

Pattern of scalp affection in primary school children in Sohag, Upper Egypt

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Background and Objectives: Scalp affection is common in children especially in school children. The objective of this study was to assess the prevalence and pattern of scalp affection in primary school children in Sohag Province, Upper Egypt during educational year from September 2009 to June 2010.

Patients and Methods: This study included pupils of different age group between 6 -12 years in five Primary schools in Sohag Province. Data collected from all subjects included sociodemographic data, environmental and housing data. Complaint, medical history, family and past history were obtained from all pupils and examination of the scalp to detected lesions in school pupils.

Results:

- 829 of 3100 pupils (26.7%) had scalp affection; Pediculosis capitis 356(11.5%), Cicatricial alopecia 163(5.3%), Dandruff 147(4.7%), Tinea capitis 96(3.1%), Impetigo 41(1.3%), Alopecia areata 13 (0.4%), Hair loss 10 (0.3%) and Psoriasis 2 (0.1%) **[Fig 1]**.
- 23.1% Pupils were affected by one scalp disease, while 3.6% affected by two scalp diseases **[Fig 2]**.
- The highest prevalence rate of scalp affection (4.8%) was observed in age group (11-12) years **[Fig 3]**.
- The highest prevalence rate of scalp affection was observed in girls 15.3% compared to boys 11.4% **[Fig 4,Tab 1]**.
- Scalp affection among urban pupils 23.6% compared to rural pupils 3.1% **[Fig 5 Tab 2]**.
- The lowest prevalence rate of scalp affection was detected among pupils belonging to high socio-economic class 2.4%, while the prevalence rate 12.3% was observed in low socio-economic class and the prevalence rate 12% was observed in middle socio-economic class **[Fig 6,Tab 3]**.
- The highest prevalence rate of scalp affection was among pupils belonging to a large sized family (>5 persons) 14.8% when compared to one belonging to a smaller family (≤ 5 persons) 11.9% **[Fig 7,Tab 4]**.
- The highest prevalence rate of scalp affection was among pupils washing hair 1-3 per week 17% while the lowest prevalence rate was detected among pupils washing hair more than 4-6 per week 9.7% **[Fig 8,Tab 5]**.

Conclusions: This study creates awareness and knowledge about the prevalence and patterns of scalp affection in primary school children in Sohag Province. Child education program could be advocated for propagating hygienic habits in schools. Good training of physician and community health workers in diagnosing and managing common dermatological conditions. It is recommended to increase knowledge, attitude and practice among children regarding scalp diseases in school health programs.

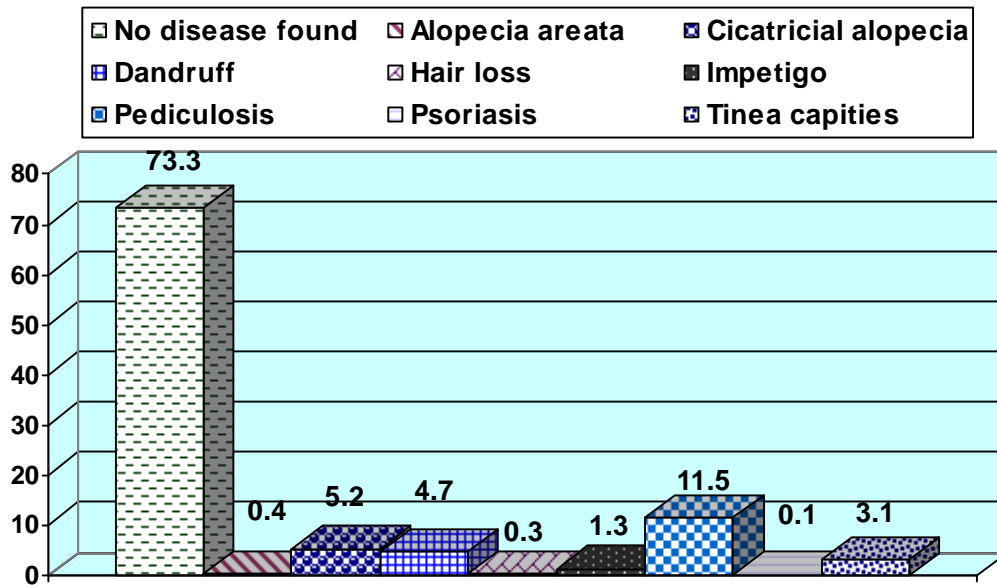


Figure (1): percentage distribution of scalp affection in primary school children

