

50 Public Health Research Topics

With study designs, statistical methods, free dataset sources and related university theses

50

Research questions

10

Sub-fields

10

Dataset sources

A curated reference for MPH and MSc students who want to choose a research question with feasible data and an appropriate analysis approach.

By Siddharth Gupta · Statssy | statssy.com/research-topics-public-health

RESEARCH WORKFLOW

Pick a question → Check its variables → Select an appropriate design → Review a related thesis → Refine the scope

How to use this guide

Start with two or three questions in one research area. Open the linked dataset and examine its codebook before deciding that a proposed outcome, exposure or grouping variable is available.

Confirm the population, period, geographic scope, survey weighting or clustering, missing-data patterns and access requirements. The listed statistical method is a starting point, not a substitute for checking the design and model assumptions.

Related theses are examples from university repositories, not necessarily identical studies. Use their methods and references to develop your own defensible design.

Explore the ten research areas

01 Infectious disease and outbreaks

02 Non-communicable diseases

03 Maternal and child health

04 Mental health

05 Nutrition and obesity

06 Health policy and health systems

07 Environmental health

08 Health inequalities and social determinants

09 Vaccination and immunisation

10 Digital health and data science

Dataset access

Some listed sources offer immediate public downloads; others require a free registration, access request, or approval. Check the terms and current availability with the linked data provider.

Infectious disease and outbreaks

01. Do warmer and wetter years bring more dengue cases across tropical countries?

DESIGN	Ecological panel
METHOD	Negative binomial panel regression
DATASET	GBD Results + World Bank WDI

RELATED THESIS [Nowcasting Dengue Cases In Poor Surveillance Nations Using Meteorology And Climate-Similar Countries](#)

Hanna Kim · Yale School of Public Health · 2026

02. Does forest loss explain rising vector-borne disease burden across countries?

DESIGN	Ecological panel
METHOD	Fixed effects panel regression
DATASET	GBD Results + World Bank WDI

RELATED THESIS [Climate, Land Use, And Lyme Disease Risk In The United States](#)

Mohan Li · Yale School of Public Health · 2026

03. Has the diarrhoeal disease burden in older adults fallen as fast as in children?

DESIGN	Trend analysis
METHOD	Joinpoint regression
DATASET	GBD Results

RELATED THESIS [Clostridioides Difficile Infection Trends And Treatment Concordance With Idsa/shear Guidelines In The Connecticut Emerging Infections Program Catchment Area, 2011-2024](#)

Rachael Hopkins · Yale School of Public Health · 2026

04. Does armed conflict raise cholera cases once safe water access is accounted for?

DESIGN	Ecological panel
METHOD	Fixed effects regression with an interaction term
DATASET	WHO GHO + World Bank WDI

RELATED THESIS [Enhancing Disease Surveillance In Conflict Settings: An Ecological Case Study On Cholera In Sudan At The Intersection Of Environmental And Conflict Drivers](#)

Kinsey Medlin · Yale School of Public Health · 2025

05. Can COVID-19 case counts warn of hospital admissions one to two weeks ahead?

DESIGN	Time series
METHOD	Distributed lag model
DATASET	OWID COVID-19 Data

RELATED THESIS [Viral Particle Detection In Wastewater](#)

Katelyn Clark · UTHealth Houston School of Public Health · 2023

Non-communicable diseases

06. Do hypertension screening rates differ by insurance status and race in US adults?

DESIGN	Cross-sectional
METHOD	Survey-weighted logistic regression
DATASET	BRFSS

RELATED THESIS [Establishing A Rigorous And Standardized Volunteer-Led Hypertension Screening Program: An Implementation Science Approach Using Cfir](#)

Alexander Boakye · Yale School of Public Health · 2026

07. Does emotional support help adults stay on their blood pressure medicine?

DESIGN	Cross-sectional
METHOD	Logistic regression
DATASET	BRFSS

RELATED THESIS [Role Of Functional Social Support In Adherence To Hypertension Therapy: A Community-Based Study In Nepal](#)

Shirish Gurung · Yale School of Public Health · 2026

08. Which Indian adults have high blood pressure but have never been told so?

DESIGN	Cross-sectional
METHOD	Multilevel logistic regression
DATASET	NFHS-5 India

RELATED THESIS [Assessing Cardiovascular Disease Risk And Healthcare Access Barriers To Identify Prevention Strategies Among Market Vendors In Uganda](#)

