Study of Skin Diseases among Children at Assiut Governorates

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Abstract: Skin diseases are a common cause of morbidity, especially among school children, worldwide. Skin diseases are considered to be the second most common cause for medical consultation for children in rural communities. **The aim** of this study is to identify the most common skin diseases among children patients attending to Dermatology Clinic, Assuit, Egypt. The study was conducted in the Dermatology Clinic at Assuit. This study will be conducted for children less than 18 years who attended to Dermatology Clinic during six months starting from the March 2013 to the end of August 2013. The total numbers of them were 991 children are who suffering from skin diseases and attending for examination and treatment. To collect data A structured interview sheet was used which included the following part: **Part A:** Socio demographic data for children and their parents **Part B:** Includes items related to present and past history of skin diseases, skin examination and medical diagnosis**. Part C**: Socioeconomic scale. **The results of the study reveals that** the two thirds of children (60.3%) aged between (6- 12) years, while only 1.1% of them aged 12 years and more with mean age of SD 6.4+2.9. Nearly two thirds of them (61.9%) were males. Also more than two fifth of them (42.7%) had low level of socioeconomic status. As regard the types of skin disease among children patients, it was found that less than one third of them (29.5%) had favus, while 13.8% of them had tinea and only 0.5% of those had psoriasis disease. **The study concluded that** there is statistically significant difference between laboratory diagnosis and child age, sex, birth order, child education and working condition P= 0.001, P= 0.013, P= 0.001 P= 0.001, P= 0.001 respectively. Also between frequency of positive skin disease and presence of animals in home P= 0.001. **The study recommended that**: Regular visits by nursing staff to rural areas will provide nursing care, referral and health education about the most frequent skin diseases and could control such conditions. Regular health education program about pediatric skin diseases provide for both teachers and parents related socioeconomic factors, overcrowding and hygiene. And encourage mothers to appreciate and utilize health promotion and disease prevention services for their children.
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1. Introduction

The skin has several important functions. It has to protect you against harmful microbes. Prevent you from losing fluids, regulate your body temperature and warm you when something that you touch is too hot or too cold. And it is susceptible to disease. There are several skin diseases that even children risk contracting. Skin diseases are associated with environmental factors and a public health approach is particularly important **(WHO, 2005)**.

Skin diseases are common among children; it is the main cause of morbidity, especially among school children, worldwide (**Mohammed, 2011**). It is often stated that overcrowding and poor living conditions favor the development of many skin diseases. Children are often exposed to climatic and social conditions that predispose them to develop skin infections **(Amin et al., 2011).**

Many factors determine the results of epidemiologic studies on skin diseases. Geographic area, climate, season, socioeconomic status, living conditions and medical resources are the most important factors **(Chen 2008 and Sardana, Mahajan and Sarkar, 2009).**

A major reason for targeting skin diseases in the developing world is that the majority are transmissible and therefore potentially preventable and controllable. Most of the available statistics on the pattern of skin diseases have been based on hospital or private practice, and can provide a very crude indication of true prevalence and incidence in a community, as many social and economic factors affect the decision to seek medical advice **(Abdel-Hafez et al., 2003)**.

We determined the prevalence of skin diseases and associated socioeconomic factors in rural areas. Recently, there has been considerable emphasis on hygiene emphasis on hygiene and socio-economic impact on the incidence of allergies disorders in children. We determined the prevalence of skin diseases in rural areas. The incidence of pediatric dermatological problems varies from one part of the

world to another. Skin diseases, through very common in many developing countries, are not often regarded as a significant health problem **(Ogunbiyi, Owoaje and Ndahi, 2005)**. Even when serious diseases may be heralded by skin changes. The prevalence of skin diseases varies worldwide and information regarding local prevalence of its various causes may help the development of policies towards better management **(PubMed, 2009)**.

Community health nurse and pediatric nurse can influence families, legislator, and communities by teaching about the importance of environmental factors that increase skin diseases include advocacy and family education about methods that decrease exposures to skin infection.

Significance of the study:

The prevalence of skin diseases in the pediatric age group is very high. Different studies have shown cross- sectional prevalence rates ranging from 22.8 to 26.8% (Amin **et al, 2011)**. Skin diseases in children are important health problems and about 20 to 30% of children seen by pediatricians present with problems related directly or indirectly to skin **(Kathem and Rubiay, 2005).**

Aim of The Study:

The aim of the study was to identify the most common skin diseases among children patients attending to Dermatology Clinic, Assuit, Egypt.

Research Questions:

1- What are types of common skin disease among children?
2- What is the Dermatology Clinic rate about skin diseases among children?

2. Subjects and Methods:

Research design:

The Descriptive Cross-sectional Research Design was used in this study.

