

REVIEW ARTICLE

THE HEALTH OF MALAYSIA'S "ORANG ASLI" PEOPLES: A REVIEW OF THE SCIENTIFIC EVIDENCE ON NUTRITIONAL OUTCOME, PARASITE INFESTATIONS, AND DISCUSSION ON IMPLICATIONS FOR CLINICAL PRACTICE

KL Phua

School of Medicine and Health Sciences, Monash University Malaysia, Bandar Sunway, Malaysia

ABSTRACT

The Orang Asli of Malaysia continue to experience poor health. There appears to be stagnation of certain aspect of their health status. Underweight (low weight-for-age) and stunting (low height-for-age) are significant amongst Orang Asli children. Worm infestation such as Ascaris, Trichuris and hookworm continue to afflict Orang Asli communities in Malaysia. Orang Asli communities can also be afflicted by other kinds of parasites, e.g. malaria parasites, microsporidia parasites and Cryptosporidium parasites. Thus, primary care doctors who treat Orang Asli patients should be on the lookout for malnutrition and its effects (including anaemia, iodine deficiency, Vitamin A deficiency) as well as worm and parasite infestations. Such patients may need to undergo de-worming at regular intervals because of the tendency to get re-infected. Primary care doctors also need to be aware of possible interactions between infestations and nutritional deficiencies.

KEYWORDS: Orang Asli, health, Malaysia

INTRODUCTION

The "Orang Asli" (literally, original people) are estimated to number 150,000 out of a total Malaysian population of 28.3 million, i.e. less than 1%¹⁻². Ethnic categorisation in Malaysia is complex and affected by the country's British colonial legacy. The Orang Asli of Malaysia have been subjected to externally imposed ethnic categorisation by both the colonial and post-independence regimes. Article 160(2) of the Malaysian Constitution defines an Orang Asli as being "an aborigine of the Malay Peninsula", i.e. the indigenous people of Peninsular Malaysia or West Malaysia. Various ethnic groups in East Malaysia on the island of Borneo are also considered to be indigenous. The "Malays" of Malaysia are also officially recognised as indigenous with special rights enshrined in the Constitution.

Malaysia's "Orang Asli" people are actually heterogenous, number about 150,000 and are comprised of at least 18 distinct cultural-linguistic groups broadly classified into the so-called Negritos, Senoi and Proto-Malays. The Negrito group includes the Kensiu, Kintak, Lanoh, Bateq, Jahai and the Mendriq. The Senoi group includes the Semai, Temiar, Semoq Beri, Jahut, Che Wong and the Mah Meri. The Proto-Malay group includes the Temuan, Semelai, Jakun, Kanaq, Kuala and the Seletar³.

According to the Jabatan Kemajuan Orang Asli (Department of Orang Asli Development) or JAKOA,³ within the Negrito group, the Kensiu live in Baling district in Kedah state. There are also the

Kintak who live in Gerik, Perak; Lanoh who live in Hulu Perak in Perak state; and Bateq who live in Pahang (Lipis and Jerantut districts), Kelantan (Pos Lebir) and Terengganu. The Jahai are to be found in Perak and Kelantan; while the Mendriq make their home in Kelantan.

Orang Asli from the Senoi group live mainly in the states of Perak, Pahang and Kelantan. More specifically, the Semai live in central Perak, southern Perak, and western Pahang. Semoq Beri are to be found in the districts of Jerantut, Maran, and Kuantan in Pahang state. They are also found in Hulu Terengganu, and Kemaman in Terengganu state. The Jahut people make their homes in the districts of Temerloh and Jerantut in Pahang. The Che Wong live in the districts of Raub, Temerloh, and Jerantut in Pahang, while Mah Meri people can be found in rural Selangor.

Orang Asli from the Proto-Malay group include the Kuala who are to be found in Batu Pahat and Pontian districts in Johor state; the Kanag who live in Kota Tinggi in Johor; the Seletar (also known as "Sea Gypsies") in south Johor; the Semelai from central Pahang and along the Pahang-Negri Sembilan border; the Temuan from Selangor, Melaka, Pahang, Johor, and Negri Sembilan. There are also the Jakun who live in "selatan Semenanjung" (southern portion of Peninsular Malaysia).