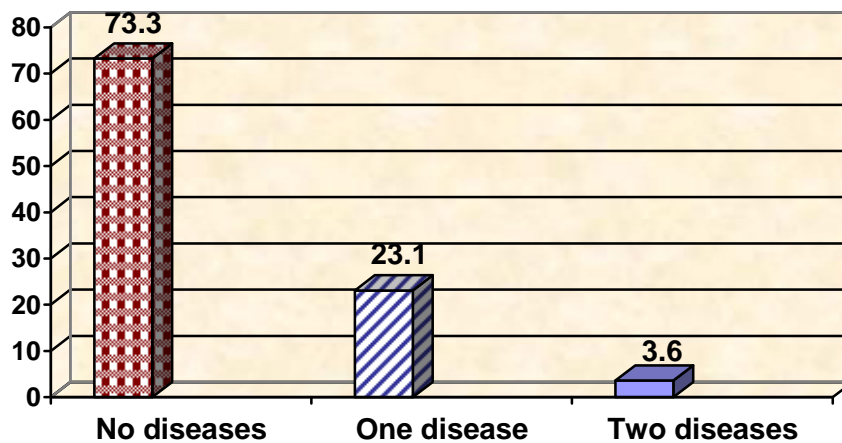


Figure (2): percentage distribution of the studied cases according to No. of scalp affection

