COMPARATIVE STUDY OF INTESTINAL PARASITIC INFESTATION AMONG THE PRIMARY SCHOOL CHILDREN IN THE URBAN AND RURAL AREAS AND ITS IMPACT ON THE ANTHROPOMETRIC MEASUREMENTS

THESIS

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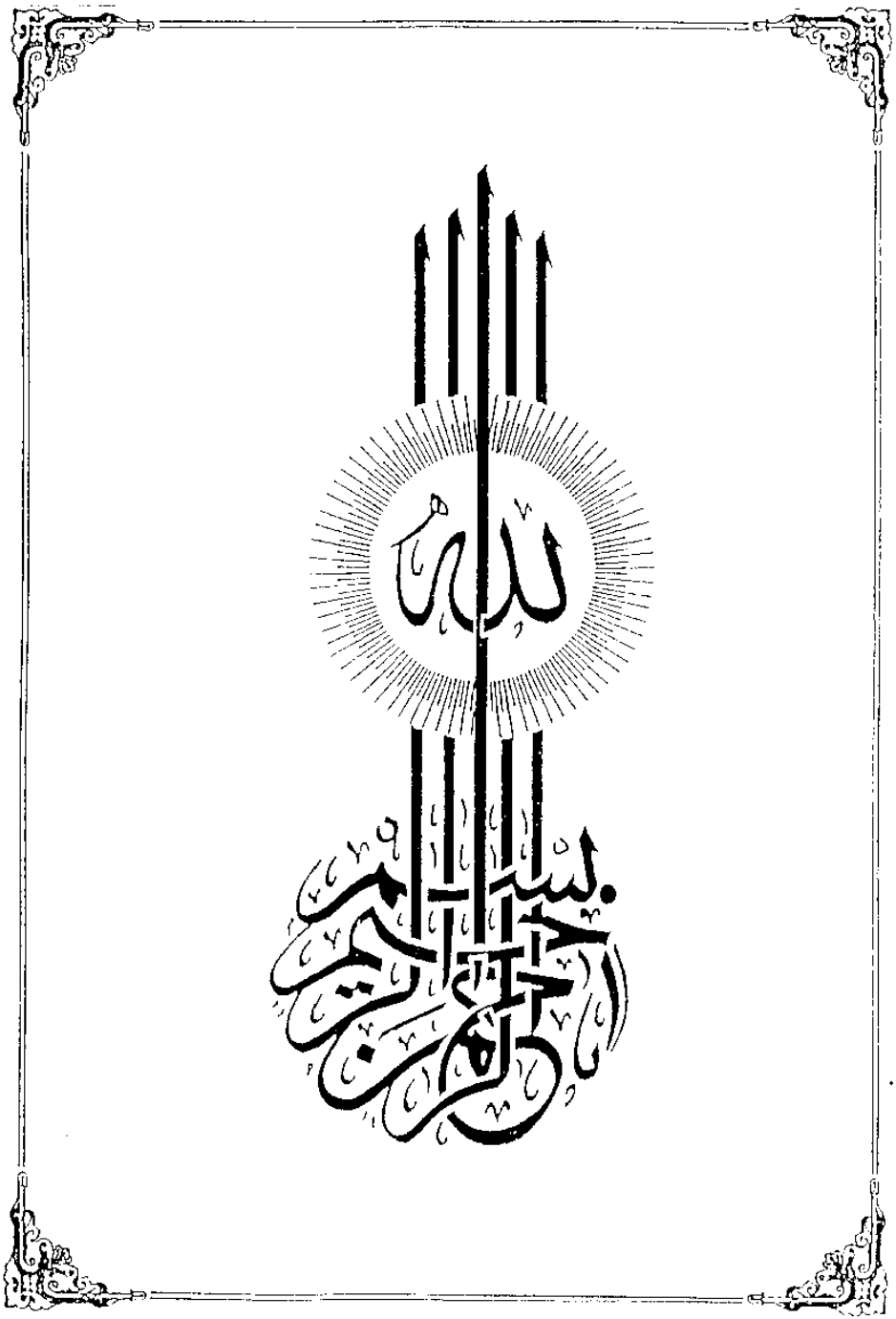