A Malaysian non-governmental organisation called the Center for Orang Asli Concerns (COAC) which has been documenting the marginalisation and poor socio-economic status of Orang Asli vis-à-vis other Malaysian ethnic groups over the years

remains adamant that more can be done for the Orang Asli. COAC notes that Orang Asli continue to suffer from high poverty rates and tend to be poorly-educated. There is also the phenomenon of loss of traditional land (because such land is not legally titled with permanent tenure) to non-Orang Asli individuals and outside entities⁴. This affects the ability of Orang Asli to have continued access to forest resources, a vital part of their traditional way of life.

In 2010, according to official data from the Department of Statistics of Malaysia, 76.9% of Orang Asli were living below the poverty line. Another alarming figure from the Department of Statistics was that 35.2% of all Orang Asli were living in “hard core poverty” (i.e. monthly household income which is less than half of the poverty line)⁵.

Although Malaysia as a whole has made significant improvements in terms of population health since independence in 1957, the overall health status of the Orang Asli lags behind that of other Malaysian ethnic groups⁴. The Orang Asli continue to experience nutritional deficiencies, high rates of helminth infections, and suffer from malaria and tuberculosis.

Rusaslina Idrus, a critic of official policy towards the Orang Asli, noted that the infant mortality rate of the Orang Asli was significantly higher than that of the Malaysian population, i.e. 51.7 versus 8.9 per thousand live births. Life expectancy at birth was 53 years for the Orang Asli while it was 73 for the Malaysian population. Furthermore, in 2008, 40% out of the 4411 Orang Asli students who completed Year Six in primary school failed to continue to Form One (the first year of secondary school). Of those Orang Asli children who continued into secondary school, half dropped out before reaching Form Five⁶. A study by two Malaysian professors of education arrived at the conclusion that there has been a “dismal failure” in implementing educational programmes aimed at the Orang Asli and that this is indicated by very high educational dropout rates⁷. As a result of poor levels of educational achievement, the Orang Asli are also disadvantaged in the Malaysian job market.

METHODS

A literature search was conducted to identify scientific papers published from 1985 to 2013 that deal with the health status of the Orang Asli. Databases such as PubMed and Scopus were searched using the keywords “Orang Asli AND health AND Malaysia”. Papers published in the late 1980s and during the 1990s were included to

enable an analysis of whether there has been significant progress with respect to improvements in the health of different communities of Orang Asli over time. In the case of papers that were similar to each other, only one paper was chosen for inclusion. Selection of articles was restricted to studies containing original empirical data collected in the field.

Socio-Economic Background: The Common Fate of Indigenous Peoples Worldwide

The Asian Development Bank’s definition of “Indigenous People” include the following⁸:

Descent from population groups present in a given area, most often before modern states or territories were created and before modern borders were defined, and maintenance of cultural and social identities, and social, economic, cultural, and political institutions separate from mainstream or dominant societies and cultures.

Elsewhere, it has been argued that indigenous people commonly experience various kinds of “displacement” and marginalisation, with negative consequences for their health and welfare. The displacement of indigenous peoples can include any of the following⁹:

- Geographical - being displaced from the land originally inhabited by their ancestors and either forcibly removed or indirectly pressured to move to fringe or less desirable areas such as deserts, mountains and wilderness
- Political - experiencing loss of political power, with subsequent political subordination to other ethnic groups, e.g. the indigenous peoples of Latin American countries such as Guatemala (descendants of the Mayas)
- Economic - experiencing impoverishment because of loss of access to (or control over) natural resources, e.g. the Orang Asli, who continue to undergo this in contemporary Malaysia¹⁰⁻¹¹
- Social - being subjected to prejudice and discrimination, with paternalistic treatment at best, and violence and genocide at worst¹². In Malaysia, the JHEOA (Jabatan Hal-Ehwal Orang Asli or the Department of Orang Asli Affairs, this being the previous name of the Department of Orang Asli Development) has the legal power to regulate their settlements, determine whom will serve as village heads, and control entry into Orang Asli abodes. JHEOA even has control over the crops that Orang Asli grow and the usage of their lands.

