

ues of serum total IgE were converted to a log scale before analysis.¹⁶ A value $p < 0.05$ was considered to be statistically significant.

RESULTS

Subjects

The 302 Thai laborers were males of 20-56 (33.6 ± 7.3) years of age. They had been educated in school for 6.3 ± 0.2 years, and 69.3% had only a primary education. Their average monthly income was Thai Baht $\$5563 \pm 433$ and 77.4% were married. Twenty percent of the laborers had travelled to other countries including Libya, Saudi Arabia, and Singapore before coming to Taiwan.

Prevalence

Among the 302 Thai laborers examined, 196 (64.9%) were found to be infected with 1 to 5 species of parasites. The rates of single, double, and triple infections were 34.4%, 25.2%, and 4.6%, respectively. One individual had 4 parasites and another had 5. Nine different parasites were observed in the fecal specimens; *O. Viverrini*, hookworm, and *Strongyloides stercoralis* were the most frequent ones (Table 1).

Epidemiology

Demographic data: The infection rates in the 20-29, 30-39, and ≥ 40 -year groups were 65.6% (63/96), 63.2% (84/133) and 67.1% (49/73), respectively. There were no significant differences among these 3 groups ($p = 0.84$).

Although no significant difference was found on infection rates by residence in urban and rural areas or by income ($p > 0.05$), a significantly higher positive

Table 1. Parasite-specific Prevalence among 302 Thai Laborers in Taiwan

Parasite	No. positive	Percent positive
<i>Opisthorchis viverrini</i>	130	43.0%
Hookworm	116	38.4%
<i>Strongyloides stercoralis</i>	42	13.9%
<i>Giardia lamblia</i>	12	4.0%
<i>Trichuris trichiura</i>	2	0.7%
<i>Fasciolopsis buski</i>	2	0.7%
<i>Taenia sp.</i>	1	0.3%
<i>Echinostoma sp.</i>	1	0.3%
<i>Entamoeba coli</i>	1	0.3%

rate of *O. viverrini* infection was found among the lower income group. Of those with incomes about or less than Thai Baht 5000/month, 45/99 or 45.5% were positive, while of those with incomes greater than Thai Baht 5000/month, 16/58 or 27.6% were positive ($p < 0.05$). Most (209/220 ; 95%) of the laborers came from northeastern Thailand.

Infection and Treatment Before Arrival in Taiwan

Twenty-three percent of laborers (66/282) acknowledged that they had had a parasitic infection in Thailand and 23.2% (60/259) had received drug treatment before their arrival in Taiwan. Although a previous history of infection was associated with hookworm and *O. viverrini* infections (McNemar Chi-square test, $p < 0.05$), there was no association with strongyloidiasis (Table 2).

Hygienic Practices and Customs

Thirty-eight percent (97/252) of the laborers had eaten raw fish, and 26% (63/242) had tasted *koipla*.

Table 2. Agreement between Results of Examination and Acknowledgement by the Laborers that They had Acquired and had been Treated for Intestinal Parasitic Infections before Arriving Taiwan

	Positive fecal examination/acknowledgment by laborers							
	Hookworm		<i>Strongyloides stercoralis</i>		<i>Opisthorchis viverrini</i>		Overall	
	No.	%	No.	%	No.	%	No.	%
Known to have infection before arrival	29/40	72.5 ^a	8/19	42.1	37/48	77.1 ^a	55/66	83.3 ^a
Received treatment before arrival	28/42	66.7 ^a	8/22	36.4	29/43	67.4 ^a	46/60	76.6 ^a

^aMcNemar Chi-square test: $P < 0.05$.