

# STUDY ON ECTOPARASITES AMONG SCHOOL AGED CHILDREN IN EL FAYOUM CITY

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**PARASITOLOGY**

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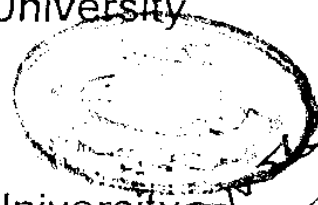
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## CONTENTS

|                                         | <u>Page</u> |
|-----------------------------------------|-------------|
| I- INTRODUCTION.....                    | 1           |
| II- REVIEW OF LITERATURE.....           | 2           |
| III- THE AIM AND SCOPE OF THE WORK..... | 55          |
| IV- MATERIALS AND METHODS.....          | 57          |
| V- RESULTS.....                         | 62          |
| VI- DISCUSSION.....                     | 67          |
| VII- SUMMARY.....                       | 76          |
| VIII-REFERENCES.....                    | 79          |
| ARABIC SUMMARY.....                     |             |

## ***INTRODUCTION***

## I-INTRODUCTION

Children are the future makers of the countries. In Egypt, they constitute a major age group population. School age children are considered one of the most vulnerable groups as they are the group living a long time outside their homes exposed to many hazards at one time. They are living their critical age of growth and development. Primary school children form a major segment of the school age population living their first exposure (Morsy et al., 1991).

The group infection enteroparasites is one of the important hazards to which they are exposed. The group infection enteroparasites are those intestinal parasites in which autoinfection is the main and the most common way of transmission (Morsy et al., 1991).

On the other hand, very few Egyptian authors dealt with ectoparasites among school children. Meanwhile, this point attracted the attention of many authors abroad (Alexander, 1968).

So the aim of this work was to throw some light on the problem of ectoparasites among school age children.



# *REVIEW OF LITERATURE*

### Review of literature

Parasitism is a biological phenomenon which appears among people especially in crowded communities and it has a big correlation to the causation and transmission of a big number of human diseases.

