

## I N T R O D U C T I O N

The human body serves as a host for different types of parasites due to its uniform or constant internal and external biotic conditions and is prone to harbour one or the other type of parasite, pathogenic or nonpathogenic. Of all these parasites that invade the human body about 66 per cent are harboured by the alimentary tract (Ansari, 1964). Infections with these intestinal parasites are a medical and public health problem of growing clinical importance (Spencer, et al., 1968).

Unlike the epidemic explosions of diseases like smallpox, cholera, etc. occurring dramatically, helminthic infections seldom shoot upto the banner headline of a newspaper. But, this lack of drama or journalistic value would seem to be more than compensated by their relentlessly corrosive and crippling design, producing mass incapacity in large population segments and exacting a devastating economic toll in areas where these are endemic. It is no exaggeration to say that they pose a greater hazard to the national health and economy than the contribution to the death roll by the sporadic epidemics of more dreadful diseases (Chowdhury, 1971a).

Although the nonpathogenic forms of protozoa dwelling in human intestine may not produce clinically demonstrable symptoms but may interfere with the metabolic balance of the host. Presence of some of these nonpathogenic forms like Trichomonas hominis and Chilomastix mesnili has given rise to inconclusive clinical debates (Manson-Bahr, 1961). Hyman (1940) has indicated that it seems very doubtful whether any of the intestinal flagellates are primarily harmful, but they may cause some injury

when intestinal disease is present. Presence of some of the intestinal protozoa like Trichomonas hominis, Chilomastix mesnili and Endolimax nana indicate an unusual condition in the gut which requires medical attention (Faust, et al., 1970). It may be noted here that Stiles (1913) had earlier suggested that the prevalence of intestinal protozoa in a community might be used as a criterion of the extent to which their food and drink are exposed to contamination with human faeces - as a measure of the effectiveness of the sanitary arrangements within the community.

Intestinal helminths still impair the health of hundreds of millions of people in all parts of the world. Even in the most highly developed countries where worm infections are relatively mild or few in number, the ones occurring will be rightly regarded as harmful (W.H.O., 1964). Seal, et al. (1957) concluded in a general health survey in Sikkim that intestinal parasitic infections caused much sickness and ill-health in the population.

Millions of people throughout the world get affected by intestinal protozoan and helminthic parasites. Our failure to tackle these parasites in general is due to lack of giving adequate importance to these infections by public health personnel or organisations.

The epidemiology of parasitic infections in human population is closely related to a number of bionomic and ecological factors which affect the survival and propagation of the causative pathogenic agents. It is also greatly influenced by social and economic conditions of the population, the state of hygiene and sanitation in the community and the pattern of works and behaviour of its members (Yoeli, et al. 1972).

Studies conducted so far do not highlight much on the epidemiological aspects of the intestinal protozoa and helminths in rural population of India. Much of research work published on the subject so far is hospital-oriented. A number of surveys in rural areas have no doubt been carried out but most, if not all of them, were of short duration, which failed to reveal the incidence rate, duration of excretion and seasonal variation i.e. the distribution pattern of intestinal parasitic infections particularly in an apparently healthy community.

To highlight the above facts, various factors such as environmental conditions, available sanitary facilities, dwelling habits, mode of defaecation, personal cleanliness, food habits, prevalence of fly nuisance and other hygienic and socio-economic factors which are responsible for the persistence of intestinal parasitic infections in a community are to be considered.

Pertinent information on all these facts and factors are most important to plan and adopt proper measures to eliminate or control these infections not only in an individual but in a community.

For complete understanding of these aspects a study was undertaken with the following objectives:-

#### Objectives

- i. To determine prevalence and incidence rates (Mac Mahon, et al., 1970 and Swaroop, 1960) every three months for a period of two years.
- ii. To observe the seasonal pattern of infections.
- iii. To study the variation in infections according to age, sex and size of household.