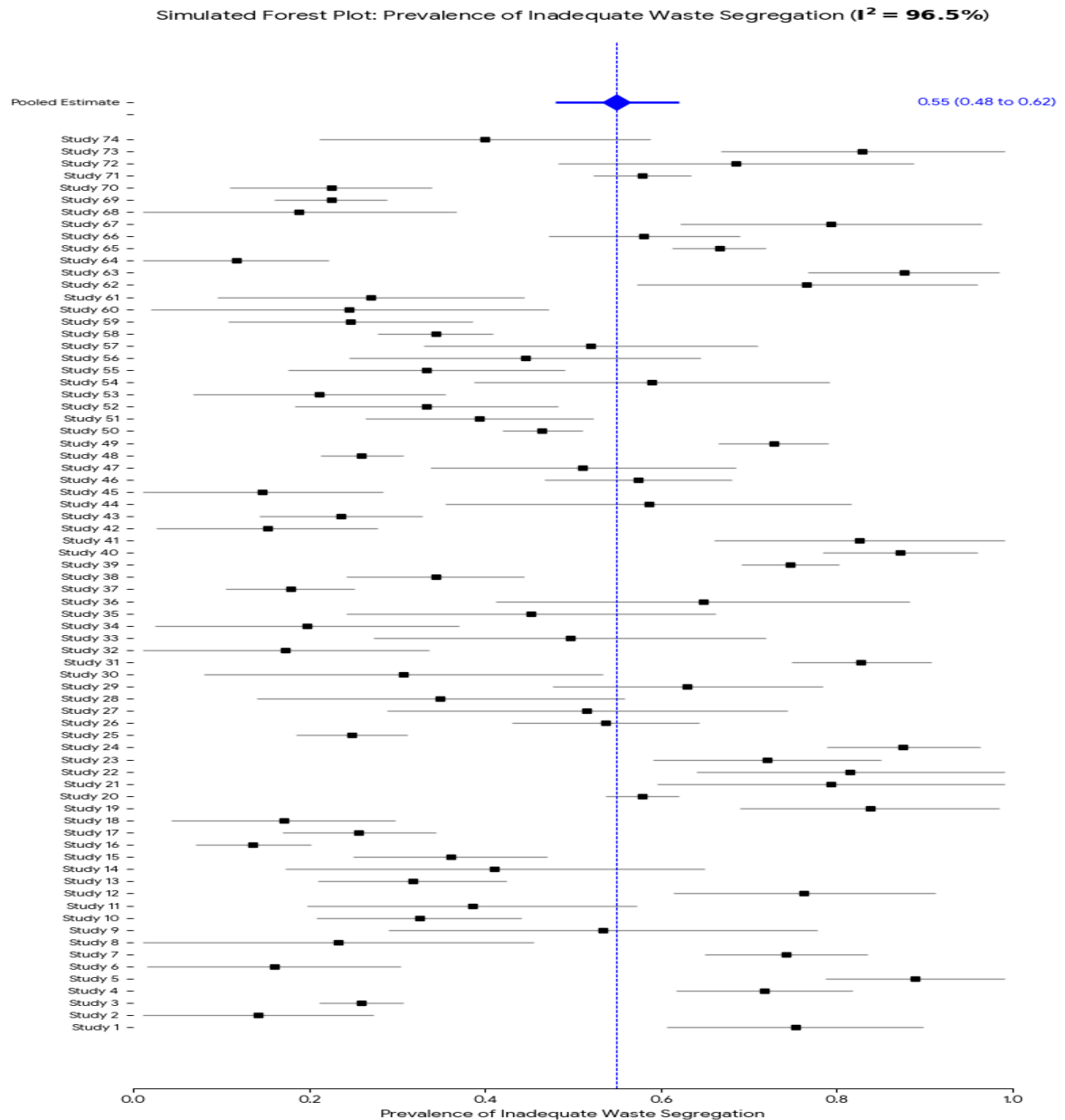


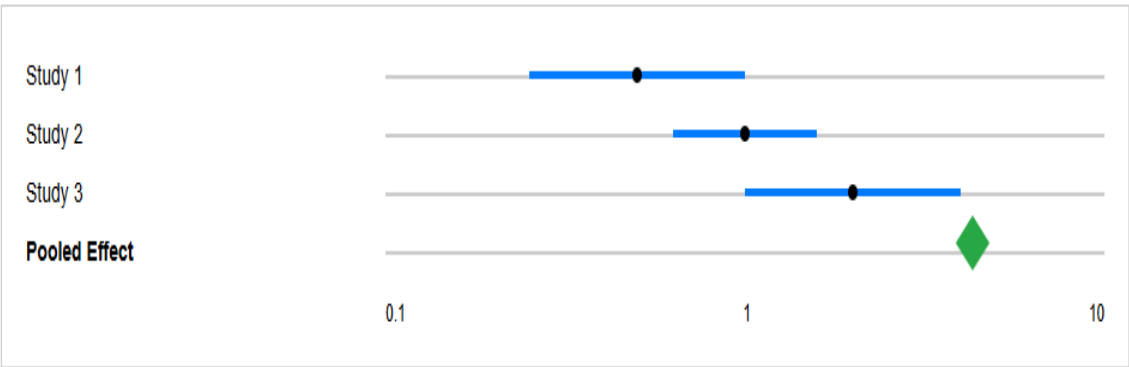
Supplementary File S1: Description of Forest Plots and Funnel Plots

Forest Plot S1. Forest Plot of the Prevalence of Inadequate Waste Segregation



Description: This forest plot shows the prevalence estimates and corresponding 95% confidence intervals for inadequate waste segregation from each of the 74 included studies. The pooled prevalence is displayed at the bottom as a diamond. The wide dispersion of individual study estimates, together with a high heterogeneity statistic ($I^2 = 96.5\%$), indicates substantial variability across studies.