Setting:

Study was conducted at the Dermatology Clinic and affiliated by Ministry Of Health, Assuit Governorates. This Clinic is only the specialty for Dermatology and served all patients for examination and treatment.

Sample:

A convenient sample of children with skin diseases was used. This study will be conducted for children less than 18 years who attended to Dermatology Clinic during six months starting from the March 2013 to the end the August 2013. The total numbers of them were 991 children are who suffering from skin diseases and attending for examination and treatment.

Tools:

The following tools were used in the current study:

1- A structured interview sheet was developed by the researchers based on a review of relevant literature which included the following part:

Part A: Socio demographic data for children and their parents such as: name, age, address, educational level, residence, and occupation.

Part B: Includes items related to history of skin disease as:-

Present history of skin diseases: included **chief complains:** such as sever itching, sever pain in the skin, loss of hair and erosion of the mucous membrane etc.

- **Onset of skin diseases:** it includes types of diseases, date of starting, duration and frequency of skin diseases.
- Present and past history of skin diseases: it includes questions about previous history of this skin disease, frequency of positive skin disease, and list the name of this disease.
- **Family history of skin diseases**: it includes questions about previous family history of this skin disease, frequency of positive skin disease, and list the name of this disease.
- **Skin examination**: The researchers observed the signs and symptoms of skin lesion through general observation of the skin to observe nature and character of diseases; site of lesion: such as trunk, limbs (upper& lower), head & neck, all the body and genitalia. as white, red, black patches, dryness, boils, abrasion, edema, erosion of the mucous membrane, size and consistency
- **Medical diagnosis** of the skin diseases: it is classified into infectious diseases (allergic diseases and autoimmune diseases). The infectious diseases such as bacterial, viral, fungal and parasitic. The classification of the bacterial diseases are caused by one or two groups of organisms, namely staphylococci and streptococci as impetigo, cellulites, intertrigo, fungal infection as tinea, viral infection as herpes zoster, parasitic infection as scabies and pediculosis and non-infectious diseases such as (autoimmune diseases such as vitiligo. Allergic diseases such as diaper dermatitis.
    - **Part C:** Socioeconomic scale modified by **Fahmy and El Sherbini (1983).**
    - All these data were scored for a total socioeconomic. The socio- economic scoring in this study sample consisted of the score of occupation, education, and social class; the

latter included the income, crowding index, and sanitation score.

- Total socioeconomic score = 23.
- Scores 19+ are considered of high socioeconomic standard.
- Scores 15-<19 are considered of middle socioeconomic standard.
- Scores <15 are considered of low socioeconomic standard.

- **Procedure:**

The investigator interviewed the children / or parents at the Dermatology Clinic, Assuit Egypt. Before implementation of the study, an official permission was obtained from Dean of the faculty of nursing directed to the director of Dermatology Clinic, Assuit. After that the aim of the study was explained. The pilot study was carried out for 20 children before implementation of the study to test the clarity of the tools and to evaluate the time needed for filling the sheet. The necessary modifications were done based on the results of the pilot study. These 20 patients were excluded from the actual sample. The data were collected for about 6 months, from March 2013 to the end the end of August 2013. The investigator started to introduce her to the women and explain the purpose and nature of the study to obtain an oral consent from them to participate in the study. Some children refused to participate in the research, so they were excluded from the research. The investigator met the child in the Clinic and began to filling the questionnaire sheet. and taking diagnosis from the doctor in the Clinic. There is no fixed number every day**.**

The average time for filling each tools was around 15-20 minutes depending on the response of child or parents. Each child was reassured that the information obtained was confidential and used only for the purpose of the study.

Statistical analysis:

The obtained data were reviewed, prepared for computer processing, coded, analyzed and tabulated. Data entry was done using the Epi-info 6.4 computer software package, while statistical analysis was done using the SPSS 16.0 statistical software package. Data was presented using descriptive statistics in the form of frequencies and percentages, means, standard deviations and using chi-square test. Statistical significance was considered at P- value <0.05.

Ethical consideration

1. Risk – benefit assessment. There is no risk for children at all during application of the research.
2. Confidentiality was mentioned during all stages of the study. Informed consent was taken from children's /or parents for their approval to participate in this study.

3. Results

Table (1) shows the distribution of the study sample regarding their socio-demographic characteristics, it was found that nearly two thirds of them (60.3%) aged between (6- 12) years, while only 1.1% of them aged 12 years and more with mean age of SD 6.4+2.9. Nearly two thirds of them (61.9%) were males and 61.5% of them were basic education and worked. Also 37.1% they were fourth and more order.

Table (2) shows the distribution of parents regarding to some of their socio-demographic characteristics, it was revealed that mare than half of them their age ranged from 20 to under 30 years. As regard the mothers' educational status, it was observed that one third of mothers (33.0%) were illiterate, while 4.1% of them were university education. Concerning the occupation of mothers, the table shows that nearly three quarters (70.0%) were housewife.