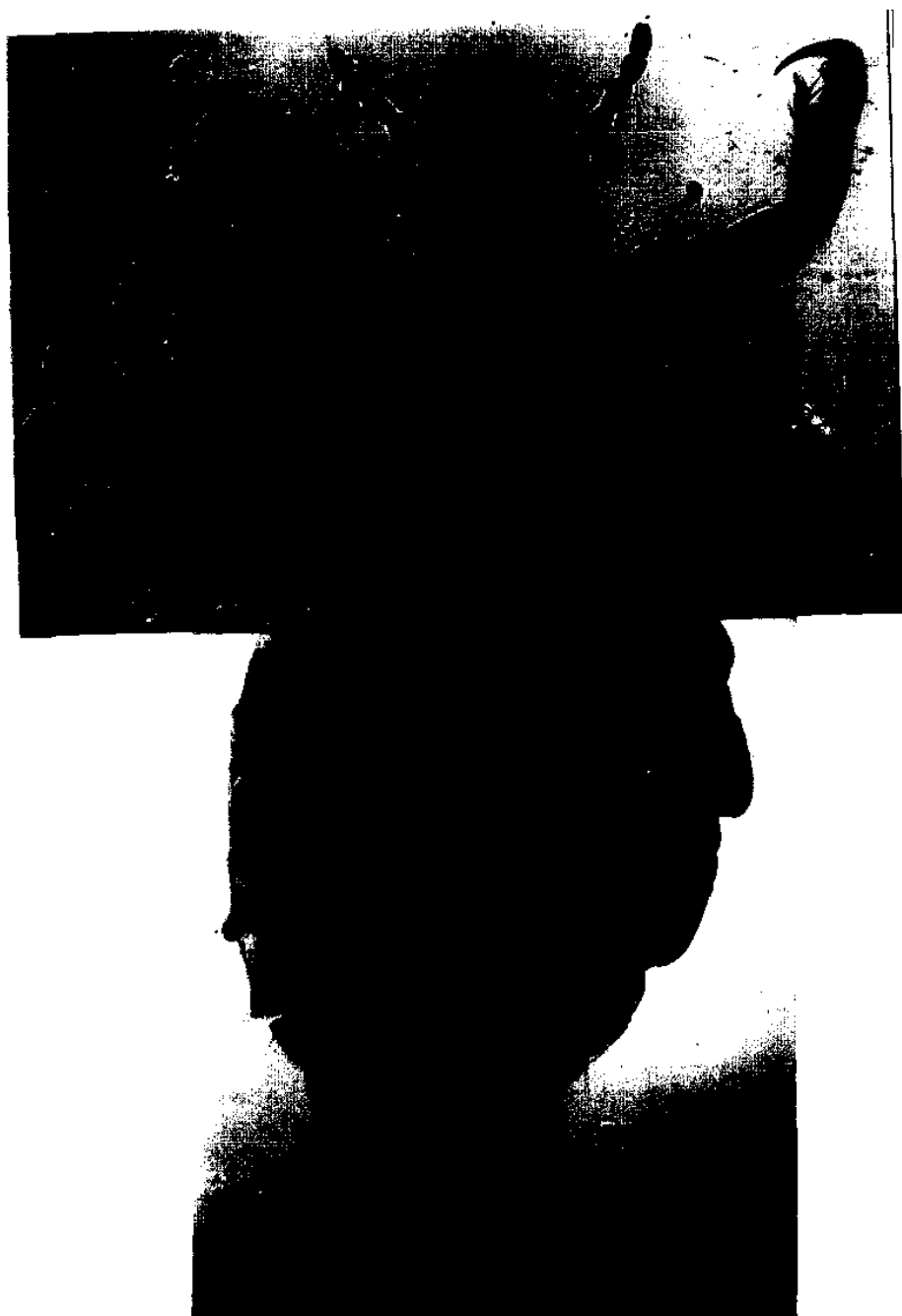
**El-Shaffey (1992)**, mentioned that parasitic diseases are among the most important causes of morbidity and mortality in the world. In developing countries, parasitic infection is prevalent in rural areas due to the existence of many environmental factors and social conditions that favour these infections.

In Egypt, parasitic infections constitutes a common health hazard that called the attention of our scientists since many years. **El-Gholmy et al. (1968)** reported a prevalence of parasitic infection of 60.5% in a selected group of children attending the outpatient clinic of Ain Shams University Hospitals.

Nearly the same incidence was found in the research of **El-Matarawy (1976)** with parasitic prevalence of 60.4% in children attending outpatients clinic of Cairo University Hospitals.

**Salem et al. (1987)** reported an overall prevalence of parasitic infection of 54% among children attending the hospitals of the Ministry of Public Health in different sectors of Cairo Governorate.

These results coincide with the comments of **Morsy et al. (1991)** that ecto and endoparasites are still one of the



Pediculus humanus ♀

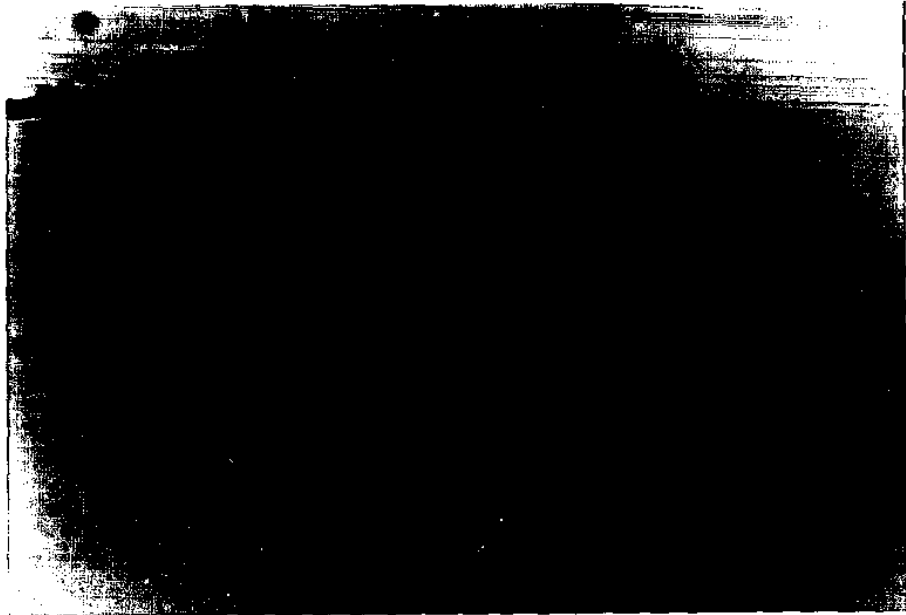
public health problems in Egypt, and that this is particularly true among school students who are exposed to parasitic infections or infestations by autoinfection or contagion.

