

The Prevalence of skin Diseases among Pupils in Some Selected Primary Schools in Kano state, Nigeria

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Abstract: The study was carried out to determine the prevalence of some skin diseases among pupils in primary schools, in this case, class five students aged between 12 – 16 years were used. Skin diseases which include athlete's foot, ringworm and scabies which are common on African children were studied. A simple questionnaire was designed and administered to each of the randomly selected pupils, in addition, the pupils were also interviewed to establish a relationship between their responses and what the interviewer gathered and observed from the pupils body as these diseases can be seen physically by the interviewer. Out of the 500 pupils sampled, one hundred and forty seven (147) an equivalent of 24.9 % suffered from one or two of these diseases.

Key words: skin infection, children, prevalence, primary schools, Kano

I. Introduction

The medical name for athlete's foot caused by a fungus is Tinea pedis. Athlete's foot is a common skin infection that affects the sole of the foot and the skin between the toes. It is usually a scaly, red, itchy eruption and occasionally may be weepy and oozing. It affects the feet of athletes and non-athletes alike. Although it is frequently caused by a fungal infection, other causes may be indistinguishable without proper testing [1]. There are a variety of fungi that cause athlete's foot, and these can be contracted in many locations, including gyms, locker rooms, swimming pools, security lines, and from contaminated socks and clothing. The fungi can also be spread directly from person to person by contact. Most people acquire fungus on the feet from walking barefoot in areas where someone else with athlete's foot has walked. Some people are simply more prone to this condition while others seem relatively resistant to it. Another colorful name for this condition is "jungle rot," often used by members of the armed services serving in tropical climates[1]. Scabies is a skin disease caused by *Sarcoptes scabiei*. It is an infestation by the [itch](#) mite and it is highly contagious skin disease. The mites are small eight-legged parasites (in contrast to insects, which have six legs). They are tiny, just 1/3 millimeter long, and burrow into the skin to produce intense [itching](#), which tends to be worse at night. The mites that infest humans are female and are 0.3 mm-0.4 mm long; the males are about half this size. Scabies mites can be seen with a magnifying glass or microscope. The scabies mites crawl but are unable to fly or jump. They are immobile at temperatures below 20 C, although they may survive for prolonged periods at these temperatures. Scabies infestation occurs worldwide and is very common. It has been estimated that, about 300 million cases occur worldwide each year. Human scabies has been reported for over 2,500 years. Scabies has been reported to occur in epidemics in nursing homes, hospitals, long-term care facilities, and other institutions. In the U.S., it is seen frequently in the homeless population but occurs episodically in other populations of all socioeconomic groups as well [1].

The medical term for ringworm is Tinea. The term ringworm refers to fungal infections that are on the surface of the skin. The name is derived from the early belief that the infection was due to a worm, which it is not. Ringworm is a fungal infection of the skin. Nevertheless, the name ringworm remains. Some of these fungi produce round spots on the skin, but many do not. On the other hand, many round, red spots on the skin may not be due to a fungal infection. A physical examination of the affected skin, evaluation of skin scrapings under the microscope, and culture tests can help doctors make the appropriate distinctions. A proper diagnosis is essential to successful treatment. (Tinea is the Latin name for a growing worm.) Doctors add another word to indicate where the fungus is located. Tinea capitis, for instance, refers to scalp ringworm, Tinea corporis to fungus of the body, Tinea pedis to fungus of the feet, and so on [1].

The diseases described above are examples of infectious diseases that are clinically evident illnesses resulting from the presence of pathogenic microbial agents, including pathogenic viruses, pathogenic bacteria, fungi, protozoa, multicellular parasites, and aberrant proteins known as prions. These pathogens are able to cause disease in animals and/or plants. Infectious pathologies are also called communicable diseases or transmissible diseases due to their potential of transmission from one person or species to another by a replicating agent (as opposed to a toxin), [2]