Concerning fathers' age, it was observed that mare than half of them their age ranged from 20 to under 30 years. Regarding to the fathers' educational status, it was observed that nearly half of fathers (49.4%) were age 40 years and more, while 27.1% of them were read and write. Concerning the occupation of fathers, the table shows that nearly two thirds (63.3%) were nongovernmental occupation.

Figure (1) shows the distribution of studied sample regarding to their socio-economic level, it was found that more than two fifth of them (42.7%) had low level of socioeconomic status.

Table (3) shows that the distribution of studied sample regarding personal hygiene for children. As regards the type of cleaning materials for hand washing and bathing, it was found that two thirds of them (66.2%) use nonmedical soap while more than one quarter of them (26.2%) use medical soap, moreover 42,6% of them had use washing powder for cleaning clothes and only 8.5% of them had used caustic soda.

Concerning the type of underwear the present study revealed that more than two thirds of children (68.5%) had wear blister underwear. Also 83.5% of children had no special clothes.

Table (4) shows that the distribution of the children patients regarding their present and past history of skin diseases. Regarding the chief complaints, less than one third of them had itching (27.2%) while only 9.7% of them had severe pain. As regards the onset of skin disease, it was found that more than one half (54.9%) of them had occurs from one month to less than one year and 16.3% of them had occurs during one year and more.

Concerning the history of skin disease two thirds of children (63.0%) had no history and more than half of them (55.2%) had no history of other skin diseases. Regarding the frequency of positive current and other skin disease (37.0%, 44.8%) of them had one frequency of positive skin disease respectively and (46.6%) of them had one frequency of positive skin disease and twice time frequency for positive other skin disease.

Table (5) displays the distribution of the children regarding their family past history of this skin disease, it was found that more than two thirds (65.2%) of them had family history of skin disease, while 34.8% of them had no family history of skin disease. Regarding the number of positive family history with skin disease, it was clear that more than half (56.4%) of them had 1-2 persons of positive skin disease. Also 43.2% of children had daughter and son was positive relation.

Figure (2) shows distribution of studied sample regarding to the types of skin diseases it was found that less than one third of them (29.5%) had favus, while 13.8% of them had tinea and only 0.5% of those had psoriasis disease.

Figure (3) shows that the distribution of studied sample regarding to the classification of skin diseases; the fungal skin infection had the highest prevalence rate (43.9%) followed by bacterial infection (25.9 %).

Table(6) Regarding skin allergy, two thirds (63.7%) of them had skin allergy, and the majority of them (90.1%) the animals are cause allergy also nearly half of them (47.5%) the allergy takes several weeks.

Table (7) shows that the distribution of children patients regarding their characteristics of skin diseases. Regarding the site of lesion, more than two thirds (66.6%) of them had lesion in the head, and only (4.5%) of them had lesion the neck. Concerning the morphology of disease, more than half (55.9%) of them had taken more than one form and only (4.1%) of them had pills or blisters and 57.1% of children had silvery white expepeel color. Also more than two thirds (66.5%) of them had symmetric size of infected area.

Table (8) represents the relation between socio-demographic characteristics and laboratory diagnosis among children patients, it was represent that there is statistically significant difference between laboratory diagnosis and child age, sex, birth order and child education P= 0.001, P= 0.013, P= 0.001 P= 0.001, respectively.

Table(9) represents the relation between past history of current skin disease and chief complains among children patients, it was revealed that there is statistically significant difference between chief complains and past history of current skin disease, frequency of positive skin disease, frequency of positive other skin disease P= 0.001, P= 0.001, P= 0.001 respectively.

Table (10) show the relation between chief complains, frequency of positive skin disease and presence of animals in home among children patients. It was found that there is statistically significant difference between chief complains, skin allergy and presence of animals in home P= 0.001 P= 0.001respectively. Also between frequency of positive skin disease and presence of animals in home P= 0.001.

Table (1): Distribution of Socio-demographic characteristics of studied children attending to Dermatology Clinic.

Items	No= (991)	%
Child age:		
< 3 yrs	121	12.2
3- < 6 yrs	261	26.3
6- 12 yrs	598	60.4
12-18 yrs	11	1.1
Mean ± SD (Range)	**6.4+2.9 (1 – 15)**	
Sex:		
Male	613	61.9
Female	378	38.1
Residence:		
Urban	49	4.9
Rural	942	95.1
Child education:		
Preschooler	382	38.5
Basic education	609	61.5
Birth order:		
First	166	16.8
Second	213	21.5
Third	244	24.6
Fourth and more	368	37.1
Child labor:		
Not worked	609	61.5
Worked	382	38.5

Table (2): Distribution of parents regarding to their socio-demographic characteristics.