In the present work the ectoparasites : Pediculus humanus capitis and P. h. humanus and Sarcoptes scabiei. among school aged children in El-Fayoum city were surveyed.

#### 1. Human lice:

The family Pediculidae contains the human head louse and body louse of the genus Pediculus, and the human pubic or crab louse belonging to the genus Phthirus. Pediculus humanus occurs in two forms:

The head louse, P. humanus capitis, and the body louse, P. humanus humanus (= P. humanus corporis). The two look much alike. A typical head louse and a typical body louse are easily distinguished, but they overlap in appearance and movements. Head lice average approximately 2.4 mm long and are smaller than body lice, ~~However they are~~ seldom if ever found on the head, whereas head lice may be found on the body. Head lice are adapted to clinging to hairs, but body lice find refuge in clothing. Head lice and body lice can interbreed and can produce fertile offspring that may



Pediculus humanus egg (x100)



Pediculus humanus (x69)



Pediculus humanus (x100)  
Nymph

possess characteristics intermediate between the two parents ( Faust et al., 1976).

A Female may lay up to 300 eggs during its life, which lasts about a month under optimal conditions. The oval eggs or nits, are laid singly, and they measure about 0.8 by 0.3 mm . At 30 °C the eggs hatch in 8 or 9 days, and the young nymph is 1 mm long. Adult lice can suck up as much as 1 mg of blood at a time, but they probably prefer to take smaller quantities at frequent intervals. At 30 °C they can survive only about 3 days of starvation. Experiments have shown that lice can move at a rate 9 inches (23cm.) per minute. They prefer a temperature of 29 to 30 °C and they avoid, when possible, any change in humidity. Their immediate past experience conditions the response to environmental changes; hence different individuals often exhibit different responses. Movement toward dark areas is chiefly a response to directed light received by the horizontally placed eyes (Faust et al., 1976).

Phthirus sp. possess a wide thorax that constitutes most of the body, and the coxae are far apart at the margins of the thorax. P. pubis frequents the pubic hairs and perianal regions of human, but it may wander to other parts

of the body, including the head. It is smaller and much broader than the other two human lice, and its legs have the appearance of being attached to the edge of the flattened body. The forelegs are slender, with long, fine claws, whereas the middle and hind legs are thick, with thick claws (Faust et al., 1976).

Beaver et al., (1984), mentioned that Phthirus pubis differs not only in its characteristic location on the body, but is so distinctive in appearance that it can never be confused with species of Pediculus (Fig: 1 and 2). Pubic lice remain attached by their mouth parts to the same site for many days, sucking from tissue to tissue but apparently without becoming engorged, and commonly occur on the perianal, axillary; chest and body hair; eyelashes; and eyebrows.

Adult lice seem to be unable to survive for longer than a day when removed from the host, and their total span of life is about one month. Although transmission from person to person occurs by close contact, it is a grave injustice to assume that sexual contact is the only mode of transfer (Faust et al., 1976).

Boyle (1987) mentioned that on the assessment of the prevalence of infestation with the head louse, Pediculus humanus capitis, among the child population, from birth to 10 years of age of Jeddah city in Saudi Arabia, an overall prevalence