KNOWLEDGE, ATTITUDE AND PRACTICES TOWARDS SOIL-TRANSMITTED HELMINTHIASES AMONG ORANG ASLI IN SUNGAI LEMBING, PAHANG

By

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ABSTRACT

Nowadays, soil-transmitted helminthiasis (STHs) has been classified as the most prevalent neglected tropical disease (NTD) which contributes to approximately 135,000 morbidity cases annually. As one of the developing country, Malaysian Government are attention on establishing and improving the effective approach for infection and morbidity control. Noticeably, the local knowledge, attitudes and practices (KAP) regarding STH infection is vital control measure in minimizing the morbidity cases. However, the KAP information which is prized in control programs was identified as scanty and less clearly described in Malaysia. A cross-sectional study was carried out among 225 Orang Asli in Sungai Lembing, Pahang aimed to evaluate their KAP on STH infection by using pre-tested questionnaire. Fecal samples were collected using wide mouth and screw-caps container and examined by using modified formalin-ether sedimentation and Kato-Katz technique. The present study revealed that 174 (77.3%) respondents were found to be infected with at least one species of STH. The predominant species of STH infected to respondents were *Trichuris trichiura* with a prevalence 68.9%, followed by *Ascaris lumbricoides* (49.3%) and hookworm (5.8%). Significant associations between knowledge of respondents and their monthly income ($p < 0.001$), family members ($p < 0.001$) and educational level ($p = 0.011$). Moreover, significant association between attitude and practices of respondents with their household monthly income ($p = 0.038$) and family members ($p < 0.001$) reported. Based on Kato katz technique, *T. trichiura* infection demonstrated as the highest infected participants with heavy worm burden at 95.4%, followed by *A. lumbricoides* (50%) and hookworm (36.3%). This study reveals inadequate of knowledge, attitude and practices on STH infection among Orang Asli in rural Malaysia. These findings could significantly improve the implementation an integrated and effective control measures towards STH infection. Moreover, it is useful for public health authority in changing the trend of the particular infections in rural area which remains unchanged since 1920s with alarming high prevalence and prominent morbidity.

Keywords: STH, KAP, *Trichuris trichiura*, *Ascaris lumbricoides*, hookworm.

CHAPTER 1

INTRODUCTION

1.1 BACKGROUND

Intestinal parasitic infections (IPIs) are still public health issues in many communities, especially in the rural area of developing countries (Hotez *et al.*, 2009). About more than 2 billion people in worldwide are infected with IPIs and more than half of the world's population are at risk of infections (WHO, 2002). IPIs can cause by helminth parasites such as soil-transmitted helminths (*Trichuris trichiura, Ascaris lumbricoides*, hookworm and *Strongyloides stercoralis*), *Hymenolepis nana* and *Taenia* spp. These infections can caused by protozoan such as *Giardia duodenalis, Entamoeba histolytica* and *Cryptosporidium* spp. (Al-Delaimy *et al.*, 2014). IPIs can be infected to individuals are either asymptomatic or suffering from the mild disease in silence as chronic infections. However, severe and acute IPIs, especially with pathogenic *Giardia* and *Entamoeba*, may cause fatal diarrhea among children or both are commonly associated with traveller's diarrhea (Haque *et al.*, 2003; Faustini *et al.*, 2006). In addition, opportunistic IPIs such as *Crytosporidium*, *Isospora belli*, microsporidia and *Strongyloides* infections are usually reported with immunocompromised individuals such as HIV (Human Immunodeficiency Virus) patients with significant morbidity and mortality (Neava *et al.*, 1995). IPIs are pervasive with high prevalence among the poor and socioeconomically deprived communities where poor environmental sanitation, overcrowding, lack of access to safe water are prevalent and low level of education (Mehraj *et al.*, 2008) and trapping them in a perennial cycle of poverty (Hotez, 2009). Moreover, IPIs can contribute to economic instability and social marginalization; and the poor people of under developed nations experience (Steketee, 2003). According to the Egger *et al.* (1990), high morbidity also can caused by IPIs among young children and have been termed as 'the cancers of developing nations'.