

Prevalence and Pattern of Skin Disorder among Primary-school Children in Wasit Governorate, Iraq, 2021

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Abstract

Background: Skin diseases account for a large portion of the worldwide sickness burden and are among the leading causes of non-fatal disease. Where skin problems are one of the most prevalent organ-specific reasons for people to attend the primary health care center; they are common in various nations, although the spectrum varies widely. This study aimed to study the prevalence and Pattern of Skin Disorders among Primary-school Children in Wasit Governorate, Iraq, 2021. **Material and Methods:** A cross-sectional study was carried out from October to December 2022. A multi-stage, stratified sampling procedure was used to choose ten elementary schools in Iraq's Wasit Governorate, five in urban regions and five in rural ones. In the second stage, 40 pupils were chosen at random from each school for a total sample size of 400. **Results:** The current study involved 400 individuals; males made up the majority of the participants (55%), and more than half of the participants (52.5%) resided in cities. Skin problems were seen in 45% of people. There was a strong link between the occurrence of skin problems and gender. Participants with a father and mother who had only completed basic school had a greater incidence. **Conclusion:** The prevalence of skin disorders among primary school children was 45%. The gender, father education, and mother education significantly affected the prevalence. Viral, fungal, and bacterial infections were the most common causes of skin disorders.

Keywords: Iraq, Skin disorder, Children, Primary school.

1. Introduction

Skin diseases account for a large portion of the worldwide sickness burden and are among the leading causes of non-fatal disease [1]. An overview of a study in children conducted by the World Health Organization revealed a prevalence of skin illnesses ranging from 21% to 87%. [2]. Skin problems are one of the most prevalent organ-specific reasons for people to attend primary health care centers; they are common in various nations, although the spectrum varies widely. [3,4]. The genetic and racial composition of a community, as well as social and sanitary standards, habits and jobs, nutritional condition, and the age structure of the population, all have an impact on the prevalence of skin disorders. [5]. The primary etiological factors in underdeveloped nations include hot and humid weather, inadequate hygiene and water availability, increased interpersonal contact and home congestion, and responses to insect bites and scabies. The frequency of paediatric skin conditions in Iraq has increased from 33.5% in 1987 to 40.9% in 2010.[3].

Childhood is a period of time in which a child's growth and development are observed. Skin characteristics and illnesses can evolve in unison with a child's biological and behavioral development. [6]. Children's skin is often regarded as smoother and softer than that of adults; as a result of these developmental anomalies, it may be more susceptible to irritation and inflammation. [7]. Skin problems are

more frequent in children than in adults, and they contribute significantly to children's morbidity. [8]. These illnesses reduce people's quality of life and place a drain on healthcare resources. Because these illnesses affect not only physical and mental health but also sleep and everyday function, having a skin condition may have a detrimental impact on educational attainment and employment. School and work absences have increased. In terms of student perceptions of school difficulty [9, 10]

Families typically ignore the treatment of skin problems due to a lack of awareness and restricted healthcare access; nevertheless, an assessment of their burden and pattern at school may assist to enhance care through the school health program. [11].

This study aimed to find out the prevalence and the main pattern of skin diseases among primary school children and their relation to various sociodemographic and epidemiologic variables.

2. Material and Methods:

A cross-sectional research was carried out from October to December 2022. A multi-stage, stratified sampling procedure was used to choose ten elementary schools in Iraq's Wasit Governorate, five in urban regions and five in rural ones. In the second stage, 40 pupils were chosen at random from each school for a total sample size of 400. The sample size was determined using the Cochran formula. [12]:

$$n = \frac{Z^2 \cdot P(1-P)}{d^2} = \frac{1.96^2 \times 0.41 \times 0.59}{0.05^2}$$

Where:

- n:** the sample size.
- Z:** statistic corresponding (1.96) to level of confidence 95%.
- P:** Prevalence of paediatric dermatoses in Iraq was 40.9% in 2010 [13].
- d:** degree of precision usually calculated at (5%).

According to this formula, the sample size will be 372 participants at least. Following parental consent, the researcher clinically evaluated the selected students and documented the dermatological results. For statistical analysis, the chi-squared test was performed. P 0.05 was regarded as statistically significant.