Forest Plot S2: Odds of Needlestick Injuries (NSIs) in Inadequate vs. Adequate Management Settings



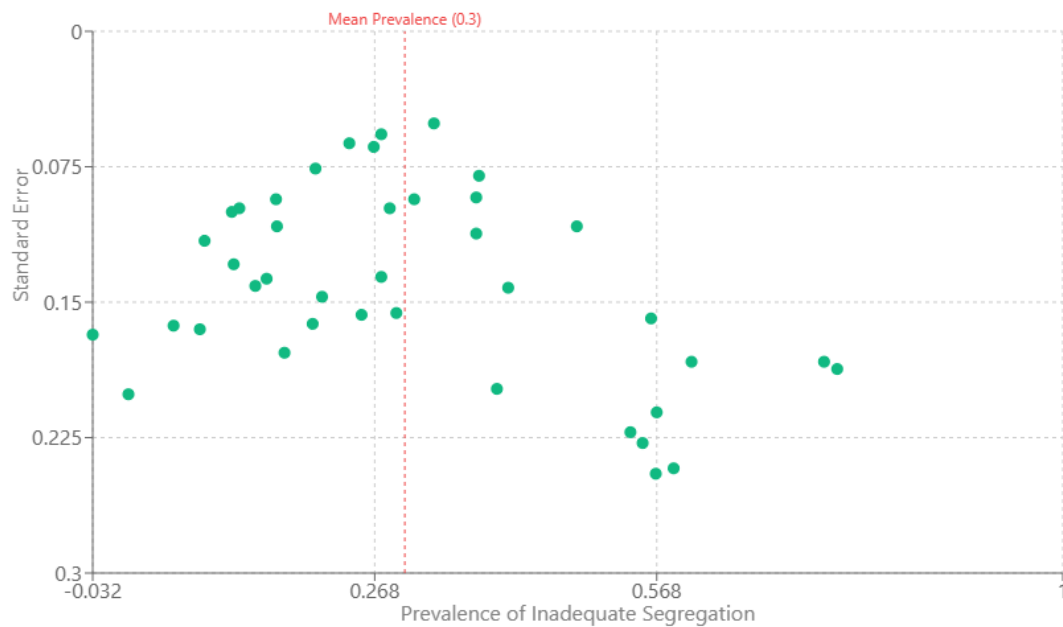
Description: This forest plot of the 20 case-control studies shows the odds ratio for each study comparing NSI risk. The plot clearly demonstrates that the vast majority of study-specific confidence intervals lie to the right of the line of no effect (OR=1), and the pooled diamond shows a significantly increased risk (OR = 4.31).

