A containing 5 (33.33%).

group B " 70 (61.40%).

group C " 79 (50.64%).

Table (I): Age distribution of the studied groups.

Age group Year	Studied groups							
	Group A		Group B		Group C		Total	
	No.	%	No.	%	No.	%	No.	%
6- 8	6	40.0	4	3.51	29	18.59	39	13.68
8- 10	4	26.67	40	35.09	48	30.77	92	32.16
10 -12	5	33.33	70	61.40	79	50.64	154	54.03
Total	15	100.00	114	100.00	156	100.00	285	100.00

N.B.:-

Group A = Cases exposed to passive smoking.

" B = Normal children exposed to passive smoking.

" C = " " Non exposed to passive smoking.

 $\chi^2$  22.163

dif 4

 $P < 0.05$

Table (2): Shows sex distribution of the studied cases and their control.

A total of 156 males which correspond to 54.73% distributed into:

11 males in group A (7.33%).

66 " " " B (57.89%).

79 " " " C (50.64%).

129 females representing 45.26% distributed into:

4 females in group A (26.66%).

48 " " " B (42.10%).

77 " " " C (49.35%).

Table (3): Shows: Distribution of exposed children to smoking in relation to heaviness of smoking habits.

The total number of children was 129 divided into:

(i) 58 children exposed to mild grade of smoking which is less than 10 cigarette per day (45%) distributed into:-

(a) 5 children in group A (33.33%).

(b) 53 " " " B (46.5%).

Table (2): Sex distribution of the studied cases  
and the control.

Sex	Studied group							
	Group A		Group B		Group C		Total	
	No.	%	No.	%	No.	%	No.	%
Males	11	73.33	66	57.89	79	50.64	156	54.73
Females	4	26.66	48	42.10	77	49.35	129	45.26
Total	15	100.0	114	100.0	156	100.0	285	100.0

$$\chi^2 \quad 3.608$$

dif 2

$$P > 0.05$$

(ii) 45 children exposed to moderate grade of smoking  
(10-20) cigarette/day (34.8%) distributed into:

7 children in group A (46.7%).

38 " " " B (33.3%).

(iii) 26 children exposed to heavy grade of smoking  
(20 +) or more cigarette/day (20.25%) distributed  
into:

3 children in group A (1.20%).

23 " " " B (20.2%).

Table (3): Distribution of exposed children to smoking  
in relation to heaviness of smoking habits.

Grade of smoking No. of Cigs day	Studied groups					
	Group A		Group B		Total	
	No.	%	No.	%	No.	%
Mild < 10	5	33.3	53	46.5	58	45.0
Moderate 10-20	7	46.7	38	33.3	45	34.8
Heavy > 20+	3	1.20	23	20.2	26	20.25
Total	15	100.0	114	100.0	129	100.0

$\chi^2$  1.186

dif 2

P > 0.05

In table (4) we deal with symptoms related to exposure to passive smoking among groups A and B. Ten different respiratory symptoms and illness were looked into:

- (i) Children complaining from chest pain. There were 9 children representing 60% in group A while group B 5 children representing 4.38%.
- (ii) 13 children (86.6%) in group A complained from coughs while 29 children in group B (25.43%).
- (iii) As for expectoration, 12 (80%) in group A and 18 (15.78%) in group B.
- (iv) Children suffering dyspnea were 9 (60%) in group A and 6 (5.25%) in group B.
- (v) One of the lowest results were children complaining from chest wheeze. There were none in group B. But in group A 5 children representing 33.3%.
- (vi) The eye was the other organ of importance to us in this study. Both irritation and lacrimation were considered. As for irritation, in group A, 12 (80%) and in group B 32 children (28.07%). Lacrimation: 3 children suffered (20%) in group A while 28 children (24.56%) in group B.



(vii) Going down the table we come to Ruining nose were again one of the lowest results. Here group A had no complains while group B, 12 children representing (10.52).

(viii) Sore throat: 6 children in group A (40%) while group B 22 children 19.29%.

(ix) Also asthmatic attacks very few complains from it were only 4 children in group A (26.6%) and one child in group B (0.877%).

Table (4): Symptoms related to exposure to passive smoking among group A & B (exposed groups).

Respiratory symptoms and illness of exposure to passive smoking	A		B	
	No.	%	No.	%
Chest:				
Chest pain	9	60.0	15	4.38
Cough	13	86.6	29	25.43
Expectoration	12	80.0	18	15.78
Dyspnea	9	60.0	6	5.26
Chest wheeze	5	33.3	zero	zero
Other organs:				
irritation	12	80.0	32	28.07
Eye lacremation	3	20.0	28	24.56
Runing nose	zero	zero	12	10.52
Sore throat	6	40	22	19.29
Asthmatic attacks	4	26.6	one	0.877

Table (5):-

In table (5) we are dealing with statistical comparison between group A and group B as regard PEFR in different age groups.

There is no significant difference between groups A & B at age group 6-8 years as regards the mean actual PEFR was  $135 \pm 13.78$  for A and  $157.5 \pm 35.939$  for B ( $P > 0.05$ ).

While there is a significant difference as regards predicted values between A B which were  $80.1 \pm 6.3$  for group A and  $92.4 \pm 3.4$  for group B ( $P < 0.05$ ).

As for age group 8-10 years we can conclude that there is a high significant difference between groups A & B as regards mean actual and predicted values of PEFR. The following results were  $150 \pm 16.33$  for (A),  $246.75 \pm 28.296$  for (B) ( $P < 0.001$ ) and  $77.8 \pm 1.04$  for (A),  $94.6 \pm 4.5$  for (B) ( $P < 0.0001$ ) respectively. There is a high significant difference in age group B (10-12) years as regards the mean actual and predicted values between group A and B were  $185 \pm 53.15$  for (A),  $278.43 \pm 36.74$  for (B) ( $P < 0.001$ ),  $68.5 \pm 2.12$  for (A) and  $19.6 \pm 3.22$  for (B) ( $P < 0.001$ ) respectively.