Items	No. n=991	%
Mother age:		
< 20 years	13	1.3
20- < 30 years	560	56.5
30- < 40 years	357	36.0
40 years or more	61	6.2
Mean ± SD (Range)	30.9+5.2 (19 – 51)	
Mother education:		
Illiterate	327	33.0
Read and write	180	18.2
Basic education	112	11.3
Secondary education	331	33.4
University education	41	4.1
Mother occupation:		
Housewife	694	70.0
Working	297	30.0
Father age:		
20- < 30 years	62	6.3
30- < 40 years	490	49.4
40 years or more	439	44.3
Mean ± SD (Range)	37.6+5.8 (25 – 55)	
Father education:		
Illiterate	175	17.7
Read and write	269	27.1
Basic education	174	17.6
Secondary education	225	22.7
University education	148	14.9
Father occupation:		
Governmental	364	36.7
Non-governmental	627	63.3
Family size:		
< 4 persons	86	8.7
4- 7 persons	543	54.8
> 7 persons	362	36.5

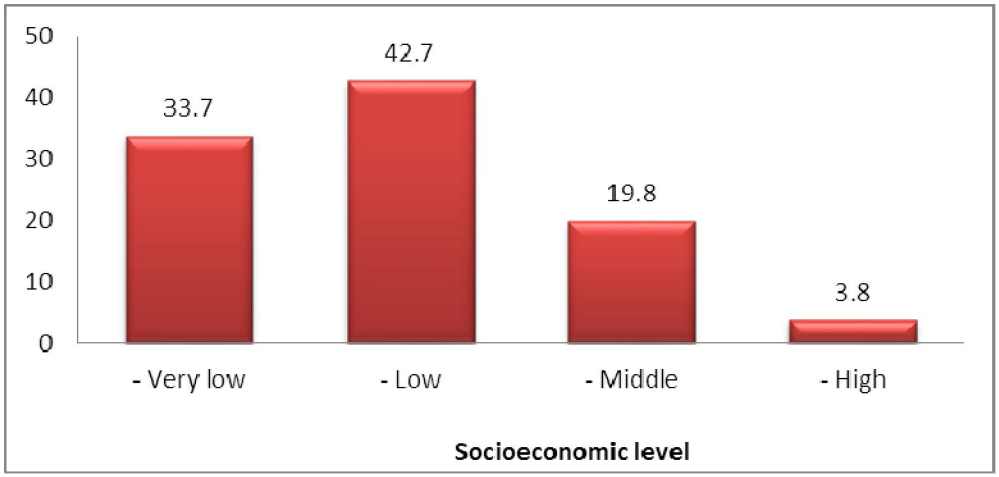

Figure (1): Distribution of the study sample regarding their socio-economic characteristics

Table (3): Distribution of studied sample regarding to personal hygiene.

Items	No	%
Types of cleaning material for hand washing and bathing:		
Nonmedical soap	731	73.8
Medical soap	260	26.2
Types of underwear:		
Cotton	312	31.5
Blister	679	68.5
Cleaning cloths of infected children:		
Alone	347	35.0
Together	644	65.0
Types of cleaning material for clothes:		
Chloral	232	23.4
Washing powder (Arial/parcel)	422	42.6
Caustic soda	84	8.5
More than one	253	25.5
Drying clothes:		
In sun	906	91.4
In the shade	85	8.6
Special clothes for each children:		
Yes	164	16.5
No	827	83.5

Table (4): Distribution of study sample regarding to present and past history for skin diseases.

Item	No. (991)	%
Present history Chief complaints:		
Itching	270	27.2
Sever pain	96	9.7
Loss of hair	196	19.8
Pain in genitalia	234	23.6
More than one	195	19.7
Onset of disease:		
<1month	285	28.8
1month to<1year	544	54.9
≥1year	162	16.3
Past history of skin disease:		
Yes	367	37.0
No	624	63.0
Frequency of positive skin disease: n=367		
Once	215	58.6
Twice	118	32.1
Tripled & more	34	9.3

Table (5): Distribution of the study sample regarding their family history of skin disease attending to Dermatology Clinic.