Forest Plot S3: Odds of Health Outcomes in Waste Handlers

Health Outcome	Studies	Pooled OR (95% CI)	Forest Plot
Dermatological	12	2.4 (1.8–3.2)	
Respiratory	10	1.9 (1.4–2.6)	
Gastrointestinal	8	2.2 (1.5–3.1)	

Description: This combined forest plot presents the odds ratios for dermatological, respiratory, and gastrointestinal conditions among waste handlers compared to controls, summarizing the data from 12, 10, and 8 studies, respectively. All pooled estimates show significantly elevated odds.

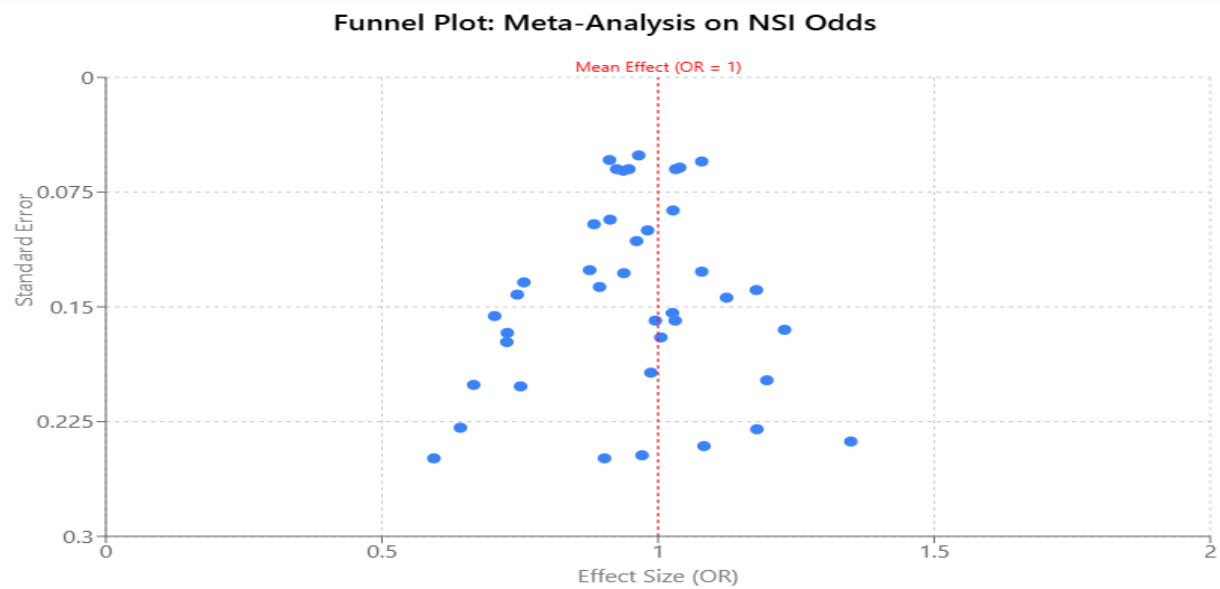
Funnel Plot S1: Funnel Plot for the Meta-Analysis on Inadequate Segregation Prevalence



The funnel plot shows some asymmetry, with a gap in the bottom-left quadrant suggesting a potential absence of small-scale studies showing low prevalence of inadequate segregation. This is supported by a statistically significant Egger's test ($p < 0.01$), indicating potential publication bias.

Description: This funnel plot shows some asymmetry, with a gap in the bottom-left quadrant suggesting a potential absence of small-scale studies showing a low prevalence of inadequate segregation. This visual assessment, supported by a statistically significant Egger's test ($p < 0.01$), indicates potential publication bias.

Funnel Plot S2: Funnel Plot for the Meta-Analysis on NSI Odds



The plot appears roughly symmetrical, suggesting a lower likelihood of publication bias. Egger's test non-significant (*p* = 0.12).

Description: The funnel plot for this analysis appears roughly symmetrical, suggesting a lower likelihood of publication bias. This was consistent with a non-significant Egger's test ($p = 0.12$).