Diseases caused by bacteria, viruses, fungi and other parasites are major causes of death, disability, and social and economic disruption for millions of people [3,4,5]. Despite the existence of safe and effective interventions, many people lack access to needed preventive and treatment care. The lost productivity, missed educational opportunities and high health-care costs caused by infectious diseases directly have impact families and communities. Illness and death from infectious diseases are particularly tragic because they are largely preventable and treatable with available interventions[6] Infections are prevalent in developing countries, where co-infection is common. The adverse impact of infectious diseases is most severe among the poorest people, who have the fewest material, physical and financial resources to draw from and limited or no access to integrated health care, prevention tools and medications. Infectious diseases raise awareness of our global vulnerability, the need for strong health care systems and the potentially broad and borderless impact of diseases [7]

Transmission of an infectious disease may occur through one or more of diverse pathways including physical contact with infected individuals. These infecting agents may also be transmitted through liquids, food, body fluids, contaminated objects, airborne inhalation, or through vector-borne spread [8]. Transmissible diseases which occur through contact with an ill person or their secretions, or objects touched by them, are especially infective, and are sometimes referred to as contagious diseases. The present study is aimed at determining the prevalence of infectious diseases among pupils of primary school age.

II. Methodology

2.1 Research design and Population sampling

Simple random sampling technique was employed in which each member of the population has equal chance of being selected. The work was carried out in selected primary schools across the state (Kano). It include both rural and urban primary schools. A total of ten primary schools were engaged in this study, in which six out of ten were selected from the metropolis while the remaining four came from the rural areas of the state.

2.2 Instrument for Data collection

For the purpose this study two types of data collecting procedures were employed The first one was the use of questionnaire which was filled by each and every respondent and then followed by interview with assistant from Medical pediatrician.

2.3 Data analysis technique

A student t-test was employed for this analysis

III. Results and Discussion

Among the three types of skin diseases studied in children at various primary schools results obtained showed that Athlete's foot (Tinea pedis) is very common in the subject with 66(13.2 %) children infected out of 500 children sampled, this is followed by ring worm (Tinea) (8.6%)where 44 of them were also infected. Scabies (Sarcoptes scabiei) (7.6 %)is the least with about 38 subjects suffering the disease as given in table 1.Infectious diseases are found to be prevalent in the study area as infections are prevalent in developing countries, where co-infection is common. The adverse impact of this disease is more severe among poorest people. This result is partly in accordance with the report of [9] which stated that over 9.5 million people die each year due to infectious diseases – nearly all live in developing countries. Children are particularly vulnerable to infectious diseases .Infectious diseases are also destructive to the health of adults, causing disability, a diminished quality of life, decreased productivity or death.

Skin infections (Athlete's foot (66) (13.2 %), Ringworm (43) (8.6%), and Scabies (38) (7.6 %)) represents highest infection rate among the infectious diseases studied and are very easy to detect as their signs can be physically seen from the skin of the sufferer. The relative ease of contamination through exchange of shoes (athlete's foot), sharing of bathing facilities and exchange of caps and clothes within a group of children favors the rapid spread of the diseases. Athlete's foot and ringworm are fungal diseases and the fact that the research was carried out during rainy season with high relative humidity may be the factor which facilitate the growth of the pathogen may likely be the rationale behind high infection rate. Diseases accounted for 25.9% of all death in 2002 in which 14.7 million people died and 32.2% of all death in 1993 where 16.4 million deaths were recorded [10].

Table 1: Number of children infected with skin diseases (out of 500)

Skin diseases	No. of children infected with skin diseases	Percentage (%)
Athlete's foot	66	13.2
Ring worm	43	8.6
Scabies	38	7.8
Total	147	29.6

One of the aims of this study is to determine whether there is a difference in the rate of infection between children in urban areas and those in rural areas. Going by our figures obtained from the analysis of the results shows that there is no significant difference between the two location centers, although children from the rural areas shows a high rate of infection of skin diseases (athlete's foot, scabies and ringworm) than those from urban centers, but for all the other parameters analyzed the difference wasn't significant.

IV. Conclusion

Poor hygienic conditions coupled with low economic status and inadequate medical interventions are the major cause of infectious diseases in children. In this regards there is an urgent need for government to double its effort in order to educate the populace on the various measures taking to avoid the rapid contracting of these diseases. This can be through seminars, workshops, symposium, conference and any other relevant means of information dissemination.

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