Items	(No.=991)	
	No.	%
Family history of current skin disease:		
Positive	646	65.2
Negative	345	34.8
Number of +ve family history:		
1-2 persons	364	56.4
3-4 persons	282	43.6
Mean ± SD (Range)	1.6+1.2 (1 – 4)	
Family relation of positive history:		
Father	33	5.1
Mother	116	18.0
Daughters and sun	279	43.2
More than one	218	33.7
Frequency of positive skin disease: n=646		
Once	546	84.5
Twice	94	14.6
Tripled	6	0.9

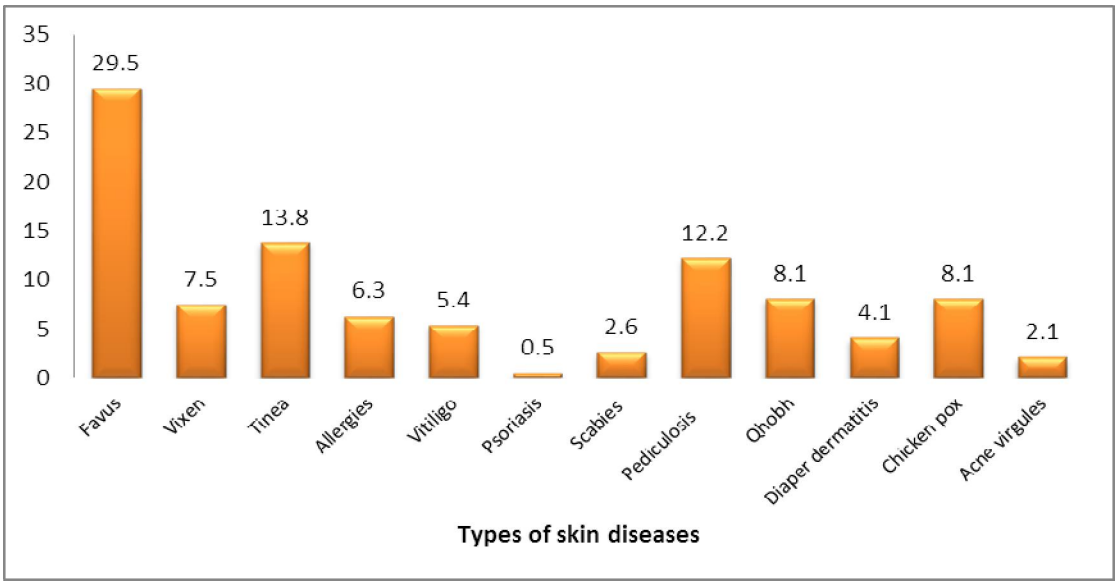

Figure (2): Distribution of studied sample regarding to the types of skin diseases.

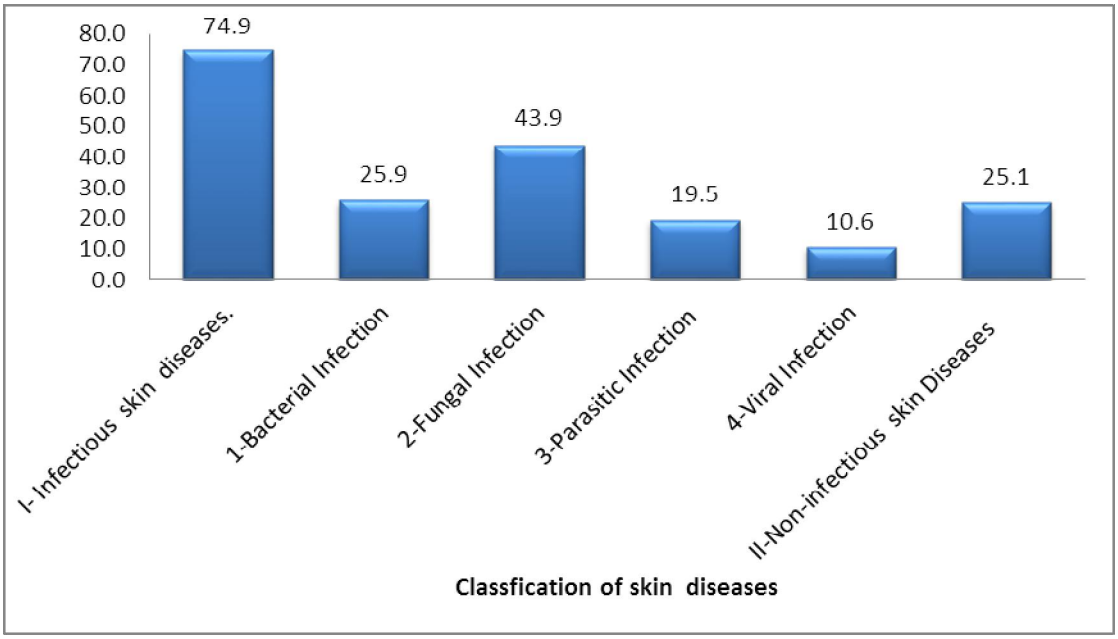

Figure (3): Distribution of studied sample regarding to the classification of skin diseases.

Table (6): Distribution of studied sample regarding to the skin allergy.

