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RESEARCH ARTICLE

PREVALENCE OF SKIN PROBLEMS IN PAEDIATRIC GROUP BELOW THAN 12 YEARS OLD

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Abstract

Background: Children's skin illnesses are a significant cause of morbidity and may be impacted by regional, racial, social, cultural, and economic variables. Despite their global prevalence, skin disorders have not played a significant role in the development of public health initiatives.

Methods: The current study aimed to determine the prevalence of dermatological disorders among pediatric population at a single point of measurement as reported by parents. The most suitable design is cross-sectional study. It was descriptive and correlational study. This enables the researcher to measure the effect and the outcome at a single point of time. This study design gives reliable results with short time and less effort. The study was conducted at (place). The participants were selected during the period during October 2022. This study included children aged less than 12 years old via non-probability convenient sampling technique at a confidence level of 95% using Epi Info software equation.

Results: The study included 1106 parents reporting dermatological disorders among their children. The most frequent dermatological disorders among children as reported by parents were cuts, scratches and grazes (n= 127, 11.5%). Cuts, scratches and grazes and insects bite was the most frequent combination of dermatological disorders among children (n= 108, 9.8%). There were 7% of children suffered from eczema (n= 77). Other dermatological disorders that children included in the current study suffered from are: Boils (n= 30, 2.7%), Cellulitis (= 24, 2.2%), Fifth disease (n= 12, 1.1%), Impetigo (n= 13, 1.2%), Herpes zoster (n= 12, 1.1%), Ring worm (n= 24, 2.2%), Warts (n= 10, 0.9%). The most frequent age group among children was 3-6 years (n= 357, 32.3%). Male to female ratio among children was very close and almost 1:1. There were 575 males (52%) and 531 females (48%).

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Conclusion: The group studied had a high frequency of skin irritation, infection, and insect bite reactions. Dermatological diseases are readily recognized, treated, and prevented. Many of the examined children had not sought medical help for the identified pathology, which may indicate a lack of access to health care. The study's strengths include its large sample size and age-focused epidemiology. Due to its methodology, this study, like many prevalence studies, cannot show causal relationships. This study reveals that it's necessary to give fast access to health care services, enhance cleanliness in homes and public areas, and adopt preventive measures including complete vaccination and targeted fumigation.

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Introduction:-

There is a wide range in the prevalence of pediatric dermatological disorders around the world [1]. Many developing countries do not consider skin problems to be a significant health issue [2-5], despite the fact that they may be a warning sign of more serious conditions. Studies on children have indicated that infectious disorders like pyoderma and scabies are major causes for seeking primary health care in developing countries [1, 4, 6].

Community clinics [5, 7-8], dermatology clinics [9-11], general outpatient clinics [6], and primary care institutions [4] seem to see different types of illnesses. Community studies demonstrate a high burden of dermatophytosis among school children in both urban [7-8] and rural [5] locations across the globe, despite the fact that dermatology clinics have shown a rise in the frequency of atopic illnesses [9, 11]. People with skin diseases have been shown in a number of different places to have a poor propensity to seek medical attention [12, 13].

This behavior may depend on how serious the ailment is and how easily it may be treated. Patients with severe scabies or pyoderma are more likely to seek medical attention than those with milder illnesses [1, 14]. In light of the terrible pain that might be caused by these illnesses. The widespread availability of OTC drugs in the United States encourages self-medication and decreases the need for professional medical care. The knowledge and experience gathered by the doctor throughout their time in medical school and subsequent specialty training determines how well they can treat the sickness.

Although the World Health Organization (WHO) has advocated for better community dermatology in low-resource settings [2], others have called for increased training of health professionals in the detection and treatment of skin disorders [15]. Initiatives like this have the potential to lessen the prevalence of inaccurate diagnoses and inadequate treatment for these illnesses.

Recent history has seen an increase in research into pediatric skin problems. The geographic and cultural diversity of our country, the slowly rising number of children, and the changing demographic structure owing to the growth in immigration refugees all call for epidemiologic investigations in this region. Our purpose in conducting this research is to shed light on pediatric dermatological issues by examining the regional prevalence and age and sex distribution of juvenile skin illnesses and by doing so, to shed light on pediatric dermatological issues seen in our nation. The current study aimed to determine the prevalence of dermatological disorders among children aged less than 12 years old.