3. Results and Discussion:

A total of 400 participants were enrolled in the current study; males constituted the largest percentage of the participants (55%), and more the half of the participants lived in urban areas (52.5%). About 23% of the fathers of the participants had college or higher education, while only 5.3% of the mothers of the participants had college or higher educations, as shown in Table 3.1.

Table 3.1: sociodemographic distribution of the participants

Characteristics		N (%)
Gender	Male	220 (55.0)
	Female	180 (45.0)
Residency	Urban	210 (52.5)
	Rural	190 (47.5)
Father education	Primary school or less	154 (38.5)
	Secondary school	154 (38.5)
	College or higher	92 (23.0)
Mother education	Primary school or less	258 (64.5)
	Secondary school	121 (30.3)
	College or higher	21 (5.3)

Regarding the body mass index, most of the participants had a normal body mass index (77%), 16.8% were overweight, 4.3% were obese, while only 2% had underweight, as shown in figure 3.1

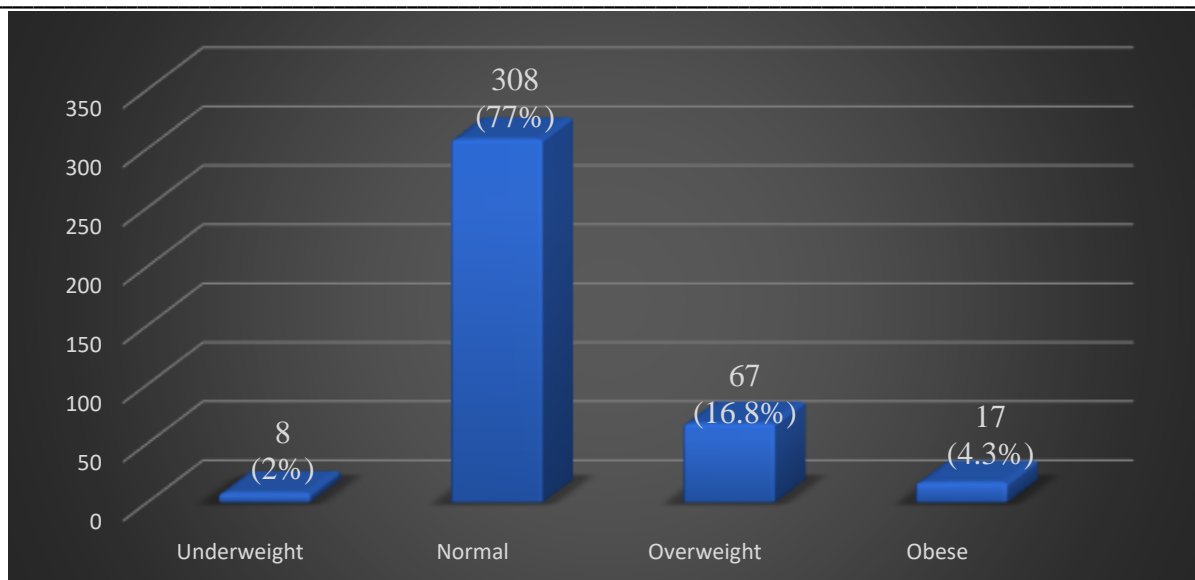


Figure 3.1: Body mass index of the participants

The most important finding of the current study was that the prevalence of the skin disorder was 45%, as shown in figure 3.2.