Items	No	%
Skin allergy Present	631	63.7
Not present	360	36.3
Causes of allergy**: n= 631**		
Foods	187	29.6
Medication	241	38.0
Season	203	32.4
Duration of allergy**: n= 631**		
Several hours	251	39.9
Several days	70	11.1
Several weeks	300	47.5
Several months	10	1.5

Table (7): Distribution of studied sample according to the characteristics of disease.

Items	No	%
Site of Lesion: #		
Head	660	66.6
Face	64	6.5
Neck	45	4.5
Genitalia	71	7.2
Limbs	124	12.5
Trunk	326	32.9
More than one site	70	7.1
Morphology: #		
High spots from the skin	63	6.4
Pills or blisters	41	4.1
Dryness	48	4.8
Abrasion	56	5.7
Swelling of the skin	230	23.2
More than one form	554	55.9
Colors of area		
White pillow	158	15.9
Red	257	25.9
Silvery white expepeel	566	57.1
Thin gray lines zigzag	8	0.8
White color like ivory does not have a hair	2	0.2
Size of infected area		
Symmetric	659	66.5
Asymmetric	333	33.5

#More than one answer

Table (8): Relation between socio-demographic characteristics and laboratory diagnosis among children patients attending to Dermatology Clinc.

Socio-demographic Data	laboratory diagnosis								P. value
	Bacterial Infection		Fungal Infection		Parasitic Infection		Viral Infection		
	No.	%	No.	%	No.	%	No.	%	
Child age:									
< 3 yrs.	51	58.0	70	8	0	0	0	0	0.001
3- < 6 yrs.	27	30.7	211	25	6	27	17	43	
6- 12 yrs.	10	11.3	554	66	16	73	18	45	
> 12 yrs.	0	0	6	1	0	0	5	13	
Sex:									
Male	62	70	501	60	16	73	34	85	0.013
Female	26	30	340	40	6	27	6	15	
Child education:									
Preschooler	10	11	560	67	16	73	23	58	0.001
Basic education	78	89	281	33	6	27	17	43	
Birth order:									
First	23	26	139	17	4	18	0	0	0.001
Second	33	38	180	21	0	0	0	0	
Third	9	10	201	24	11	50	23	58	
Fourth and more	23	26	321	38	7	32	17	43	

Table (9): Relation between past history of skin diseaseand chief complaints / signs among children patients attending to DermatologyClinic

Past history of skin disease	Chief complaints and Signs: #										P. value
	Itching		Severe pain		Loss of hair		Pain in genitalia		More than one		
	No.	%	No.	%	No.	%	No.	%	No.	%	
Past history of current skin disease:											
Yes	58	21.5	40	41.7	74	37.8	128	54.7	49	56.3	0.001
No	212	78.5	56	58.3	122	62.2	106	45.3	38	43.7	
Frequency of positive skin disease:											
Once	2	3.4	13	32.5	41	55.4	105	82.0	36	73.5	0.001
Twice	33	56.9	22	55.0	33	44.6	22	17.2	8	16.3	
Tripled	23	39.7	5	12.5	0	0.0	0	0.0	5	10.2	
More than	0	0.0	0	0.0	0	0.0	1	0.8	0	0.0	

Table (10): relation between chief complains, skin allergy, frequency of positive skin disease and presence of animals at home among children

Complains	Found animal				P. value
	Yes		No		
	No.	%	No.	%	
Chief complaints and Signs:					
Itching	238	30.3	32	32.7	0.001
Sever pain	87	11.1	9	9.2	
Loss of hair	194	24.7	2	2.0	
Pain in genitalia	183	23.3	51	52.0	
More than one	83	10.6	4	4.1	
Onset of disease:					
0- >1month	105	12.1	0	0.0	0.001
<1month	215	24.7	70	71.4	
1month to<1year	527	60.6	15	15.3	
≥1year	23	2.6	13	13.3	
Skin allergy:					
Present	542	62.3	89	90.8	0.001
Not present	328	37.7	9	9.2	
If present causes of allergy:					
Foods	174	32.1	21	23.6	0.001
Medication	192	35.4	59	66.3	
Season	176	32.5	9	10.1	
Time of allergy:					
Several hours	221	40.8	3	3.4	0.001
Several days	71	13.1	7	7.9	
Several weeks	249	45.9	70	78.7	
Several months	1	0.2	9	10.1	
Past history of current skin disease:					
Yes	333	37.3	34	34.7	0.349
No	560	62.7	64	65.3	
Frequency of positive skin disease:					
Once	207	62.2	8	23.5	0.001
Twice	101	30.3	17	50.0	
Tripled	24	7.2	9	26.5	
More than	1	0.3	0	0.0	

4. Discussion:

Skin diseases constitute a high percentage of skin disorders encountered in pediatrics. Skin diseases were major health problems in Upper Egypt. Environmental factors and socioeconomic status play a major health problem specially skin diseases **(WHO, 2005).**