Methods:-

Study design and setting

The current study aimed to determine the prevalence of dermatological disorders among pediatric population at a single point of measurement as reported by parents. The most suitable design is cross-sectional study. It was descriptive and correlational study. This enables the researcher to measure the effect and the outcome at a single point of time. This study design gives reliable results with short time and less effort. The study was conducted at (place). The participants were selected during the period during October 2022.

Participants, sampling and sample

This study included children aged less than 12 years old via non-probability convenient sampling technique at a confidence level of 95% using Epi Info software equation.

Instruments and data collection

Data was collected using a questionnaire filled through a self-administered approach from parents.

Study instruments consisted of the following domains:

1. Sociodemographic data
2. Identification of any dermatological disorder

Data analysis

Data obtained from questionnaire were entered and analyzed using SPSS program version 23 computer software. Sociodemographic data are presented using descriptive statistics as means, median, percentages and standard deviation. Independent T test and one-way Anova are used to show statistical significance among participants characteristics. Chi square test is used to show relationship between categorical variables.

Ethical consideration

An approved permission was gained from (institution) to collect quantitative data from parents regarding their children condition. After explanation of study objectives, participants were asked to volunteer to participate at our study. In addition, verbal informed consent was gained from participants before asking questions.

Results:-

The study included 1106 parents reporting dermatological disorders among their children. Mother was the respondent among 84.4% of study participants (n= 934) while father responded 172 times (15.6%) (Figure 1).

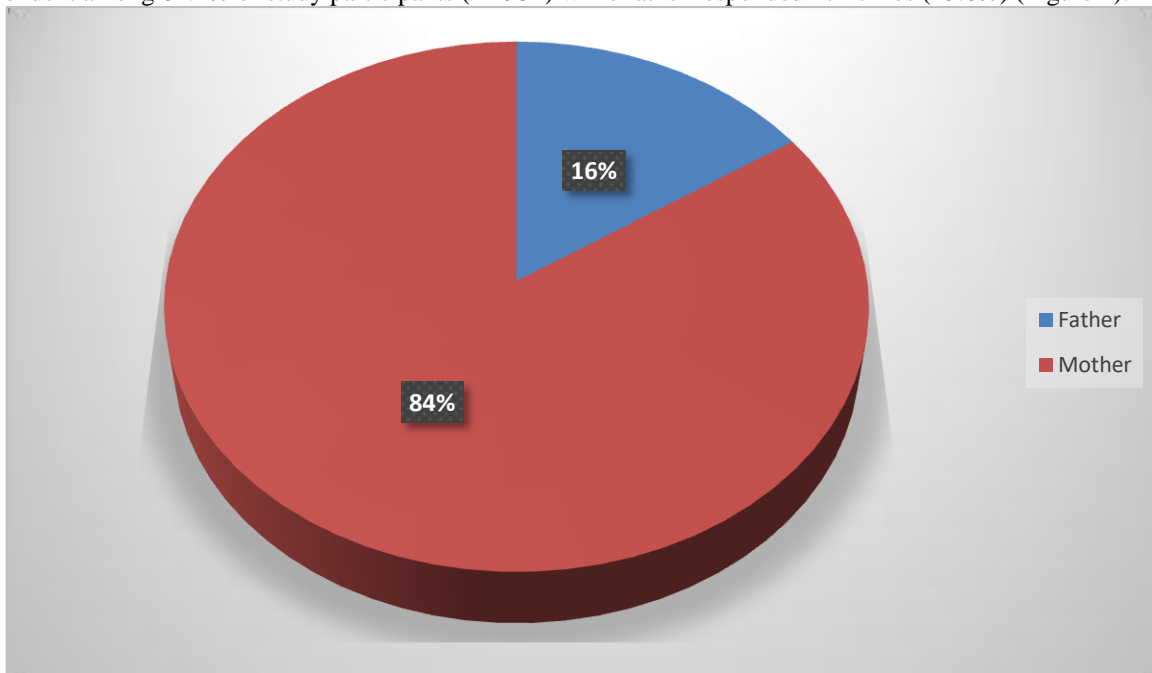


Figure 1:- Respondent distribution among study participants.

All children suffered from more than one type of skin infection. The most frequent dermatological disorders among children as reported by parents were cuts, scratches and grazes (n= 127, 11.5%). Cuts, scratches and grazes and insects bite was the most frequent combination of dermatological disorders among children (n= 108, 9.8%). There were 7% of children suffered from eczema (n= 77). Other dermatological disorders that children included in the current study suffered from are:

1. Boils (n= 30, 2.7%).
2. Cellulitis (= 24, 2.2%).

3. Fifth disease (n= 12, 1.1%).
4. Impetigo (n= 13, 1.2%).
5. Herpes zoster (n= 12, 1.1%).
6. Ring worm (n= 24, 2.2%).
7. Warts (n= 10, 0.9%).

