

Soo-Yeon Kim
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Education

Korea University

Seoul, South Korea

BS in Health and Environmental Science (Mar. 2012 - Feb. 2018)

- Department of Health and Environmental Science
- Overall GPA: 3.77/4.5
- Compulsory military service for Mar. 2014 - Dec. 2015

MPH in Epidemiology & Risk Management (Mar. 2018 - Feb. 2020)

- Department of Public Health Sciences
- Dissertation: “Health Effects of Air Quality Regulations in Seoul Metropolitan Area: Applying Synthetic Control Method to Controlled Interrupted Time Series Analysis”
- Overall GPA: 4.38/4.5
- Advisor: Jong-Tae Lee

George Washington University

Washington, DC, US

PhD in Environmental Health (Aug. 2022 - Present)

- Department of Environmental and Occupational Health
- Advisor: Susan C. Anenberg

Work & Professional Experience

Undergraduate Research Assistant

- Environmental Epidemiology Lab, Korea University, Seoul, South Korea (Apr. 2017 - Feb. 2018)

Graduate Research Assistant

- Environmental Epidemiology Lab, Korea University, Seoul, South Korea (Mar. 2018 - Apr. 2020)
- Air, Climate, and Health Lab, George Washington University, Washington, DC, US (Sep. 2022 – present)

Graduate Teaching Assistant

- Department of Environmental and Occupational Health, George Washington University, Washington, DC, US
 - Environmental and Occupational Epidemiology (PUBH 6121, 2023-2025 Fall)
 - Quantitative Methods in Environmental and Occupational Health (PUBH 6131, 2024 Spring)

Research Intern

- National Evidence-based Healthcare Collaborating Agency (NECA), Department of Health Policy Research & Development of Clinical Evidence Research, Seoul, South Korea (Apr. 2021 - Aug. 2021)

Teaching

- Guest lecture, Families and Global Health (University of Maryland College Park, School of Public Health, FMSC 110-0201, 0202, 2025 Spring)

- Co-mentorship, Independent study (master's student Vana Brookins, George Washington University, School of Public Health, 2025 Spring)
- Co-instructor, Environmental and Occupational Epidemiology (George Washington University, PUBH 6121, 2025 Fall)

Research Grants

1. FI (Future Investigator) (PI: Susan C. Anenberg & Co-I: Gaige H. Kerr): "Application of satellite observations in estimating NO₂ concentrations and mortality burdens in the continental United States (CONUS) at small spatial scales", NASA FINESST (2024-present; \$150,000)
2. Participated in developing and drafting a research proposal, data analysis, writing a final report:
 - "Development of indices for the evaluation of food-safety policy effectiveness" (Mar. 2018 - Nov. 2018)
 - "Analysis of determinants of health in Korea based on linked data between the Korean National Health and Nutrition Examination Survey and cause of death statistics" (Jun. 2018 - Dec. 2018)
 - "Development of indices for evaluating environmental health policies and R&D projects" (Nov. 2018 - May. 2019)
 - "Study on the Management Manual for the Particulate Matter Social disaster" (Mar. 2019 - Jun. 2019)
 - "Analysis of trend and determinants in health-related behavior and chronic diseases based on the Korean National Health and Nutrition Examination Survey" (Aug. 2019 - Mar. 2020)
 - "Development of environmental health policies focusing on susceptible populations" (Dec. 2019 - Mar. 2020)

Publications

1. **Kim, S. Y.**, Kerr, G. H., Nawaz, O., Anenberg, S. C. Spatiotemporal Trends and Disparities in NO₂ Exposure and Attributable Mortality in U.S. Census Tracts (2019–2024). In preparation.
2. **Kim, S. Y.**, Kerr, G. H., Anenberg, S. C. Associations between city-level socioeconomic status and urban air pollution-related disease burdens across 13,000 cities worldwide. In preparation.
3. Seo, J., Byun, G., **Kim S. Y.** Weon, S., Bell, M. Air Quality Changes During the Paris 2024 Olympics: Impacts, Interventions, and Global Comparisons. In preparation.
4. Kerr, G. H., Amegah, K., Chen, L., Crooks, J., Shindell, D., Vorha, K., Akritidis, D., Anenberg, S. C., Carleton, C., Lacey, F., **Kim, S. Y.**, Lin, J., Nawaz, M. O., Pant, P., Pozzer, A., von Schneidemesser, E., Turnock, S., Wang, S., West, J. J., & YingYing, Y. Tropospheric Ozone Assessment Report II: Ozone trends, population exposure, and health impacts. In preparation.
5. Zimmer, A., Kerr G. H., **Kim S. Y.**, S. Anenberg, C. Tuholske. Changing urban demographic exposure to extreme heat and air pollution. In preparation.
6. **Kim, S. Y.**, Kerr, G. H., van Donkelaar, A., Martin, R. V., West, J. J., Anenberg, S. C. (2025). Tracking air pollution and CO₂ emissions in 13,189 urban areas worldwide using large geospatial datasets. *Commun Earth Environ* 6, 311.
7. Byun, G., Choi, Y., Foo, D., Stewart, R., Song, Y., Son, J. Y., ... & Bell, M. L. (2024). Effects of ambient temperature on mental and neurological conditions in older adults: A systematic review and meta-analysis. *Environment international*, 109166.
8. **Kim, S. Y.**, Kim, H., & Lee, J. T. (2020). Health Effects of Air-Quality Regulations in Seoul Metropolitan Area: Applying Synthetic Control Method to Controlled-Interrupted Time-Series Analysis. *Atmosphere*, 11(8), 868.
9. Byun, G., Kim, S., **Kim, S. Y.**, Park, D., Shin, M. J., Oh, H., & Lee, J. T. (2020). Blood Lead Concentrations and Mortality in Korean Adults: the Korea National Health and Nutrition Examination Survey with Mortality Follow-Up. *Int. J. Environ. Res. Public Health*, 17(18), 6898.