بسم الله الرحمن الرحيم

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Parasitic infestation is one of the important health problems in Egypt. Infection might affect any age, but it usually begins in early childhood with beginning of movement and exposure to infestation and it reaches its peak in the school age **(El-Daydamouny, 1982).** Certain parasitic infestations mainly Schistosoma mansoni, Schistosoma doudenale, Entamoeba histolytica and Ascaris are endemic in Egypt**(El-Gholmy et al., 1968).**

Parasitic infections are common among school children and causing a major problem among them **(Pawlowski, 1988).** Parasitic infestations are endemic in many parts of the world, although they are more common in hot climates, no specific geographic area is spared **(Nelson, 1983).**

In Egypt, human diseases caused by parasites are still extra ordinarily common and schistosomiasis leads the list of parasitic diseases **(Mousa and Atta, 1967).**

Children constitute nearly half of the total population of the third world countries, most of them suffer from parasitic infestations leading to high morbidity and mortality, and widely prevalent malnutrition **(Rathi, 1984).**

The interaction of man and his environment, are complex, so evaluation of nutritional status, permits an understanding of the whole factors that determine the nutritional problems in the human, especially among school children as a vulnerable group in the community **(Park, 1971).**

OBJECTIVES OF THE STUDY

The objectives of the current study are:

- To investigate the problem of intestinal parasitic infestation among a sample of primary school children aged 7-11 years in urban and rural areas of Egypt.

- To compare the prevalence of different intestinal parasitic infestations e.g. intestinal schistosomiasis, ascariasis, ancylostomiasis, enterobiasis, amoebiasis, giardiasis, hymenolepiasis between the urban versus the rural primary school children.

- To study the effect of these parasitic infestations on the anthropometric measurements of the studied children.

REVIEW OF LITERATURE

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I- Epidemiology OF The Common Intestinal Parasites Among The Primary School Children

i- Intestinal Schistosomiasis:

In Egypt, schistosomiasis is considered as a major public health problem due to the prevalence and morbidity of the disease among the Egyptians, especially the rural population. The disease affects production potential and thereby reduce the national income **(El-Khoby et al., 1991).** It was estimated that over one thousand million people living in tropical and sub-tropical countries are exposed to the risk of schistosomiasis and that 200 millions are actually infected **(Iatrotski and Avis, 1981).**

Schistosomiasis is predominantly an infection of rural and agricultural communities, with some periurban distribution where poverty, ignorance, poor housing, bad hygienic practices are existing **(Davis, 1986).**

The high prevalence of schistosomiasis in Egypt, contributes to the high infection rate of Africa **(Mott, 1984). WHO (1990)** estimated that about 200 millions persons are infected throughout the world.

The incidence of Schistosoma infection is generally higher in males than females, and rises with age until it reaches a maximum at the age between 10-14 years **(Rizk, 1958)**.

The endemicity of schistosomiasis in Egypt is due to 2 main factors: Behaviour of the population and the irrigation system applied **(El-Khoby et al., 1991)**.

In Egypt the infection rates with Schistosoma mansoni differ significantly between various areas, between different villages and even between different areas of the same village **(Farook et al., 1966)**.

Schistosoma mansoni is common in Nile Delta of Egypt and occurs in heavily endemic areas in Sudan, Ethiopia also it is endemic in central Africa extending from the Atlantic Coast at Senegal East World through Tanzania. In the Middle East it occurs in the Yemen and Saudi Arabia, in the Western hemisphere it occurs in Venzuela, extending Eastward through North Brazil **(Zoheir, 1988)**.

In Egypt approximately 20 million individuals are infected with S. mansoni and S. haematobium **(Abdel-Wahab et al., 1980)**.

There is a higher prevalence of schistosomiasis in males as compared to females **(Hammam et al., 1976).**

This higher infection rate among males reflects their increased exposure during work in the fields and swimming, bathing or fishing in infected water **(Hammam et al., 1976).**

ii- Ascariasis:

Is caused by the large round worm Ascaris lumbricoides. It is world wide parasite, its prevalence per million people is 800-1000 and it is the most common soil transmitted intestinal helminthiasis in man and causes approximately 30,000 deaths per year world wide **(Pawlowski, 1984).**

WHO (1987) estimated the global prevalence of Ascarias by 1000 millions cases. According to **Faust (1974) and Zoheir (1987)** Ascariasis is the most cosmopolitan and most common of all helminths.

Ascariasis is endemic in many regions in South East, Europe, Africa, Asia and Central and South America, but it may occur in any country. Transmission of ascariasis occurs throughout the year in the moist