The most frequent age group among children was 3-6 years (n= 357, 32.3%). Age groups distribution among children is presented in figure 2. It is noticed from the figure that age distribution is following normal distribution curve.

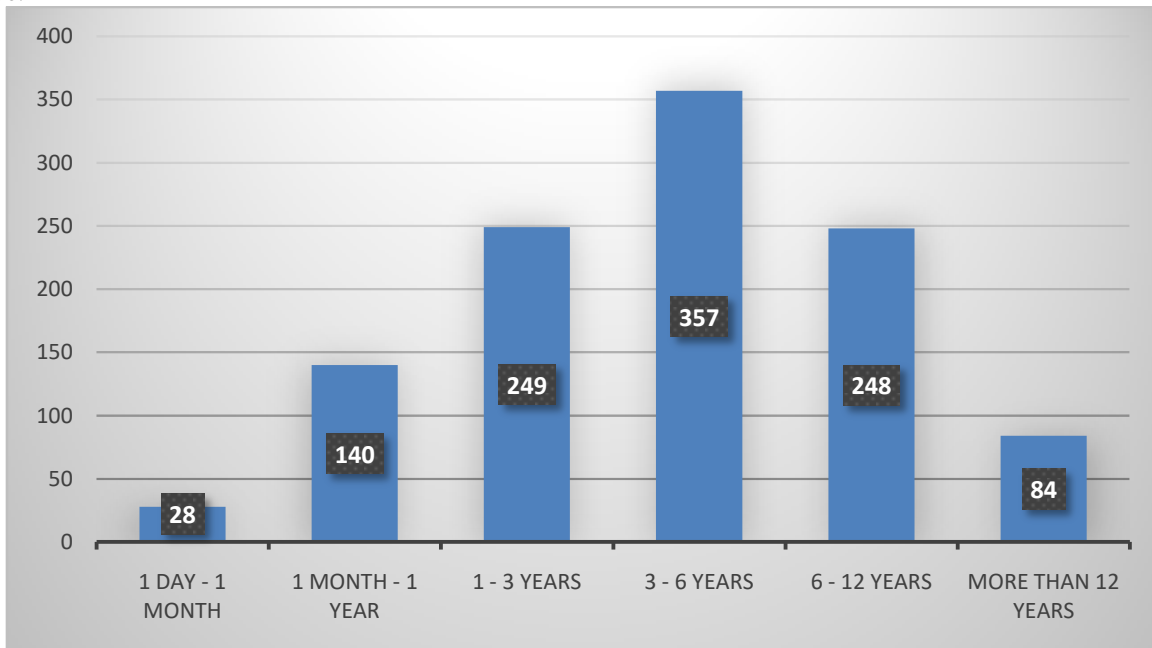


Figure 2:- Age groups distribution among study participants of children.

Male to female ratio among children was very close and almost 1:1. There were 575 males (52%) and 531 females (48%) (Figure 3).