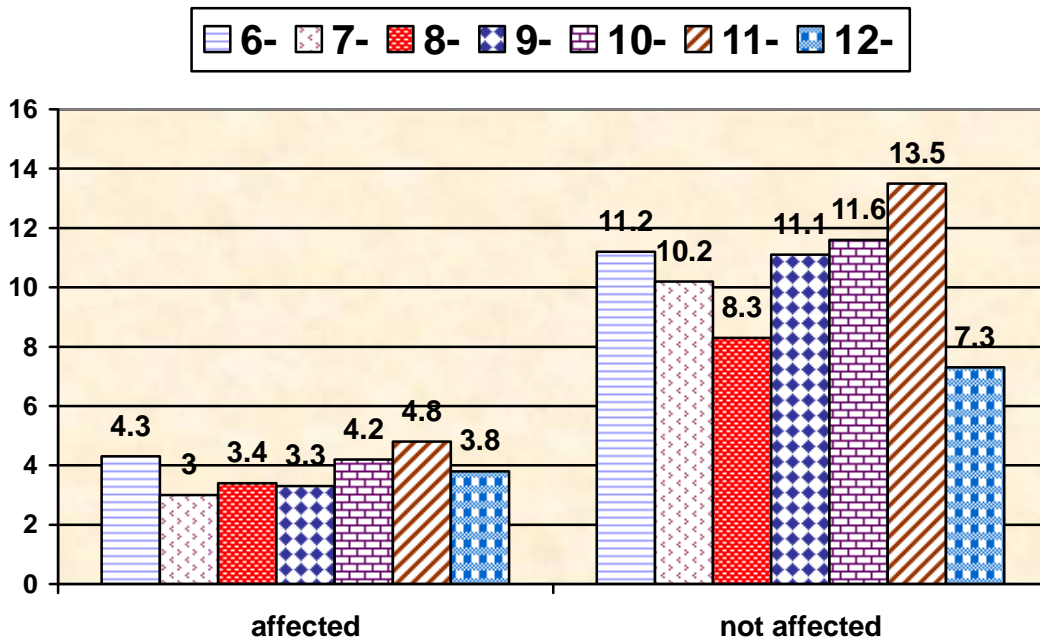


Figure (3): Relation between age group and scalp affection in the studied pupils

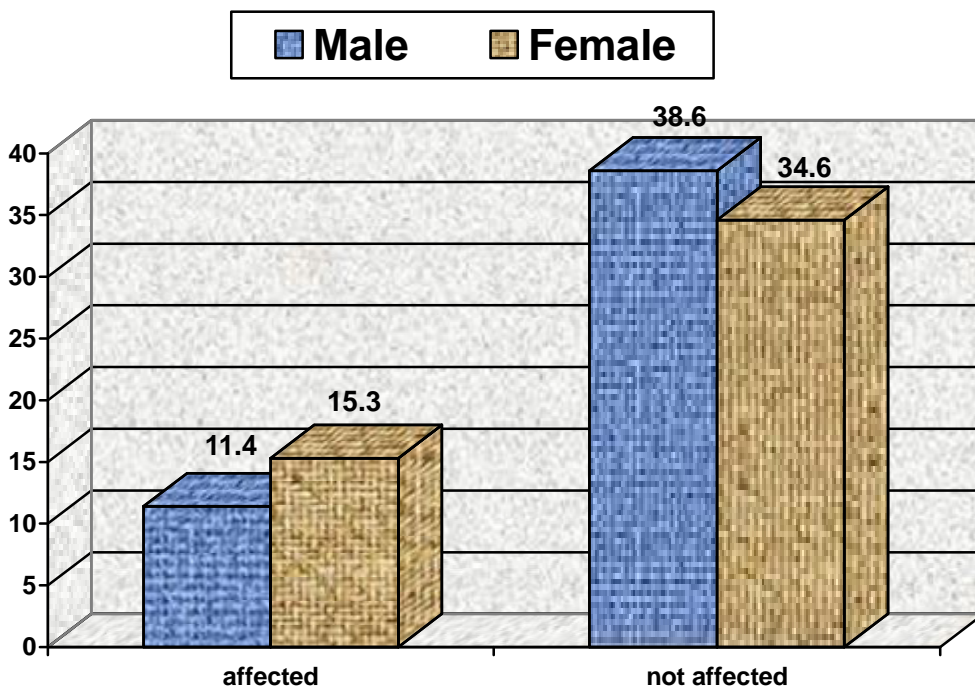


Figure (4): percentage distribution of the relation between scalp affection and sex

Table 1: Pattern of scalp affection according to sex:

		Sex		Total
		Male	Female	
No diseases	No.	1197	1074	2271
	%	38.6	34.7	73.3
Alopecia areata	No.	10	3	13
	%	0.3	0.1	0.4
Cicatracial alopecia	No.	149	14	163
	%	4.8	0.5	5.3
Dandruff	No.	52	95	147
	%	1.7	3.1	4.7
Impetigo	No.	16	25	41
	%	0.5	0.8	1.3
Pediculosis	No.	41	315	356
	%	1.3	10.2	11.5
Psoriasis	No.	0.0	2	2
	%	0.0	0.1	0.1
Tinea capitis	No.	85	11	96
	%	2.7	0.4	3.1
Hair loss	No.	1	9	10
	%	0.0	0.3	0.3
Total	No.	1551	1549	3100
	%	50.0	50.0	100.0
P value		0.000		
Pearson chi-square		23.52		

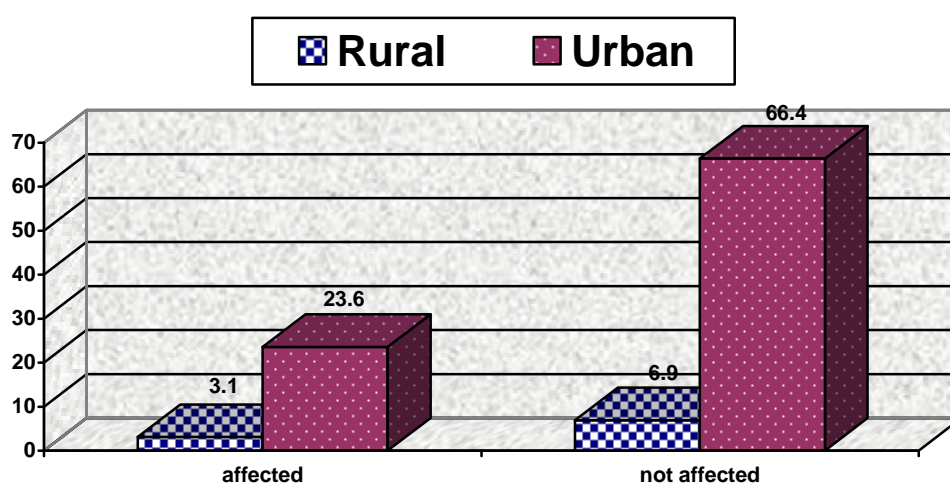


Figure (5): Percentage distribution of the relation between scalp affection and residence

Table 2: Pattern of scalp affection according to residence:

Diagnosis		Residence		Total
		Rural	Urban	
No diseases	No.	213	2058	2271
	%	6.9	66.4	73.3
Alopecia areata	No.	1	12	13
	%	0.0	0.4	0.4
Cicatricial Alopecia	No.	19	144	163
	%	0.6	4.7	5.3
Dandruff	No.	15	132	147
	%	0.5	4.3	4.7
Impetigo	No.	4	37	41
	%	0.1	1.2	1.3
Pediculosis	No.	42	314	356
	%	1.4	10.1	11.5
Psoriasis	No.	0	2	2
	%	0.0	0.1	0.1
Tinea capitis	No.	16	80	96
	%	0.5	2.6	3.1
Hair loss	No.	0	10	10
	%	0.0	0.3	0.3
Total	No.	310	2790	3100
	%	10.0%	90.0%	100.0%
P value		0.274		
Pearson chi-square		8.712		

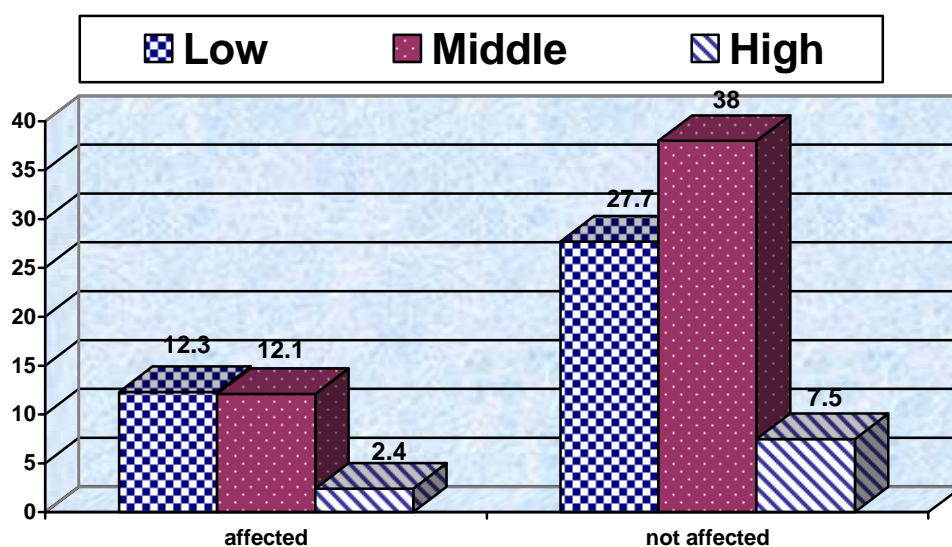


Figure (6): Percentage distribution of the relation between scalp affection and socioeconomic status

Table 3: Pattern of scalp affection according to socioeconomic status:

Diagnosis		Socioeconomic status			Total
		low	Middle	High	
No diseases	No.	859	1179	233	2271
	%	27.7	38.0	7.5	73.3
Alopecia areata	No.	3	8	2	13
	%	0.1	0.3	0.1	0.4
Cicatricial Alopecia	No.	63	81	19	163
	%	2.1	2.6	0.6	5.3
Dandruff	No.	65	69	13	147
	%	2.1	2.2	0.4	4.7
Impetigo	No.	18	22	1	41
	%	0.6	0.7	0.0	1.3
Pediculosis	No.	177	152	27	356
	%	5.7	4.9	0.9	11.5
Psoriasis	No.	1	1	0.0	2
	%	0.0	0.0	0.1	0.1
Tinea capitis	No.	47	38	11	96
	%	1.5	1.2	0.4	3.1
Hair loss	No.	6	4	0.0	10
	%	0.2	0.1	0.0	0.3
Total	No.	1240	1554	306	3100
	%	40.0	50.1	9.9	100.0
P value		0.008			
Pearson chi-square		30.027			