Yumi Yang · Yale School of Public Health · 2026

09. Who is most likely to have diabetes that has never been diagnosed?

DESIGN	Cross-sectional
METHOD	Survey-weighted logistic regression
DATASET	NHANES

RELATED THESIS [Evaluating Saliva Based Glucose Testing For Accessible Diabetes Care In Tanzania](#)

Shannon Dhindsa · Yale School of Public Health · 2025

10. Do adults eat and move differently after a type 2 diabetes diagnosis?

DESIGN	Cross-sectional comparison
METHOD	Propensity score matching with linear regression
DATASET	NHANES

RELATED THESIS [Lifestyle Behaviors Before and After Diagnosis of Type 2 Diabetes: Findings From the Nurses' Health Studies](#)

Amelia E. Roebuck · UTHealth Houston School of Public Health · 2023

Maternal and child health

11. Do women with chronic conditions have higher odds of a low birth weight baby?

DESIGN	Cross-sectional
METHOD	Logistic regression
DATASET	NFHS-5 India

RELATED THESIS [Disability And Adverse Pregnancy Outcomes In Prams 2019-2020](#)

Zulimah Sawab · Yale School of Public Health · 2026

12. What decides whether a mother seeks care when her child has diarrhoea?

DESIGN	Cross-sectional
METHOD	Multilevel logistic regression
DATASET	DHS Program

RELATED THESIS [Predicting Healthcare-Seeking For Childhood Diarrhea Across Low- And Middle-Income Countries](#)

Madi Baltagulov · Yale School of Public Health · 2026

13. Do maternal health conditions shorten exclusive breastfeeding?

DESIGN	Cross-sectional
METHOD	Cox regression on breastfeeding duration
DATASET	NFHS-5 India

RELATED THESIS [Impact Of Maternal Chronic Diseases In Pregnancy On Duration Of Infant Intake Of Breastmilk In The Postpartum Period](#)

Danielle Nicole Lodge · Yale School of Public Health · 2025

14. Which causes drive maternal deaths, and how have they shifted since 2000?

DESIGN	Trend analysis
METHOD	Joinpoint regression
DATASET	GBD Results

RELATED THESIS [Addressing the Public Health Concern of Maternal Mortality in Houston, Texas](#)

Lucy Couture · UTHHealth Houston School of Public Health · 2024

15. Do more antenatal visits lower the odds of low birth weight in poorer households?

DESIGN	Cross-sectional
METHOD	Logistic regression with an interaction term
DATASET	UNICEF MICS

RELATED THESIS [Empowering Mothers In New Haven: Evaluating The Impact Of A Maternal Health Program For New And Expecting Black And Brown Mothers](#)

Ethelia Holt · Yale School of Public Health · 2025

Mental health

16. Is there a dose-response link between childhood adversity and adult anxiety?

DESIGN	Cross-sectional
METHOD	Logistic regression with a dose-response trend
DATASET	BRFSS

RELATED THESIS [Prevalence of Adverse Childhood Experiences and Its Dose-Response Association with Anxiety-Related Stress Symptoms in Young Adults Ages 18 to 44 Years Old in the United States](#)

Kenechukwu O. Nwosu · UTHealth Houston School of Public Health · 2024

17. Which children with functional difficulties miss out on early learning support?

DESIGN	Cross-sectional
METHOD	Logistic regression
DATASET	UNICEF MICS

RELATED THESIS [Mental Health Service Utilization Among Children with Autism Spectrum Disorder: A Secondary Analysis of the 2021-2022 National Survey of Children's Health](#)

Emma N. Barnes · University of South Florida · 2026

18. Does emotional support protect sexual minority adults from depression?

DESIGN	Cross-sectional
METHOD	Logistic regression with moderation
DATASET	BRFSS

RELATED THESIS [Lgbtq Community Connectedness As A Mental Health Resource Against Structural Stigma: A Population-Based Study Of Gay And Bisexual Men In The United States](#)

Elizabeth Ann Neunzig · Yale School of Public Health · 2026

19. Is the burden of depression higher in countries facing conflict and displacement?

DESIGN	Ecological panel
METHOD	Fixed effects panel regression
DATASET	GBD Results + World Bank WDI

RELATED THESIS [Family-Related Stressors And Mental Health Among Internally Displaced Young Adults In Mozambique: A Mixed-Methods Study With Implications For Global Mental Health Interventions](#)

