

### **Factors associated with *Ascaris lumbricoides* Re-infection**

In the current study, bivariable logistic regression analyses were performed to identify factors associated with *A. lumbricoides* reinfection after three months, as shown in (Table 2). Factors including latrine utilization (COR: 0.09, 95% CI: 0.01-0.49), hand washing with soap after defecation (COR: 4.22, 95% CI: 1.15-15.5), and finger nail trimming practice (COR: 3.81, 95% CI: 1.04-13.83) yielded *P*-values < 0.25 and were subsequently entered into multivariable analysis

**Table 2.**Bivariable logistic regression analysis of associated factors for *Ascaris lumbricoides* re-infection among school children in chuahit, Northwest Ethiopia

| Variables              | Category            | <i>Ascaris lumbricoides</i> reinfection |            | COR (95%CI)       | P-value        |
|------------------------|---------------------|-----------------------------------------|------------|-------------------|----------------|
|                        |                     | No. of RI                               | No. of NRI |                   |                |
| Age (years)            | 7-10                | 12                                      | 23         | 1                 | 0.900          |
|                        | 11-14               | 7                                       | 4          | 1.09(0.26- 4.49)  |                |
| Sex                    | Female              | 8                                       | 17         | 1                 | 0.666          |
|                        | Male                | 8                                       | 13         | 1.30(0.38- 4.41)  |                |
| Fathers occupation     | Government employee | 3                                       | 2          | 4.5(0.61- 32.69)  | 0.137          |
|                        | Farmer              | 7                                       | 21         | 1                 |                |
|                        | Merchant            | 6                                       | 7          | 2.57(0.64 -10.28) |                |
| Residency              | Rural               | 4                                       | 5          | 1                 | 0.500          |
|                        | Urban               | 12                                      | 25         | 0.6(0.136- 2.64)  |                |
| Mothers' education     | Illiterate          | 11                                      | 20         | 1                 | 0.577          |
|                        | Primary school      | 2                                       | 6          | 0.60(0.10 - 3.52) |                |
|                        | Secondary school    | 1                                       | 2          | 0.90(0.07- 11.19) |                |
|                        | Collage and above   | 2                                       | 2          | 1.81(0.22- 14.75) |                |
| No. of siblings        | 0-1                 | 1                                       | 1          | 1                 | 0.550          |
|                        | 2-3                 | 10                                      | 24         | 0.41(0.023- 7.33) |                |
|                        | ≥4                  | 5                                       | 5          | 1 (0.04- 20.82)   |                |
| Nail trimming practice | Yes                 | 2                                       | 18         | 1                 | <b>0.043 *</b> |
|                        | No                  | 14                                      | 12         | 3.81(1.04- 13.83) |                |
| Shoes wearing          | Every time          | 11                                      | 22         | 1                 | 0.743          |
|                        | Sometimes           | 5                                       | 8          | 1.25(0.33- 4.73)  |                |
| Hand washing with      | Every time          | 1                                       | 1          | 1                 |                |

|                                         |             |    |    |                   |               |
|-----------------------------------------|-------------|----|----|-------------------|---------------|
| soap before a meal                      | Sometimes   | 13 | 24 | 2.15(0.12- 37.19) | 0.598         |
|                                         | Never       | 2  | 1  | 0.50(0.01-19.56)  | 0.711         |
| Hand washing with soap after defecation | Yes         | 7  | 23 | 1                 |               |
|                                         | No          | 9  | 7  | 4.22(1.15 -15.5)  | <b>0.030*</b> |
| Drinking water source                   | Home pipe   | 6  | 10 | 1                 |               |
|                                         | Public pipe | 5  | 14 | 0.59(0.14 -2.50)  | 0.479         |
|                                         | Pit water   | 5  | 6  | 1.11(0.21- 5.61)  | 0.899         |
| Latrine availability                    | Yes         | 5  | 19 | 1                 |               |
|                                         | No          | 11 | 11 | 0.09(0.01- 0.49)  | <b>0.005*</b> |

No.: Numbers; RI : re infected; NRI: not re infected; COR: crude odds ratio; CI: confidence interval; 1.: reference; \*: significant association at  $P < 0.25$ .