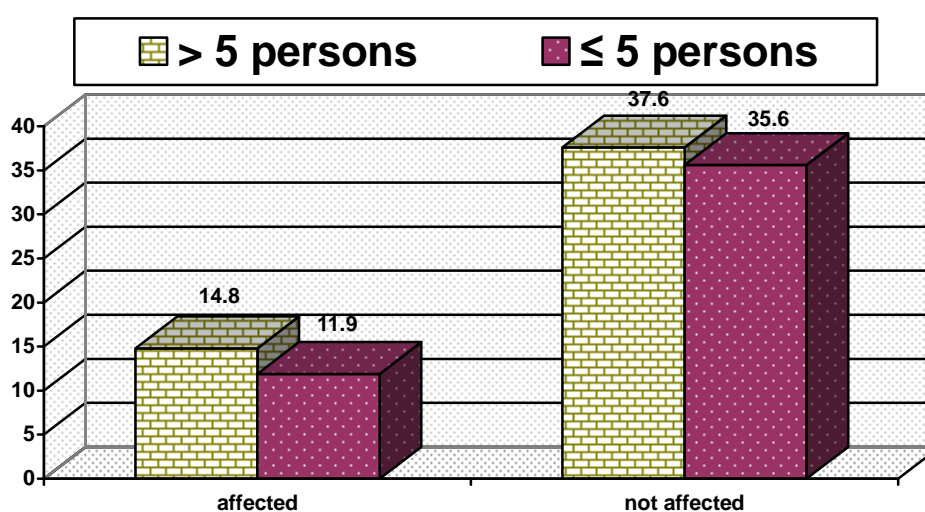


Figure (7): Percentage distribution of the relation between scalp affection and family size

Table 4: Pattern of scalp affection according to family size:

Diagnosis		Family size		Total
		> 5 persons	≤ 5 persons	
No diseases	No.	1166	1105	2271
	%	37.6	35.7	73.3
Alopecia areata	No.	5	8	13
	%	0.2	0.3	0.4
Cicatricial Alopecia	No.	71	92	163
	%	2.3	3.0	5.3
Dandruff	No.	62	85	147
	%	2.0	2.7	4.7
Impetigo	No.	20	21	41
	%	0.6	0.7	1.3
Pediculosis	No.	247	109	356
	%	8.0	3.5	11.5
Psoriasis	No.	2	0	2
	%	0.1	0.0	0.1
Tinea capitis	No.	50	46	96
	%	1.6	1.5	3.1
Hair loss	No.	2	8	10
	%	0.1	0.3	0.3
Total	No.	1625	1475	3100
	%	52.4	47.6	100.0
P value		0.000		
Pearson chi-square		60.62		

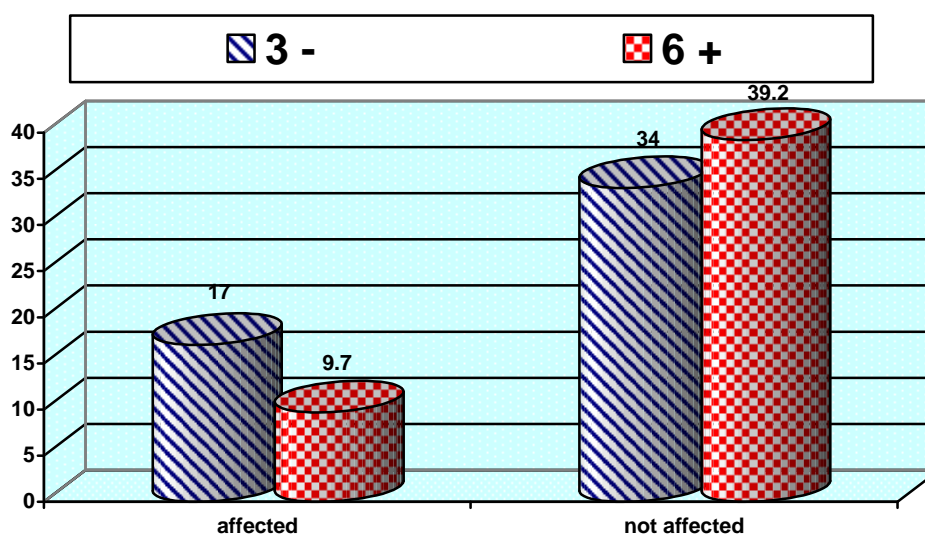


Figure (8): Percentage distribution of the relation between scalp affection and frequency of hair washing/week

Table 5: Pattern of scalp affection according to hair washing per week:

Diagnosis		Frequency of hair washing per week		Total
		1-3 times	4-6 times	
Not diseases	No.	1055	1216	2271
	%	34.1	39.2	73.3
Alopecia areata	No.	5	8	13
	%	0.2	0.3	0.4
Cicatricial alopecia	No.	65	98	163
	%	2.1	3.2	5.3
Dandruff	No.	85	62	147
	%	2.7	2.0	4.7
Impetigo	No.	26	15	41
	%	0.8	0.5	1.3
Pediculosis	No.	280	76	356
	%	9.0	2.5	11.5
Psoriasis	No.	1	1	2
	%	0.0	0.0	0.1
Tinea capitis	No.	59	37	96
	%	1.9	1.2	3.1
Hair loss	No.	6	4	10
	%	0.2	0.1	0.3
Total	No.	1583	1517	3100
	%	51.1	48.9	100.0
P value		0.000		
Pearson chi-square		146.183		