Jaspreet Kandola · Yale School of Public Health · 2026

20. How much of the variation in poor mental health days sits at state level, not individual level?

DESIGN	Cross-sectional
METHOD	Multilevel negative binomial regression
DATASET	BRFSS

RELATED THESIS [The Village Determinants Of Self-Rated Health And Mental Health: A Multilevel Analysis Of Environments In Rural Honduran Villages](#)

Marnen Elizabeth Decker · Yale School of Public Health · 2025

Nutrition and obesity

21. Does physical activity explain the link between household income and obesity?

DESIGN	Cross-sectional
METHOD	Mediation analysis
DATASET	NHANES

RELATED THESIS [Association Between Greenspace And Weight-Related Outcomes In Later Adulthood: A Longitudinal Study Using Uk Biobank Data](#)

Jun Jiang · Yale School of Public Health · 2025

22. Do malaria and child undernutrition cluster in the same Indian districts?

DESIGN	Ecological
METHOD	Spatial analysis with negative binomial regression
DATASET	NFHS-5 India

RELATED THESIS [Under-Five Malaria And Malnutrition Syndemic In Rajasthan](#)

Nandini Sinha · Yale School of Public Health · 2025

23. Do children who eat school meals have better diet quality?

DESIGN	Cross-sectional
METHOD	Propensity score matching
DATASET	NHANES

RELATED THESIS [Universal School Meal Programs At The State-Level: Assessing The Next Iteration Of Child Nutrition Policy For A New Generation Of Students](#)

Grace V. Manes · Yale School of Public Health · 2025

24. Which households eat the widest variety of fruits and vegetables?

DESIGN	Cross-sectional
METHOD	Poisson regression
DATASET	NHANES

RELATED THESIS [Investigating Fruit And Vegetable Variety In A National Food Co-Op: A Brighter Bites Evaluation](#)

Katherine G. Hearne · UTHealth Houston School of Public Health · 2022

25. Which pregnant women take iron and folic acid for 100 days or more?

DESIGN	Cross-sectional
METHOD	Multilevel logistic regression
DATASET	NFHS-5 India

RELATED THESIS ['If The Child Is Born Unripe': A Health Equity-Centered Exploration Of The Barriers And Facilitators To Implementing Folic Acid Supplementation And Fortification For Neural Tube Defect Prevention In Việt Nam](#)

Allison Ngoc Tran · Yale School of Public Health · 2025

Health policy and health systems

26. Did Medicaid expansion raise HPV vaccination and cervical screening?

DESIGN	Quasi-experimental
METHOD	Difference-in-differences
DATASET	BRFSS

RELATED THESIS [Medicaid Expansion And Two Pathways To Hpv Prevention: A State-Level Analysis Of Vaccination Coverage And Cervical Cancer Screening](#)

Yiting Yin · Yale School of Public Health · 2026

27. Does higher government health spending improve health outcomes in low and middle income countries?

DESIGN	Ecological panel
METHOD	Fixed effects panel regression
DATASET	World Bank WDI

RELATED THESIS [Rethinking Health Systems Responsiveness in Low-and Middle-Income Countries](#)

Meesha Iqbal · UTHealth Houston School of Public Health · 2025

28. Did opioid prescribing limit laws change opioid deaths across US states?

DESIGN	Quasi-experimental
METHOD	Difference-in-differences with negative binomial regression
DATASET	GBD Results

RELATED THESIS [Dissecting the Heterogeneous Effects of Opioid Prescribing Limit Laws on Pediatric Mortality: A Multidimensional and Negative Binomial Modeling Approach](#)

Francine R. Vega · UTHealth Houston School of Public Health · 2025

29. Do countries with more community health workers have lower child mortality?

DESIGN	Ecological panel
METHOD	Fixed effects panel regression
DATASET	WHO GHO + World Bank WDI

RELATED THESIS [Laro Kwo-Saving Lives: Evaluating The Role Of Community Health Workers In Healthcare Delivery And Disease Control In Northern Uganda](#)

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30. Does high out-of-pocket spending push women away from facility births?