10. Kim, H., Byun, G., Choi, Y., Kim, S., **Kim, S. Y.**, & Lee, J. T. (2020). Effects of long-term exposure to air pollution on all-cause mortality and cause-specific mortality in seven major cities of South Korea: Korean National Health and Nutritional Examination Surveys with mortality follow-up. *Environmental Research*, 110290.

Conference Presentations

Invited Presentation

1. “Identifying socioeconomic disparities in urban air pollution and associated disease burdens in 13,000 cities worldwide” (2025 AGU-AMS Joint Climate and Health Showcase, virtual)
2. “Application of high-resolution geospatial data in analyzing trends of air pollution and its health burdens across time, space, and populations” at Michelle L. Bell’s Research Group (Nov. 2025, Yale School of Environment)

Oral Presentation

1. “Health Effects of Air Quality Regulations in Seoul Metropolitan Area: Applying Synthetic Control Method to Controlled Interrupted time Series Analysis” (32nd Annual Conference of the International Society for Environmental Epidemiology (ISEE 2020), virtual conference)
2. “Tracking CO2 emissions and air pollution in 13,000 cities worldwide using large geospatial datasets” (American Geophysical Union 2023 (AGU 2023), San Francisco, US)
3. “Estimating global trends of air pollution, air pollution-attributable disease burdens, and CO2 emissions in 13,000 cities using large geospatial datasets” (Health Effects Institute (HEI) Annual Conference 2024, Philadelphia, US)
4. “Estimating global trends of air pollution, air pollution-attributable disease burdens, and CO2 emissions in 13,000 cities using large geospatial datasets” (36th Annual Conference of the International Society for Environmental Epidemiology (ISEE 2024), Santiago, Chile)
5. “Identifying socioeconomic disparities in urban air pollution and associated disease burdens in 13,000 cities worldwide” (American Geophysical Union 2024 (AGU 2024), Washington, D.C., US)
6. “Identifying socioeconomic disparities in urban air pollution and associated disease burdens across 13,000 cities worldwide” (105th American Meteorological Society 2025 (AMS 2025), virtual attendance)
7. “Associations between city-level socioeconomic status and urban air pollution-related disease burdens across 13,000 cities worldwide” (2025 Joint Annual Meeting of the International Society of Exposure Science and the International Society for Environmental Epidemiology (ISES-ISEE 2025), Atlanta, US)

Poster Presentation

1. “Effects of Air Quality Interventions on CLRD and IHD Mortality in Seoul, Korea” (Joint Annual Conference of the ISES-ISEE 2018, Ottawa, Canada)
2. “Health Impact Assessment of Air Quality Interventions in South Korea: Combining Interrupted Time Series Analysis with Synthetic Control Methods” (Joint Annual Conference of the ISES-ISEE Asian Chapter 2019, Daegu, South Korea)
3. “The association between PM₁₀ and Quality of Life (QoL) in South Korea: a cross-sectional study” (31st Annual Conference of the International Society for Environmental Epidemiology (ISEE 2019), Utrecht, Netherlands)
4. “Have Air Quality Regulations in South Korea Improved or Exacerbated the Environmental Health Disparity?” (33rd Annual Conference of the International Society for Environmental Epidemiology (ISEE 2021), virtual conference)
5. “Tracking CO2 emissions and air pollution in 13,000 cities worldwide using large geospatial datasets” (104th American Meteorological Society 2024 (AMS 2024), Baltimore, Maryland, US)

6. “Tracking CO2 emissions and air pollution in 13,000 cities worldwide using large geospatial datasets” (5th Earth Systems, Observations, and Modeling Graduate Symposium (ESOM) 2024, Fairfax, Virginia, US)

Honors & Awards

- Outstanding Student Presentation Awards (OSPA), American Geophysical Union (AGU) 2024 (Mar. 2025)
- Jane Warren Award, Health Effects Institute (HEI) (Apr. 2024)
- Brain Korea 21 (BK21) Scholarships, Government of South Korea (Mar. 2018 - Feb. 2020)

Other Experiences

- Journal reviewer at Science Advances, GeoHealth, and Environmental Research Letters (2025-)
- Abstract reviewer at the International Society for Environmental Epidemiology (ISEE) (2025-)
- Leading the Joint project between GW Climate and Health Institute and George Hacks for research website development (May. 2025-)
- Member of American Geophysical Union (AGU) GeoHealth Early Career Researcher (ECR) committee (Mar. 2025-)
- Acknowledged contribution to UN-Habitat (2024) World Cities Report 2024: Cities and Climate Action, UN-Habitat, Nairobi
- Completion of Global Environmental Leaders Program, Korean Ministry of Environment, Korea Environment Corporation, Institute of East and West Studies (Feb. 4 – Feb. 25, 2021)