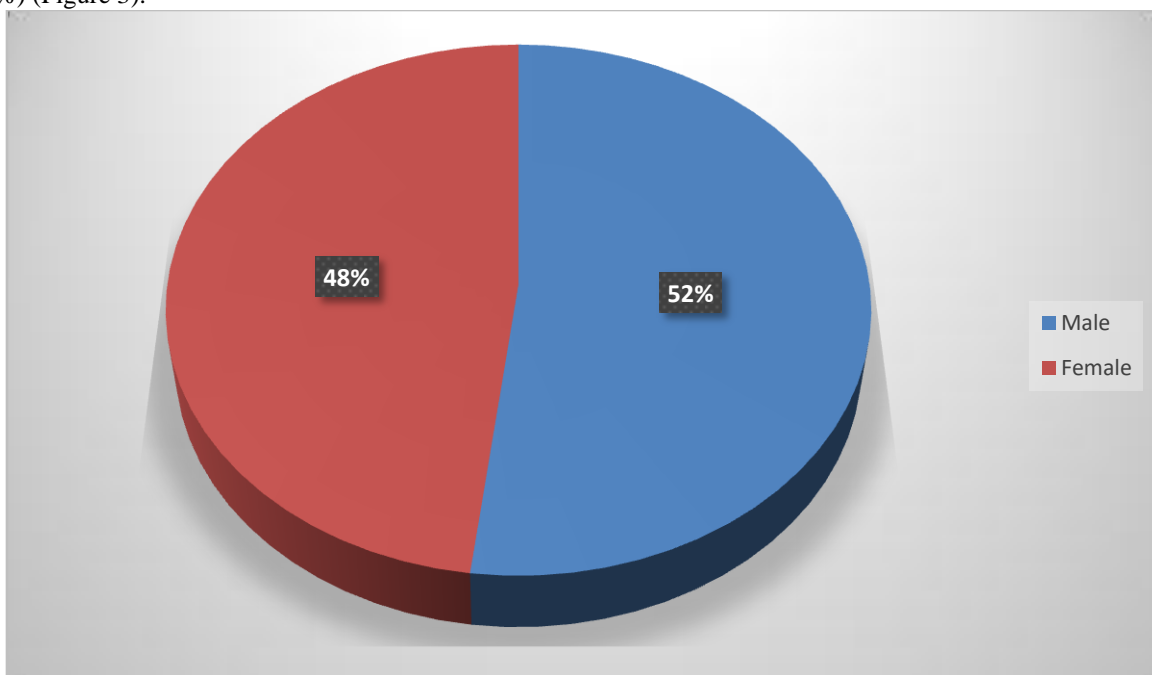


Figure 3:- Gender distribution among study participants of children.

Parents reported that their children had other comorbid conditions besides the dermatological disorder. However, most of children had no comorbid condition ($n= 733$, 66.3%). On the other hand, the most frequent comorbid condition reported was asthma ($n= 152$, 13.7%). Other reported comorbid conditions are presented in figure 4.

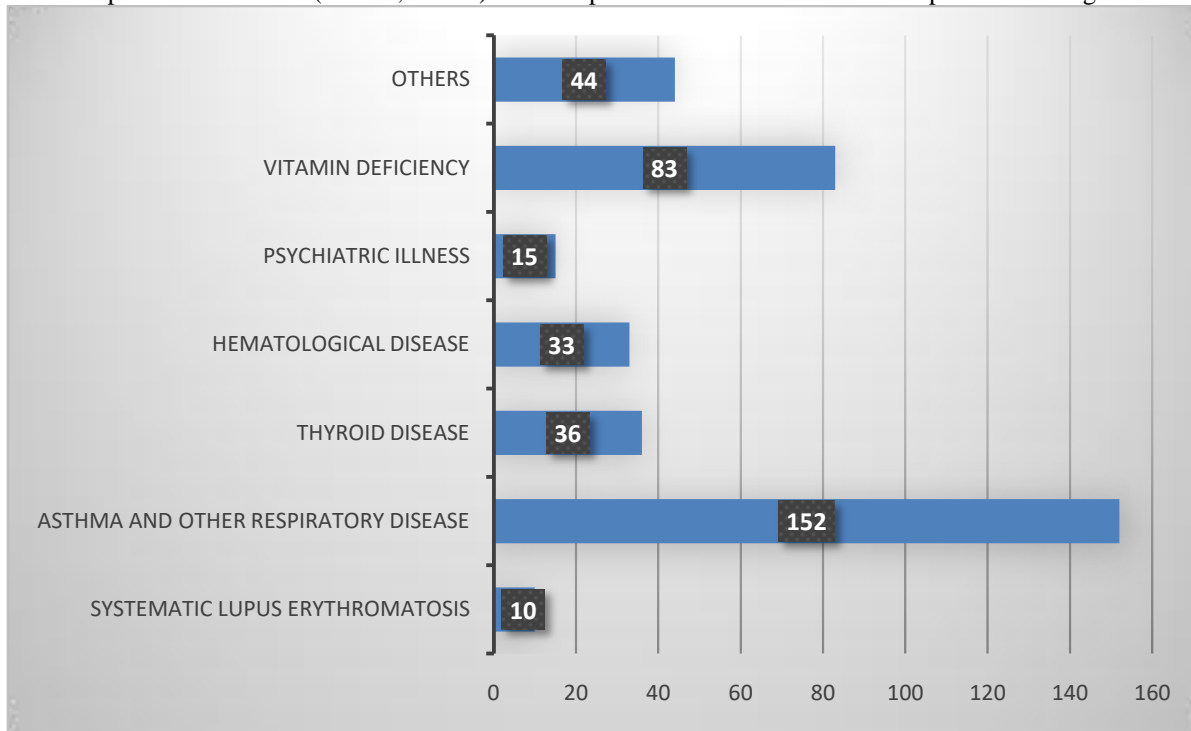


Figure 4:- Comorbid conditions distribution among study participants of children.