DESIGN	Ecological panel
METHOD	Fixed effects panel regression
DATASET	World Bank WDI

RELATED THESIS [The Impact Of California's Behavioral Health Services Act \(bhsa\) On The Need And Utilization Of Behavioral Health Services In California Counties](#)

Lucia Shen · Yale School of Public Health · 2025

Environmental health

31. How many deaths are linked to air pollution, and is the burden rising faster in some regions?

DESIGN	Ecological panel
METHOD	Panel regression
DATASET	GBD Results

RELATED THESIS [The Mortality Effects Of Daily Ambient Pm2.5 Concentrations By Urbanicity In North Carolina](#)

Pargol Lisa Arab · Yale School of Public Health · 2025

32. Do babies in homes that cook with solid fuel have lower birth weight?

DESIGN	Cross-sectional
METHOD	Logistic regression
DATASET	NFHS-5 India

RELATED THESIS [Investigating Associations Between Maternal Residential Proximity To Federal Superfund Sites And Adverse Birth Outcomes In Pennsylvania: A Retrospective Cohort Study \(2003-2020\)](#)

Amy Guan · Yale School of Public Health · 2026

33. Do countries hit by more floods and droughts see higher child mortality?

DESIGN	Ecological panel
METHOD	Fixed effects panel regression
DATASET	World Bank WDI

RELATED THESIS [The Effect Of Flood Risk Perception On County-Level Excess Mortality Due To Flooding In The U.s.](#)

Jane Elise Fortna · Yale School of Public Health · 2026

34. Does safe water and sanitation access reduce diarrhoea in children under five?

DESIGN	Cross-sectional
METHOD	Multilevel logistic regression
DATASET	UNICEF MICS

RELATED THESIS [Investigating Relationships Between Water, Sanitation, And Hygiene \(wash\) Indicators And Self-Reported Health Outcomes In Rural Ranomafana, Madagascar](#)

Thritha Sathish Anand · Yale School of Public Health · 2025

35. Did years with higher PM2.5 exposure bring a larger preterm birth burden?

DESIGN	Ecological panel
METHOD	Fixed effects panel regression
DATASET	GBD Results

RELATED THESIS [Effect Of Wildfire Smoke Pm2.5 On Preterm Birth Outcomes: A Generalized Synthetic Control Analysis Of Preterm Births In The Contiguous United States From 2006 To 2020](#)

Alexandra Maria Nechaev · Yale School of Public Health · 2025

Health inequalities and social determinants

36. Does income predict poor self-rated health, and is the gap different by race?

DESIGN	Cross-sectional
METHOD	Logistic regression with an interaction term
DATASET	BRFSS

RELATED THESIS [Influenza-Associated Hospitalizations And Socioeconomic Status In Southern Connecticut, 2022-2025](#)

Allison Traiger · Yale School of Public Health · 2026

37. Does education explain gaps in cardiovascular health scores among US adults?

DESIGN	Cross-sectional
METHOD	Survey-weighted linear regression
DATASET	NHANES

RELATED THESIS [Health Literacy And Cardiovascular Health Following Incarceration](#)

Bahar Bouzarjomehri · Yale School of Public Health · 2026

38. Do rural Indian households face larger gaps in health insurance cover?

DESIGN	Cross-sectional
METHOD	Multilevel logistic regression
DATASET	NFHS-5 India

RELATED THESIS [Prevalence of SARS-Cov-2 Antibodies by Rural-Urban Residential Status in Texas](#)

Breanna Bailey Ellis · UTHealth Houston School of Public Health · 2023

39. Are poorer households more exposed to indoor smoke from cooking fuel?

DESIGN	Cross-sectional
METHOD	Concentration index with logistic regression
DATASET	DHS Program

RELATED THESIS [Environmental Justice Dimensions Of Orphaned Oil And Gas Wells In The United States](#)

Grace Marie Hauser · Yale School of Public Health · 2025

40. Does diabetes risk differ between Asian American adults and other adults at the same BMI?

DESIGN	Cross-sectional
METHOD	Logistic regression with an interaction term
DATASET	NHANES

RELATED THESIS [Trends And Prevalence Of Autism Among Asian American Subgroups In California](#)

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Vaccination and immunisation

41. Did countries that vaccinated older people first see fewer COVID-19 deaths?

DESIGN	Ecological panel
METHOD	Fixed effects panel regression
DATASET	OWID COVID-19 Data

RELATED THESIS [Barriers And Facilitators To Covid-19 Vaccination Access Among Older Adults: A Comprehensive Needs Assessment To Enhance Vaccination Strategies](#)

