

Intercoder reliability test results for air pollution content analyses

This document contains information about the results from the intercoder reliability tests for the content analyses contained in the following research note. All reliability statistics were calculated using the ReCal web service (Freelon, 2010).

Kotcher, J.E., Adebayo, A., Borth, A., Maibach, E., Leiserowitz, A., Rosenthal, S. (2019). *Many Americans appear unaware of the specific health problems caused by air pollution*. Yale University and George Mason University. New Haven, CT: Yale Program on Climate Change Communication.

Table 1. Intercoder reliability statistics for perceived health problems from air pollution

Category	Percent Agreement	Krippendorff's Alpha
Allergies	99.8	0.97
Asthma	99.2	0.97
Birth defects/premature birth	99.1	0.00
Black lung	100.0	1.00
Climate change/Global warming	99.6	0.82
COPD	99.7	0.98
Death	99.9	0.92
Diabetes	100.0	undefined
Eye irritation	100.0	1.00
Heart disease	99.6	0.94
Immune deficiencies	100.0	1.00
Kidney disease	100.0	undefined
Lung cancer	99.6	0.97
Neurological problems	99.7	0.77
General respiratory problems	97.5	0.95
Other cancer	99.2	0.97
Poor air quality	97.9	0.79
Skin irritation	99.9	0.97
Special populations affected	98.0	0.30
Weakening of bones	100.0	undefined
Don't know	99.0	0.70
Other	96.2	0.26
Unintelligible	98.2	0.28
No response	99.9	0.00

Note: Krippendorff's alpha is undefined when there are zero instances of a category in the data. A small number of categories have high percent agreement, but a low Krippendorff's alpha (below .667). This occurred due to low incidence of that category in the data, which is known to heavily influence Krippendorff's alpha (Lacy et al., 2015). COPD stands for chronic obstructive pulmonary disease.

Table 2. Intercoder reliability statistics for perceived vulnerable populations from air pollution

Category	Percent Agreement	Krippendorff's Alpha
All people are vulnerable	99.7	0.86
Babies/very young	99.8	0.97
Children/young	99.6	0.97
City dwellers	99.0	0.93
Coal miners	99.6	0.86
Seniors	99.8	0.99
Disenfranchised	99.8	0.67
Live/work in polluted area	97.4	0.85
Low immunity	99.4	0.87
Minorities	99.7	0.94
Outdoor workers/farmers	99.8	0.75
Poor/low income	99.3	0.95
Rural	99.9	0.67
Sick and disabled	97.8	0.85
Smokers	100.0	1.00
Specific region	99.6	0.84
Uninsured/limited healthcare	100.0	1.00
Women	100.0	1.00
Don't know	100.0	1.00
Other	96.7	0.40
Unintelligible	98.6	0.27
No response	99.9	1.00

Note: A small number of categories have high percent agreement, but a low Krippendorff's alpha (below .667). This occurred due to low incidence of that category in the data, which is known to heavily influence Krippendorff's alpha (Lacy et al., 2015).

References

- Freelon, D. (2010). ReCal: Intercoder reliability calculation as a web service. *International Journal of Internet Science*, 5(1), 20-33.
- Lacy, S., Watson, B. R., Riffe, D., & Lovejoy, J. (2015). Issues and best practices in content analysis. *Journalism & Mass Communication Quarterly*, 92(4), 791-811