Almost all children included in the study are living with their parents ($n= 1027$, 92.9%). Nevertheless, 7.1% of children were not living with their parents ($n= 79$). Parents were asked to assess their family status. Most of study parents reported a very excellent family condition ($n= 448$, 40.5%). Other rankings are demonstrated in figure 5.

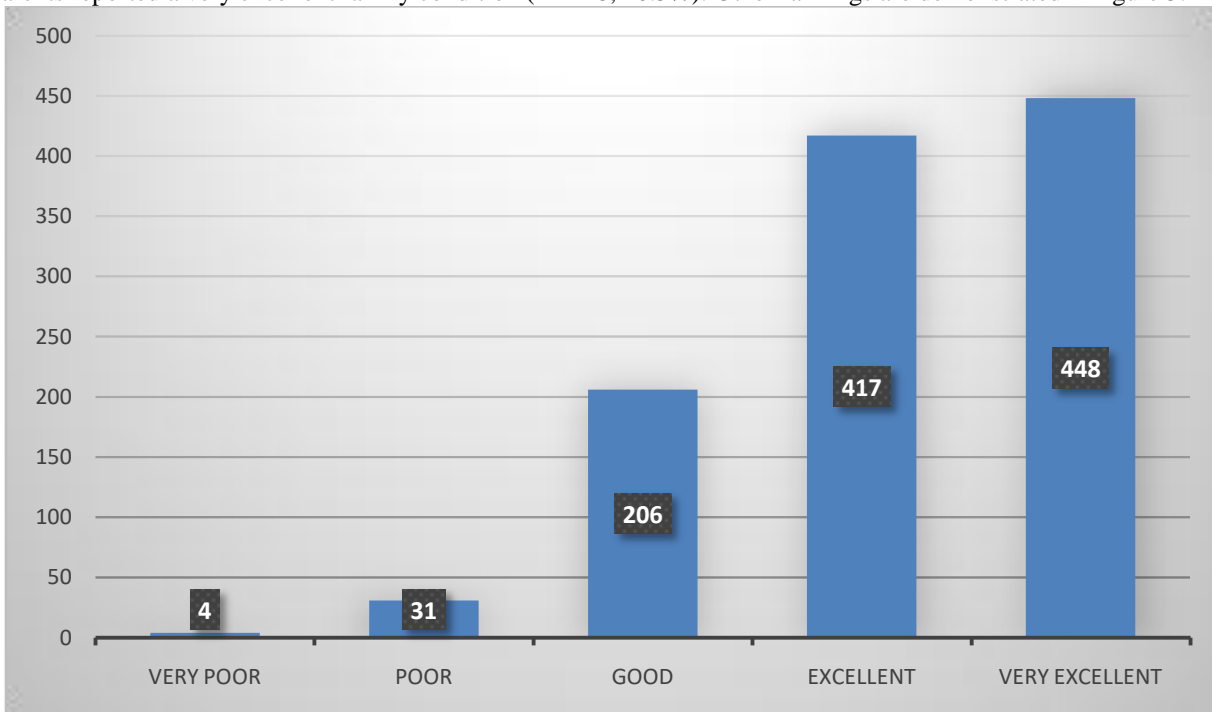


Figure 5:- Family socioeconomic status distribution among study participants.

Parents were also asked if any of them suffers from chronic condition. Half of them were healthy (n= 560, 50.6%). And the other half reported the following conditions in table 1.

Table 1:- Chronic conditions among parents.

Condition	Frequency	Percent
Allergic diseases	390	35.3
Chronic blood disorders	51	4.6
Autoimmune diseases	105	9.5%

Discussion:-

The published research on the most common skin illnesses all employ different methods, making direct comparisons impossible. The majority of published research use retrospective analysis based on hospital patient records. This is the first research of its kind to apply the aforementioned methods to the study of skin disorders among children as parents' reported. The variability of the research may account for the large inter-study variation in reported rates of dermatological illness prevalence (20-60%) [16-17]. Furthermore, there are research that focus on populations [18-22]. With a greater degree of accuracy and dependability in the estimates, the data provided by these research is more trustworthy. In order to accurately measure the incidence of skin disorders in children, we used a rigorous epidemiological design in our research. This study's most important conclusion is that cuts and grazes is the most common kind of skin illness in children and young adults. Although it may be seen in any country where the causative insects are prevalent, this is one of the most specific allergic tropical disorders [23].

