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Spatial analysis of the association between LLIN use and malaria prevalence in a longitudinal cohort in northeast Uganda

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Abstract The text of your abstract. 150 – 250 words.

Keywords LLIN · Spatial analysis · Malaria · RDT · Microscopy ·

1 Introduction

Your text comes here. Separate text sections with

2 Methods

Text with citations by Galyardt (2014), (Mislevy 2006).

2.1 Subsection title

as required. Don't forget to give each section and subsection a unique label (see Sect. 2).

Paragraph headings Use paragraph headings as needed.

$$a^2 + b^2 = c^2 (1)$$

Grants or other notes about the article that should go on the front page should be placed here. General acknowledgments should be placed at the end of the article.

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3 Results

Table 1: Demographic characteristics, net usage, and malaria status of study population.

| | Time 1 (N=194) | Time 2 (N=198) | Time 3 (N=200) | Time 4 (N=200) | p |
|--------------------------|-------------------|-------------------|-------------------|-------------------|---------|
| Demographic | | | | | |
| Age mean (sd) | 23.1 ± 15.8 | 22.4 ± 15.1 | 25.4 ± 17.5 | 25.4 ± 19.1 | 0.165 |
| People per HH mean(sd) | 5.6 ± 3.0 | 5.8 ± 3.3 | 5.1 ± 2.9 | 5.4 ± 2.9 | 0.129 |
| Net usage | | | | | |
| Nets per HH mean(sd) | 1.9 ± 1.7 | 2.9 ± 1.6 | 2.4 ± 1.3 | 2.0 ± 1.5 | < 0.001 |
| Nets per person mean(sd) | 0.4 ± 0.3 | 0.6 ± 0.3 | 0.6 ± 0.3 | 0.5 ± 0.3 | < 0.001 |
| Nets per two mean (sd) | | | | | < 0.001 |
| 0 | 120 (61.9%) | 66 (33.3%) | 70 (35%) | 105 (52.5%) | |
| 1 | 74 (38.1%) | 132 (66.7%) | 130 (65%) | 95 (47.5%) | |
| Malaria | | | | | |
| Total sampled mean (sd) | 4.7 ± 2.6 | 4.3 ± 2.4 | 4.0 ± 2.1 | 4.0 ± 2.2 | 0.005 |
| Prop + by RDT | 0.4 ± 0.3 | 0.5 ± 0.3 | 0.3 ± 0.3 | 0.2 ± 0.2 | < 0.001 |
| Prop + by microscopy | 0.2 ± 0.2 | 0.2 ± 0.3 | 0.1 ± 0.2 | 0.1 ± 0.2 | < 0.001 |

Table 2: Coefficients from spatial model

| | Dependent Variable | | | | | |
|-----------|----------------------------|----------------------------------|------------------------|----------------------------|--|--|
| | RDT+ | | MIC+ | | | |
| | Net Cov | >= 1 net per 2 | Net Cov | >= 1 net per 2 | | |
| netCov | 0.681 (0.525, 0.873) | 0.813 (0.73, 0.94) | 0.702 (0.513, 0.982) | 0.859 (0.709, 1.01) | | |
| Time | | | | | | |
| stime2 | 1.08 (0.936, 1.26) | 1.08 (0.913, 1.22) | 1.48 (1.16, 1.81) | 1.44 (1.18, 1.76) | | |
| stime3 | $0.670 \ (0.552, \ 0.796)$ | 0.681 (0.55, 0.791) | 0.815 (0.598, 1.1) | 0.781 (0.591, 0.994) | | |
| stime4 | $0.612 \; (0.515, 0.717)$ | 0.614 (0.51, 0.734) | 0.791 (0.58, 1.03) | $0.784 \; (0.575, 0.989)$ | | |
| Spatial | | | | | | |
| longitude | 0.00286 (0.000212, 0.108) | $0.00253 \ (0.000115, \ 0.0263)$ | 0.014 (0.000124, 1.08) | 0.0104 (0.0000946, 0.61) | | |
| latitude | 0.852 (0.178, 5.21) | 0.751 (0.169, 5.04) | 0.203 (0.0116, 2.61) | 0.211 (0.0186, 3.39) | | |
| sig^2 | 1.01 (1.00, 1.02) | 1.01 (1, 1.02) | 1.03 (1.01, 1.08) | 1.03 (1.01, 1.08) | | |
| phi | 1.52 (1.52, 7.39) | 1.04 (1.04, 6.69) | 1.04 (1.04, 6.82) | 1.04 (1.04, 6.96) | | |

3.1 Subsection title

Referencing Table 1 is cool. as required. Don't forget to give each section and subsection a unique label (see Sect. 3).

Paragraph headings Use paragraph headings as needed.

$$a^2 + b^2 = c^2 (2)$$

References

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