- Cultural - the culture of indigenous peoples and their religious beliefs are often disdained and labeled as “primitive”, “backward”, “uncivilised” and “inferior”. The accompanying assumptions are that indigenous peoples need to be “brought into the mainstream”, “modernised”, “civilised”, “assimilated” etc.

One major consequence of all these forms of displacement and marginalisation is negative effect on the health and well-being of indigenous population groups¹³. Similar to indigenous peoples in other countries, the process of displacement and marginalisation of the Orang Asli in Malaysia is reflected in poorer health and socio-economic statistics⁴.

The health status of population groups is dynamic and thus changes over time. When we compare changes in the health and socio-economic situation of a particular group of people to other ethnic groups, the situation could be any one of the following⁹:

1. Stagnation or further deterioration of certain aspects of their health and socio-economic status
2. Improvement, but at a slower rate relative to other ethnic groups in their respective countries (thus resulting in a widening gap)
3. Improvement, with a narrowing of the gap between them and other ethnic groups in their respective countries

The Health of Orang Asli As Revealed By The Scientific Literature

Research conducted in various Orang Asli communities over the years indicate that their health status often lag behind that of other Malaysians. The following tables list various scientific studies and contain information on their key findings with respect to Orang Asli health.

Kasim et al’s 1987 study¹⁴ found that 56% of all the Orang Asli children in their sample were underweight and 65.7% of them were stunted. “Underweight” refers to low weight-for-age while “stunted” means low height-for-age. Such findings were replicated in other studies carried out in subsequent years. For example, Saibul et al. found that 58% of their sample of Orang Asli children

were underweight while 64% were stunted²². A more recent paper by Ahmed et al. found that 28% of the kids in their sample showed significant stunting while 29.2% were underweight²³.

Data for older Orang Asli are equally dismal. Thus, in 1998, Lim and Chee found that 35.7% of the females in their sample suffered from chronic energy deficiency. At the same time, 21.4% of the females were overweight or obese¹⁶. Yusof et al. study published in 2007 showed that 40% of all the adults in their sample showed signs of nutritional insufficiency. Other problems arising from poor nutrition such as goitre, Vitamin A deficiency, and anaemia were also found to be present in Orang Asli communities²⁰.

Worm infestation continues to afflict Orang Asli communities in Malaysia. Karim et al’s 1995 study found that intestinal worms were present in 48% of the Orang Asli males and in 73% of the Orang Asli females in their sample²⁴. More recent studies continue to show worrisome figures, e.g. 61.9% of sampled kids with *Ascaris*, 98.2% with *Trichuris* and 37% with hookworm¹⁹. Aini et al. showed that worm infestation can be severe and at relatively high prevalence rates, i.e. 19% of sampled kids with severe *Ascaris* infection, 26% with severe *Trichuris* infection and 3% with severe hookworm infection²⁸. Such findings are replicated by the latest studies, e.g. Ahmed et al. found that 84.6% of the kids in their sample were infected with *Trichuris*, 47.6% were infected with *Ascaris* and 3.9% were infected with hookworm²³. Nasr et al. found that Orang Asli children in their sample had 71.7% infection with *Trichuris*, 37.4% with *Ascaris* and 17.6% with hookworm³².

Orang Asli communities can also be afflicted by other kinds of parasites, e.g. malaria parasites, microsporidia parasites and *Cryptosporidium* parasites. Gurpreet’s study published in 2009 showed that 24.2% of sampled Orang Asli were infected with the parasite that causes malaria²⁹. Lono, Kumar and Chye found that 21% of their sampled population were infected with microsporidia parasites while Al-Mekhalafi et al. found that 7.2% of their sampled kids had the *Cryptosporidium* parasite³⁰⁻³¹.