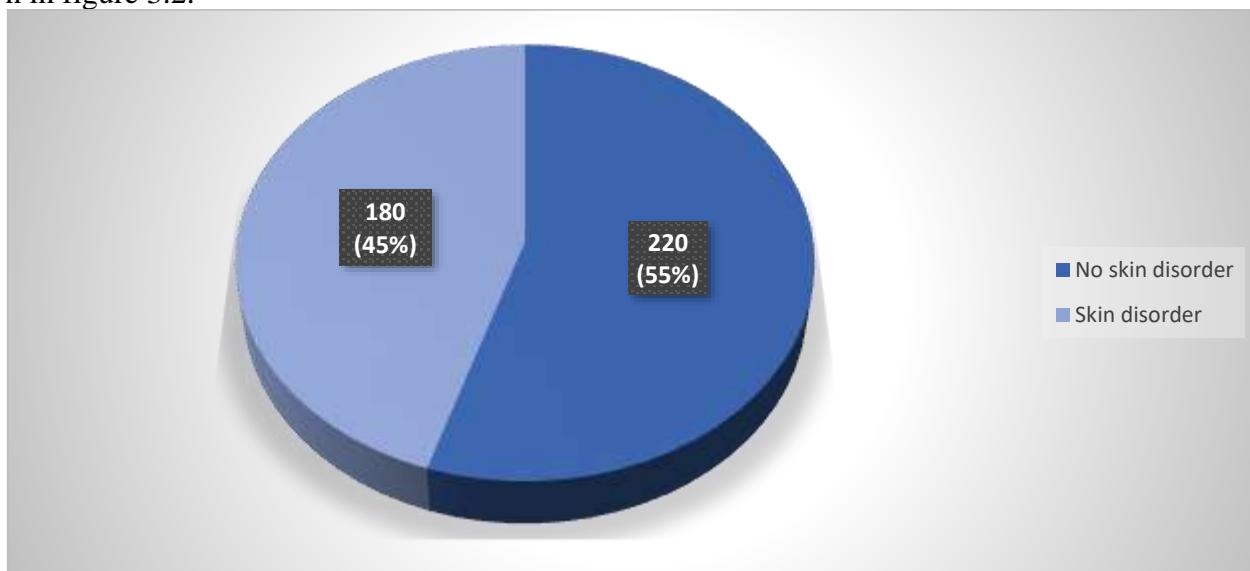


Figure 3.2: The prevalence of the skin disorders

In instance, research conducted in Iraq Erbil City found that the frequency of skin illnesses among primary school pupils was 40.6%. [14]. A study conducted in Baghdad in 2010 found that the frequency was 40.9%. [13]. While another study was done in Turkey revealed the prevalence of skin disorders ranges to 25 % between primary school children [15].

Regarding the pattern of the skin disorders, viral infection was the most common, as 20.5% of the participants had skin viral infection, and fungal infection was observed in 12% of the participants, followed by bacterial infection as it observed in 8% of the participants (Table 3.2).

Table 3.2: Patterns of skin disorder

Skin disorder	N (%) 180
Parasitic	8 (2%)
Fungal	48 (12%)
Viral	82 (20.5%)
Bacterial	19 (4.75%)
Eczema	18 (4.5%)
Hair disorder	5 (1.25%)

In another study that was done in Erbil City, the infectious dermatome was the most prevalent skin disorder; the highest prevalence of these disorders was a parasitic infection, followed by viral infection [14]. While viral infection was the most prevalent cause of skin disorder, a study was done in Turkey, followed by parasitic, fungal, and bacterial [15].

The current study's final finding was a significant link between the existence of skin diseases and gender ($P < 0.05$); the greater prevalence of skin illness was among men and participants with basic school education or less, as indicated in Table 3.3.

Table 3.3: Association between the prevalence of skin disorders and sociodemographic characteristics

Characteristics		Skin disorders	P-value
		N (%)	
Gender	Male	98 (54.4)	0.046
	Female	82 (45.6)	
Residency	Urban	95 (52.8)	0.317
	Rural	85 (47.2)	
Father education	Primary school or less	66 (36.7)	<0.001
	Secondary school	77 (42.8)	
	College or higher	37 (20.6)	
Mother education	Primary school or less	110 (61.1)	<0.001
	Secondary school	60 (33.3)	
	College or higher	10 (5.6)	

In comparison, another study conducted in Baghdad discovered a strong relationship between the occurrence of skin disorders and residence as well as the education level of the parents. [13].

In conclusion, the prevalence of skin disorders among primary school children was 45%. The gender, father education, and mother education significantly affected the prevalence. Viral, fungal, and bacterial infections were the most common causes of skin disorders.

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