This study aimed to identify the most common skin diseases seen in children who attended the Dermatology Clinic at Assuit. Skin diseases in children are the major health problems and about 20 to 30% of children seen by pediatricians present with problems related directly or indirectly to skin **Negi et al., (2001).**

Skin diseases are a common problem in school children. Contact between classmates is an important cause of skin infections and infestations. The prevalence and pattern of skin diseases has been seen to vary depending on the socio-economic and cultural factors related to hygiene and treatment-seeking behavior. Since treatment of skin complaints is often neglected by families due to lack of awareness and poor healthcare access (**Dogra and Kumar, 2003).**

The findings of the present study showed that nearly two thirds of children their age ranged from 6 to 12 yrs with a mean SD 6.4 ± 2.9(1- 16), this finding is in disagreement with **Wenk and Itin, (2003)** who stated that 60%, of skin diseases was observed in the preschool age group, as regard sex the present study showed that (61.9%) of children were males. These result inconsistent with **Mostafa et al., (2012)** who found that (40.8%) were males and (59.2%) females. Also these finding disagree with **Tamer et al, (2008)** indicated that (92.9%) of sample were females and only (7.5%) males.

Regarding the residents in the present study, the majority of the study sample (95.1%) come from rural areas while only (4.9%) of them were from urban areas.

Regarding the mothers and fathers educational and occupational status, it was observed that one third of mothers were illiterate. Also nearly three quarters (70.0%) of them were housewife. Concerning the education of fathers; more than one quarter of them were read and write and nearly two thirds of them were nongovernmental occupation. This finding agree with **Kathem and AL-rubiay, (2005)** who showed that low level of parent education, occupation and low social class were significant risk factors for skin diseases.

Concerning family size in current study 54.8 % were from 4-7 persons it means that large family size increase the risk of infection with skin diseases.

As regards to level of socioeconomic status the present study showed that more than three quarter (76.4%) of the studied sample had low level of socioeconomic status and only (3.8%) had high socio economic level. This result disagree with **Moftah et al., (2014)** who indicated that more than half (55.7%) of study sample had moderate level of socio-economic standard. These results are similar with **Sardana et al., (2009)** who showed that low social classes were significant risk factors for infections. The lowest prevalence of skin diseases was detected among persons belonging to high class (76.76%), while the highest prevalence was among very low class (87.88%). The prevalence of skin diseases decreased with upgrading of social class. Also this study is agree with **Van Haalen et al., (2009)** who revealed that a significant correlation between skin diseases and lower socioeconomic status. These results were supported by **Mostafa et al., (2012),** who reported that there is insignificant effect of other factors such as nutritional status, size of family, bathing frequency.

Regarding the chief complaints, the present study found that less than one fifth of children had itching, sever pain, loss of hair, and pain in genital organ. As regards the onset of skin disease, it was found that more than one half (54.9%) of them had occurs from one month to less than one year. Concerning the history of skin disease two thirds of children (37.0%) had history and the frequency of current skin disease (21.7%) of them had one frequency. This finding reveal to the nature of the skin diseases may take long time for recovery, lack of education status for parents' leads to use unhealthy behavior for child caring and animal found in home.

Regarding the types of skin diseases among children it was found that less than one third of them (29.5%) had favus, while (13.8%) of them had tinea and only (0.5%) of those had psoriasis disease. Regarding the classification of skin disease in the present study represent that three quarter of children had infectious disease such as the fungal infections revealed high frequency of the studied sample. In the same line **Ogunbiyi et al., (2005)** reported that high frequency of fungal infections were reported to be 37.6%.

Bacterial infection in the present study found that less than two fifth of children. This result disagreement with **Hogewoning et al., (2013)** who reported that Bacterial skin infection the highest prevalence, especially in rural areas and in schools serving children living at lower socioeconomic levels.

Parasitic skin diseases were 19.5% in our study. This was similar to other studies from Pakistan, **Yassmeen and Khan, (2005)** and south India **Karthikeyan et al., (2004).**

Pediculosiscapitis represents 12.2% of the studied cases. Similar rates were observed in previous Egyptian studies that reported 19.7%, 14.7%, 21.8% and 16% respectively (**Morsy et al., 2002 and Nada et al., 2012**).While higher infestations rates were reported in other studies 32.2% and 48.2% (**EL-Shafie and El-Shazly, 2002). Abed-El-Hafez et al., (2003)** stated that fungal diseases: Tinea, Pedis was the most fungal infection.

On the other parasite disease in this study was scabies, representing 2.6% of all cases and this result in the same line with **Mostafa et al, (2012) and Abdel-Hafez etal., (2003) and Wenk, and Itin (2003)** reported that 3%, 1.72% and 1.7% respectively. On the other hand, high prevalence rates of scabies were recorded by **El-Rifaie, Meabed and Mostafa (2000), Javed and Jairamani (2006)** They were 23.9%, 21.0% and 10.16% respectively.