Table1: Research Studies of the Nutritional Status of Orang Asli and Their Key Findings

Research Study & Year of Publication	Key Findings of the Study
Kasim, Ismail and Ibrahim (1987) ¹⁴	56% of all sampled kids are underweight (low weight-for-age) 65.7% of all sampled kids are stunted (low height-for-age)
Osman and Zaleha (1995) ¹⁵	35% of females in sample are malnourished 35% of males and 64% of females have goitre
Lim and Chee (1998) ¹⁶	35.7% of females in the sample suffer from chronic energy deficiency
Norhayati et al. (1998) ¹⁷	21.4% of females are overweight or obese About 20% of sampled people with protein-energy deficiency
Zalilah and Tham (2002) ¹⁸	38.4% with Vitamin A deficiency Food insecurity: 82% of sampled households Underweight: 45.3% Stunting: 51.6% Wasting: 7.8% (wasting means low weight-for-height) Diet quality of children: Poor - 68.7% Fair - 31.3%
Al-Mekhlafi et al. (2005) ¹⁹	56.5% significantly underweight 61.3% significantly stunted 19.5% significantly wasted
Yusof et al. (2007) ²⁰	40% showed nutritional insufficiency
Al-Mekhlafi et al. (2008) ²¹	52.3% of sampled kids mildly underweight 37.3% were significantly underweight 43.6% of sampled kids were mildly stunted 43.6% were significantly stunted 43.1% of sampled kids were mildly wasted 5.6% were significantly wasted
Saibul et al. (2009) ²²	58% of sampled kids were underweight 64% were stunted
Ahmed et al. (2012) ²³	31% of sampled women were overweight 20% were obese 41% of sampled kids had anaemia 28% showed significant stunting 29.2% were underweight 12.5% showed signs of wasting

Implications For Treatment And Management of Orang Asli Patients

The above review of the scientific evidence imply that primary care doctors and other health personnel who treat Orang Asli must be sensitive at all times to the possibility of disorders arising from malnutrition and from parasite or worm infestation. Paradoxically, some Orang Asli adults can be overweight or even obese and thus suffer from disorders associated with these physical conditions³⁴.

In terms of malnutrition, primary care doctors may need to treat Orang Asli patients for anaemia,

iodine deficiency, or Vitamin A deficiency. Conversely, overweight or obese Orang Asli patients may present with ailments such as diabetes. It should be remembered that worm infestation - rarely seen in the rest of the Malaysian population - can worsen any existing malnutrition problem amongst Orang Asli patients, e.g. anaemia can arise from hookworm infestation since they feed on blood and can cause internal bleeding. A systematic analysis paper summarizing the effects of anti-helminth drugs on maternal and child health was published by the Cochrane Collaboration. The authors of the paper mentioned that³⁵.

Table2: Research Studies of Worm and Parasite Infestations of Orang Asli and Their Key Findings

Research Study & Year of Publication	Key Findings of the Study
Karim et al. (1995) ²⁴	Intestinal worms are present in: 48% of males in sample 73% of females in sample
Norhayati et al. (1997) ²⁵	62.9% of sampled kids with Ascaris worms 91.7% with Trichuris worms 28.8% with hookworm
Zulkifli et al. (1999) ²⁶	47.5% of sampled kids with Ascaris 33.9% with Trichuris 6.2% with hookworm
Al-Mekhlafi et al. (2005) ¹⁹	61.9% of sampled kids with Ascaris 98.2% with Trichuris 37% with hookworm
Hakim et al. (2007) ²⁷	25.7% of sampled people with Ascaris worms 31.1% with Trichuris 8.1% with hookworm 17.6% with giardiasis 8.1% with Blastocystis hominis 2.7% with Cryptosporidium parasite
Aini et al. (2007) ²⁸	19% of sampled kids with severe Ascaris 26% with severe Trichuris infection 3% with severe hookworm infection 24.9% with giardiasis 41.5% of sampled kids were anaemic
Gurpreet (2009) ²⁹	24.2% of sampled people infected with malaria parasite
Lono, Kumar and Chye (2010) ³⁰	21% of sampled people were infected with microsporidia parasites
Al-Mekhalafi et al. (2011) ³¹	7.2% of sampled kids were infected with Cryptosporidium parasite
Ahmed et al. (2012) ²³	84.6% of sampled kids infected with Trichuris 47.6% infected with Ascaris 3.9% infected with hookworm
Nasr et al. (2013) ³²	71.7% of sampled kids infected with Trichuris 37.4% infected with Ascaris 17.6% infected with hookworm
Anuar et al. (2013) ³³	20.4% detected positive for Blastocystis