On the other hand, urticaria was shown to be the major reason for consultation in a study of 10,000 children at Children Hospital IMAN in Mexico between 1971 and 1975. Atopic dermatitis was the second most common reason for seeking medical attention (12.9% of cases) [24]. Notably, urticaria was found to be 2.2% prevalent among 5,250 pediatric patients investigated in a referral facility in Mexico City 20 years later, with atopic dermatitis accounting for 14.5% of all consultations. Changes like these were linked to advancements in hygiene, housing, and economic standing [25].

It's worth noting that Bogotá and Mexico City have climatic and socioeconomic similarities. According to previous studies, urticaria was found in 6.8% of 3479 children who visited a dermatology clinic in Bamako, Mali, over the course of a year [26]. In contrast, urticaria was only 5.2% prevalent among the 2100 children who visited a reference center in southern India during the same year [27]. Among a sample of 1415 Nigerian adolescents tested in the southwest of the country, 120 (8.5%) were found to have urticaria, making it the third most frequent skin illness overall [28].

Our study's high eczema prevalence may be attributable, in part, to the young age of the participants. To be sure, our team has shown eczema urticaria is more common in this age range, while the aforementioned research looked at considerably older populations in whom the condition is far less common. Since most literature has concentrated on studying urticaria, the GPs were well-versed in how to diagnose the condition, which might possibly be a result of confirmation bias. Furthermore, the true incidence of skin disorders is not reflected in these research since they only examine cases sent to referral facilities. To provide one example, the prevalence of eczema among youngsters may be underestimated since many of those affected may not visit these institutions. In contrast, atopic dermatitis was the most common skin illness among those who reported having it 35% of the time in research that compared the reported frequency of dermatologic disorders to a prior study conducted 30 years previously [29]. There has been an increase in the prevalence of atopic dermatitis in recent decades. Children in Bogotá, Colombia, aged 6 and 7 years old showed a prevalence of eczema of 14.3 percent, according to research findings in the worldwide research of Asthma and Allergy in Childhood Phase III [30-31]. Which fits up very well with our current findings. In contrast, two studies in Colombia have used the modified ISAAC surveys to evaluate the prevalence of atopic dermatitis in a population (one in 1998 [32], and another 10 years later [33]). Research including children aged 1 to 4 years old shows that the frequency of atopic dermatitis rose from 2.1% to 4.9% between 1998 and 2009 [32-33].

There were 25.9% of 1105 children less than 16 years old in a study conducted in a developed country had atopic dermatitis [34]. Atopic dermatitis has a prevalence in the United States between 6% and 12.98%, depending on the method and design of the research being used to determine the prevalence [35].

An important finding of this research is the high incidence of infectious skin disorders. Infectious infections may be common and dangerous since most people in the research group were from low-income households, lived in unsanitary settings, and had easy access to healthcare. This means that infectious skin diseases continue to be a major issue for public health in places like the poor world. For instance, a dermatologist-conducted research of 420 Dares Salaam primary school students revealed that 57.3% of the kids were suffering from some kind of skin condition, the most common of which was infections (30.4%), most of which were caused by fungus [36]. Similar findings were found in this group, with a prevalence of 42.8% for skin disease and 12.3% for infectious disorders. In a cross-sectional research done in Damietta, Egypt, El-Khateeb et al. [37] reported that infections accounted for 50.9% of the skin disorders detected and ranked third among the causes of skin diseases, with parasitic infections predominating and being more frequent in rural regions. Based on data collected from hospital records in Thailand, researchers found that infections were second most common among skin diseases (41.9%), behind eczemas (41.2%) [38]. It is noteworthy that our analysis found molluscum contagiosum to be the most common infectious pathology, which is in agreement with the WHO report highlighting viral illnesses as a significant cause of skin disease worldwide [1].

Conclusion:-

This research shows that the group investigated had a high incidence of skin inflammation, infection, and responses to insects' bites. The identified dermatological illnesses are easily diagnosed, responsive to therapy, and avoidable. Nonetheless, it may be indicative of a lack of access to health care impacting this group given many of the evaluated youngsters had not sought medical assistance for the observed pathology. The large sample size and careful epidemiological layout centered on a particular age group are two of the study's strongest points. One of the drawbacks of this research, like with many prevalence studies, is that it cannot demonstrate causal correlations due to its methodology.

This research shows that in order to lower the prevalence of these illnesses, it is important to provide prompt access to health care services, improve hygiene in households and public spaces, and implement preventative measures including full immunization and targeted fumigation.

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