Food or digestive allergies, skin allergies (such as eczema) are the most common allergies among children. Allergies can affect a child's physical and emotional health and can interfere with daily activities, such as sleep, play, and attending school **(Baiardini et al., 2006 and Marklund et al., 2004)**. A severe allergic reaction with rapid onset, anaphylaxis, can be life threatening. Foods represent the most common cause of anaphylaxis among children and adolescents (**De Silvaet al., 2008 and Lee and Vadas, 2011).**

Regarding skin allergy, the present study illustrated that two thirds (63.7%) of children had skin allergy, while nearly half of them the allergy takes several weeks moreover 38.0% of the studied children stated the medication are cause of allergy followed by 29.0% of them stated foods. **Javed and Jairamani, (2006)** reported that urticaria was the representing (89.5%) of all cases.

As regards the type of cleaning materials for hand washing and bathing it was found that two thirds of children use nonmedical soap. Moreover 42.6% of them had use washing powder for cleaning clothes. Concerning the type of underwear the present study revealed that more than two thirds of children (68.5%) had wear blister underwear. And the majority of children had no special clothes and (65.0%) wash infected with uninfected clothes. It may leads to increase risk factors of skin disease

Regarding the site of lesion, more than two thirds (66.6%) of them had lesion in the head, and more than one site represent (7.1%). Concerning the morphology of disease, more than half of them had taken more than one form. Also more than two thirds of them had symmetric size of infected area.

Regarding the relation between laboratory diagnosis and socio-demographic characteristics among children. There is statistically significant difference between laboratory diagnosis and child age, sex, birth order, child education and working condition P= 0.001, P= 0.013, P= 0.001 P= 0.001, P= 0.001 respectively.

As regards to occurrence of skin infection for children; more than half (58%) of children at the age group < than 3 years diagnosed by bacterial infection, 66% for age from 6-12 ys. diagnosed by fungal infection and 73% of the same age groups diagnosed parasitic infection, and less than half (45%) of them diagnosed viral infection. It may be due to the children under 6 years is more liable to bacterial infection than older because low resistance to infection. **Sardana et al., (2009)** indicated that the hot weather and overcrowding play an important role in the presence of different skin conditions, fungal infections are common in hot humid overcrowded environment. Also **Kathem and Rubiay, (2005)** reported that the highest frequency, 60%, of atopic dermatitis was observed in the preschool age group, while infantile group was the most prevalent 33.5% and50.7% respectively in other studies.

Concerning the relation between chief complains, skin allergy, frequency of positive skin disease and presence of animals at home In the present study, it was found that there is statistically significant difference between chief complains, skin allergy, frequency of positive skin disease and presence of animals in home. Also between and presence of animals at home P= 0.001.This results in the same line with **Amin et al., (2011)** who reported that 30.7% in rural children had positive skin diseases and contact with animals such as cats, rabbits and poultry were most frequently mentioned overall, with cats more in urban, and rabbits, poultry, goat and sheep in rural children ($p = 0.004$).

Regards to the incidence of skin diseases; as regard age groups was as follows; (15%) in infant group, (36.9%) in preschool age group and (48.1%) in school age group. **Tamer et al., (2008)** reported that the Prevalence of skin diseases among females were (90.89%) was significantly higher than males (82.71%).

Allergic conditions are among the most common medical conditions affecting children **Friedman, Morris (2006).** An allergic condition is a hypersensitivity disorder in which the immune system reacts to substances in the environment that are normally considered harmless **Muraro et al., (2007)**. Early detection and appropriate interventions can help to decreased it.

The relation between time of allergy and past history of skin disease. It was found that there is statistically significant difference between time of

allergy and past, frequency history of skin disease. P= 0.001 P= 0.001, P= 0.001 respectively.

Conclusion

Infectious skin diseases constitute a high percentage of skin disorders encountered in pediatrics, it represent three quarter of children and one quarter diagnosed with non-infectious diseases. Less than one third of them (29.5%) had favus, while 13.8% of them had tinea and only 0.5% of those had psoriasis disease. Also there is statistically significant difference between laboratory diagnosis and child age, sex, birth order, child education and working condition P= 0.001, P= 0.013, P= 0.001 P= 0.001, P= 0.001 respectively. Also between frequency of positive skin disease and presence of animals in home P= 0.001.

Recommendations:

-Regular visits by nursing staff to rural areas will provide nursing care, referral and health education about the most frequent skin diseases and could control such conditions.

- Regular health education program about general pediatric skin diseases provide for both teachers and parents related socioeconomic factors, overcrowding and hygiene. And encourage mothers to appreciate and utilize health promotion and disease prevention services for their children.

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