Pregnancy complicated by maternal hookworm infection poses a serious threat to the health of mothers and their babies, especially in developing countries. (We found).... three randomised controlled trials evaluating the impact of giving a single antihelminth treatment in the second trimester of pregnancy. The studies were conducted in Sierra Leone, Peru and Entebbe Uganda. A total of 1329 women were randomly assigned to receive a single dose of albendazole or mebendazole, or a placebo..... Analysis of the impact of antihelminth intervention on maternal anaemia including all results showed that the intervention was not associated with any clear impact on maternal anaemia or on low birthweight, perinatal deaths or preterm births. Unfortunately, although de-worming using drugs such as albendazole, levamisole, mebenda-zole, pyrantel, and ivermectin³⁶ can help to improve the

health of individual Orang Asli patients, such patients although have a tendency to get re-infected quickly³⁷. This could be one reason for the negative findings of Haider, Humayun and Bhutta described above. Hence, primary care doctors may need to convince Orang Asli patients to undergo de-worming at regular intervals.

Malaysian policy-makers can directly assist the efforts of primary care providers who treat Orang Asli patients by facilitating the work being done by relevant Ministry of Health staff and through private sector GPs, e.g. making nutritional supplements (such as iron pills and Vitamin A pills) and de-worming drugs more readily available and affordable. Longer term policy goals should, of course, include improving the nutritional intake of Orang Asli, improving their health literacy, and preventing worm and parasite infestations through

proper water supply and sanitation. Malaria parasite infestation can be reduced through the provision of free bed nets and mosquito repellants.

CONCLUSIONS

From the studies discussed and the empirical data presented in Table 1 and Table 2 above, it can be concluded that the health of the Orang Asli remain poor - even if there has been improvement over the years. Underweight (low weight-for-age) and stunting (low height-for-age) are still significant amongst Orang Asli children. For example, Kasim et al's 1987 study¹⁴ found that 56% of the Orang Asli children in their sample were underweight and 65.7% of them were stunted. In 2012, i.e. a quarter of a century later, Ahmed et al. found that 28% of the kids in their study sample showed significant stunting while 29.2% were underweight²³.

Worm infestation such as Ascaris, Trichuris and hookworm continue to afflict Orang Asli communities in Malaysia. Reinfestation after deworming is also common. Again, the 2012 study done by Ahmed et al. found that 84.6% of the kids in their sample were infected with Trichuris, 47.6% were infected with Ascaris and 3.9% were infected with hookworm²³. Nasr et al. found in 2013 that Orang Asli children in their sample had 71.7% infection with Trichuris, 37.4% with Ascaris and 17.6% with hookworm³².

Orang Asli communities are also afflicted by other kinds of parasites, e.g. malaria and microsporidia parasites, at significant levels. Gurpreet's 2009 study showed a malaria parasite prevalence rate of 24.2%²⁹ while Lono, Kumar and Chye found in 2010 that 21% of their sample were infected with microsporidia parasites³⁰.

Some researchers argue that even if there has been improvement (in terms of mean infection rate of intestinal parasites), these can occur at a slower rate relative to other major Malaysian ethnic groups. Hence, more needs to be done in order to narrow the gap between the health of Orang Asli and other Malaysian ethnic groups. For example, Lim et al. called for the establishment of a national parasitic infection baseline databank in order to improve the health of the Orang Asli³⁸.

CONFLICT OF INTEREST

None

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