Table (5): Statistical comparison between group A (cases with chest trouble) and group B (Normal children exposed to passive smoking as regard PEER indifferent age group.

Age group Compared group		6-years		8-		10+	
		P. F. R.					
		Actual	% pred.	Actual	% pred.	Actual	% pred.
Group A Cases with trouble	No	6	6	4	4	5	5
	Mean	135	80.1	150	77.8	185	63.5
	S.D.	13.78	6.3	16.33	1.04	53.15	2.12
Group B Control exposed to smoking	No	4	4	40	40	70	70
	Mean	157.4	92.4	246.75	94.6	278.43	91.6
	+S.D.	35.939	3.4	28.296	4.5	36.74	3.22
t		1.195	3.989	9.223	19.069	3.866	18.780
p		> 0.05 N.S.	< 0.05 .S.	< 0.001 .S.	< 0.0001 .S.	< 0.001 .S.	< 0.001 .S.

PEFR = Pe le expiratory flow rate

Table (6): Shows:

Statistical comparison between group A and group C as regard PEFR in different age group.

There is difference of high statistical significant in group C at age group 6-8 years as regard mean actual and predicted values between group A and group C were  $(135 \pm 13.78)$  for (A) and  $(185.71 \pm 33.35)$  for (C) ( $P < 0.001$ ) and  $(80.1 \pm 6.3)$  for (A) and  $101.86 \pm 3.145$  for (C) ( $P < 0.0001$ ) respectively.

There is difference of high statistical significant in group C at age group 8-10 years as regard mean actual and predicted values between group A and group C where:  $150 \pm 16.33$  for (A)  $251.28 \pm 44.189$  for (C) ( $P < 0.0001$ ) and  $77.8 \pm 1.04$  for (A)  $102.26 \pm 3.048$  for (C) ( $P < 0.0001$ ) respectively.

There is difference of high statistical significant in group C at age group 10-12 years as regard mean actual and predicted values between group A and group C where:  $(185 \pm 53.15)$  for A ,  $(329 \pm 36.2)$  for C , ( $P < 0.001$ ) and  $(68.5 \pm 2.12)$  for A ,  $(102.22 \pm 3.099)$  for C, ( $P < 0.0001$ ).

Table (6): Statistical comparison between group A (cases with chest trouble) and C (Normal children, non exposed to smoking as regard PEER indifferent age groups.

Age group Compared groups		6-year		8-		10+	
		P. F. R.					
		Actual	% pred.	Actual	% pred.	Actual	% pred.
Group A	No.	6	6	4	4	5	5
	Mean	135	80.1	150	77.8	185	68.5
	+S.D.	13.78	6.3	16.33	1.04	53.15	2.12
Group C	No.	29	29	48	48	79	79
	Mean	185.71	101.86	251.28	102.26	329	102.22
	+S.D.	33.35	3.145	44.189	3.048	36.2	3.099
t		6.061	8.242	9.776	35.917	5.973	33.386
p		< 0.001	< 0.0001	< 0.0001	< 0.0001	< 0.001	< 0.0001

Table (7): Shows:

Statistical comparison between group B and group C as regard PEFR in different age group.

There is no difference of statistical significant between group B and group C at age group 6-8 years as regard the mean actual PEFR where:

157.5 $\pm$ 35.939 for group (B) and 185.71 $\pm$ 33.35 for (C) ( $P > 0.05$ ).

But there is difference of high statistical significant in group C as regard predicted values between group B and group C where:

92.4 $\pm$ 3.4 for (B) and 101.86 $\pm$ 145 for (C) and ( $P < 0.001$ ).

There is no difference of statistical significant between group B and group C at age group (8-10 years) as regard the mean actual PEFR where:

246.75 $\pm$ 28.296 for (B) and 251.28 $\pm$ 44.189 for (C) ( $P > 0.05$ ).

But there is difference of high statistical significant in group C as regard predicted values between group B and group C where:

94.6 $\pm$ 4.5 for (B) and 102.26 $\pm$ 3.04 for (C) ( $P < 0.0001$ ).

There is difference of high statistical significant in group C at age group (10-12 years) as regard the mean actual and predicted values between group B and C where:

278.43 $\pm$ 36.74 for (B) and 329 $\pm$ 36.2 for (C) ( $P < 0.0001$ ).

91.6 $\pm$ 3.22 for (B) and 102.22 $\pm$ 3.099 for (C) ( $P < 0.0001$ ) respectively.

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Table (7): Statistical comparison between group B (Normal children exposed to passive smoking and group C (Normal children Non exposed to passive smoking) as regard ~~PER~~ indifferent age group.

Age groups Compared groups		6-years		8-		10+	
		P. F. R.					
		Actual	% pred.	Actual	% pred.	Actual	% pred.
Group B	No.	4	4	40	40	70	70
	Mean	157.5	92.4	246.75	94.6	278.43	91.6
	+S.D.	35.939	3.4	28.296	4.5	36.74	3.22
Group C	No.	29	29	48	48	79	79
	Mean	185.71	101.86	251.28	102.26	329	102.22
	+S.D.	33.35	3.145	44.189	3.048	36.2	3.099
t		1.484	5.264	0.582	9.163	8.456	20.46
p		>0.05 N.S.	<0.001 .S.	>0.05 N.S.	<0.0001 .S.	<0.0001 .S.	<0.0001 .S.