Jiye Lee · Yale School of Public Health · 2025

42. Did the type of first COVID-19 vaccine a country used shape its booster coverage?

DESIGN	Ecological
METHOD	Multiple linear regression
DATASET	OWID COVID-19 Data

RELATED THESIS [Association Between Primary Covid-19 Vaccine Type And Booster Uptake Among Incarcerated People In Connecticut: A Retrospective Cohort Study](#)

Michael Condon Elhardt · Yale School of Public Health · 2025

43. Did pneumococcal vaccine rollout cut pneumonia deaths in children under five?

DESIGN	Quasi-experimental
METHOD	Interrupted time series
DATASET	UNICEF Immunization Data + GBD Results

RELATED THESIS [Impact Of Pcv10 On Pediatric Pneumonia In Nepal](#)

Katie Steimel · Yale School of Public Health · 2025

44. What predicts zero-dose children in India?

DESIGN	Cross-sectional
METHOD	Multilevel logistic regression
DATASET	NFHS-5 India

RELATED THESIS [Influenza Vaccine Coverage, Effectiveness, And Disease Burden Among Pediatric Sickle Cell Patients In Connecticut From 2021-2024: A Test-Negative Case-Control Study](#)

Precious Nchekwube · Yale School of Public Health · 2025

45. Has the drop-off between first and third DTP doses narrowed across countries since 2010?

DESIGN	Trend analysis
METHOD	Panel regression
DATASET	UNICEF Immunization Data

RELATED THESIS [Invasive Pneumococcal Disease: Outcomes And Vaccine Effectiveness By Risk Profiles Among A Pediatric Cohort From 2002 – 2025](#)

Keyner Rojas · Yale School of Public Health · 2026

Digital health and data science

46. Does owning a mobile phone link to higher HIV testing among women?

DESIGN	Cross-sectional
METHOD	Logistic regression
DATASET	DHS Program

RELATED THESIS [A Pilot Rct Of Mhealth & Chw Intervention For Art Adherence](#)

Shivesh Shourya · Yale School of Public Health · 2025

47. Does internet use link to better HIV and contraception knowledge among Indian women?

DESIGN	Cross-sectional
METHOD	Logistic regression
DATASET	NFHS-5 India

RELATED THESIS [Youth Views On Health Content, Ads, And Messages On Social Media](#)

Christina Tong · Yale School of Public Health · 2025

48. Does wider internet access link to higher child vaccination coverage across countries?

DESIGN	Ecological panel
METHOD	Fixed effects panel regression
DATASET	World Bank WDI + UNICEF Immunization Data

RELATED THESIS [Implementation Of Digital Interventions To Address Alcohol Use In Primary Care: A Scoping Review](#)

Sean Becker · Yale School of Public Health · 2026

49. Can machine learning spot undiagnosed diabetes better than logistic regression?

DESIGN	Prediction model
METHOD	Random forest compared with logistic regression (AUC)
DATASET	NHANES

RELATED THESIS [Modeling Buprenorphine Treatment Discontinuation in Opioid Use Disorder – Predictors and Disparities Using Statistical and Machine Learning Approaches](#)

Wanru Guo · UTHealth Houston School of Public Health · 2025

50. Do rural adults go longer between routine check-ups than urban adults?

DESIGN	Cross-sectional
METHOD	Ordinal logistic regression
DATASET	BRFSS

RELATED THESIS [Telehealth Adaptation Of Bright Bodies Program, A Pediatric Intensive Lifestyle Intervention For Obesity: Caregiver Experiences And Implications For Future Implementation](#)

Xiayu "katniss" Ni · Yale School of Public Health · 2026

Turning a topic into a dissertation

1. Narrow the scope. Specify one population, location and period.
2. Check the codebook. Confirm available variables, definitions, units, and sample sizes.
3. Validate the method. Consider sampling design, outcome type, repeated observations, dependence and modelling assumptions.
4. Assess feasibility. Check data access, ethics requirements, timeline and the capacity to reproduce the analysis.
5. Find your contribution. Compare the question with existing scholarship and refine what is new.

Discuss your shortlist

Bring two or three potential topics, their dataset links and your research objectives to a short consultation.

[Book a meeting with Siddharth Gupta](#)

Statssy · Public Health Research Topics and Ideas

This is a topic-planning resource. Statistical methods are suggested starting points, and the linked theses illustrate related research rather than identical analyses.