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Briana Stephenson

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EDUCATION:

2007	Mathematics	BS	Massachusetts Institute of Technology
2010	Biostatistics	MPH	The George Washington University
2017	Biostatistics	PHD	The University of North Carolina at Chapel Hill

POSTDOCTORAL TRAINING:

Research Fellowships:

2017-2019	Hispanic Community Health Study/Study of Latinos (*Biostatistics*)	UNC Collaborative Studies Coordinating Center

ACADEMIC APPOINTMENTS:

2019-	Assistant Professor Biostatistics	Harvard T.H. Chan School of Public Health

OTHER PROFESSIONAL APPOINTMENTS

2008-2010	Mathematical Statistician	US Food & Drug Administration
2010-2011	Senior Statistician (ORISE Fellow)	U.S. Department of Defense

HONORS AND AWARDS:

2021-2023	NIH Extramural Loan Repayment Program Award (1L60HL159672-01)		For methodological research in health disparities
2018	Distinguished Student Paper Award	ENAR	For Stephenson, Herring et al., JASA 2019
2017	Gillings Dissertation Award	UNC-Chapel Hill	For Public Health Impact
2015	Junior Researcher Poster Award	10th Conference on Bayesian Nonparametrics	Best poster in Applied Stat
2012	Public Health Award	UNC-Chapel Hill	Biostatistics
2011	Smith Anderson Fellowship	UNC-Chapel Hill	Biostatistics
2009	Tauber Scholarship	GWU	
2008	Departmental Scholarship	GWU	Epidemiology & Biostatistics

COMMITTEE SERVICE:

DEPARTMENTAL/SCHOOL AND UNIVERSITY SERVICE:

Harvard University Service

2020-2022	Ivy+ Consortium COVID Data Sharing Research team	

School Service

2019-	Faculty Council	HSPH

Departmental Service

2020-	Faculty Mentor, Harvard Summer program in Biostatistics & Computational Biology	HSPH
2019-	PhD Admissions Committee, Member	HSPH/Biostatistics
2019-	Diversity Pipelines committee, Member	HSPH/Biostatistics
2019-	Computational Biology & Quantitative Genetics (CBQG) Masters Program, Executive Committee Member	HSPH

UNC Biostatistics Service

2016-2017	DataFest, Graduate VIP Consultant	Duke University
2016	Summer Undergraduate Pipeline Symposium, Poster Judge	UNC-Chapel Hill

2015-2016	Faculty Hiring Committee, Member	UNC-CH/BIOS
2013-2014	Faculty Hiring Committee, Member	UNC-CH/BIOS

PROFESSIONAL SOCIETIES:

2022	Poster award and industrial presentation Scientific committee	2022 ISBA World Meeting
2021-2023	Council of Sections Rep	ASA Biometrics Section
2020-2022	Regional Advisory Board	IBS/ENAR
2020-2022	Program Committee	Academic Data Science Alliance Annual Meeting
2018-	Member	ASA, Caucus for Women in Statistics

2018	Member	2018 BNP@NIPS Program Committee
2014-	Member	American Statistical Association (ASA)
2014-	Member	International Society of Bayesian Analysis (ISBA)
2013-	Member	International Biometric Society (IBS), Eastern North American Region (ENAR)

GRANT REVIEW ACTIVITIES:

2019	DMS/NIGMS Panel B	NSF/NIH

EDITORIAL ROLES:

Ad hoc reviewer

- Science of the Total Environment
- BMJ Open
- Journal of the American Statistical Association
- Statistics in Medicine
- JAMA Oncology
- JAMA Network Open

FUNDED GRANTS AND UNFUNDED PROJECTS:

ACTIVE GRANTS:

2021-2023 Impact of changing restaurant advertising on weight gain and disparities.
U54 UMB/DFHCC
Co-Principal Investigator

2020-2025 Per- and Polyfluoroalkyl substances mixtures and maternal cardiovascular disease risk across the reproductive life course.
NIH/NIEHS: R01ES031065 (James-Todd)
Co-Investigator

2021-2022 Changes in beverage availability and targeted marketing associated with Philadelphia beverage tax
Healthy Eating Research 2020: Special Solicitation on Beverage Consumption in Early Childhood
Co-Investigator

2021-2023 Identifying bias in receipt and access to optimal care for endometrial cancer patients in Massachusetts
Harvard Data Science Initiative Bias^2 Award
Principal Investigator

PENDING GRANTS:

2022-2027 Statistical methods to understand changes in dietary patterns over time and CVD risk among understudied populations
NHLBI/K01
Principal Investigator
Develop new methodology to identify dietary pattern changes over time and its association to CVD risk of understudied groups under a longitudinal study design.

2022-2027 Structural racism and the stories bodies tell: analyzing the continued impacts of Jim Crow on contemporary health inequities & seeding narrative change to advance health equity
NIMHD/R01
Co-investigator
Understanding and Addressing the Impact of Structural Racism and Discrimination on Minority Health and Health Disparities

2022-2027 Exposure to phthalates and OP flame retardants and long-term maternal cardiovascular and metabolic health
NIEHS/R01
Co-investigator
Study the impact of phthalates and organophosphate (OP) flame retardants exposure during preconception, pregnancy, and midlife on cardiovascular and metabolic health in midlife among women from the Environment and Reproductive Health (EARTH) study.

COMPLETED GRANTS:

2020-2021 Statistical methods to understand dietary exposure patterns among understudied populations
NHLBI R25 PRIDE CVD-CGE, Small Research Project
Mentored Independent Researcher

2017-2019 Hispanic Community Health Study/Study of Latinos

NHLBI Postdoc Diversity Supplement: HHSN268201300001I

Postdoctoral research fellow

Develop and utilize Bayesian nonparametric clustering methods to describe dietary behaviors and its association to cardiovascular risk in HCHS/SOL study population

2014-2017 National Birth Defects Prevention Study

T32 Training Grant: T32ES007018

Predoctoral Research Trainee

Develop Bayesian clustering methodology to derive dietary patterns of pregnant mothers in the United States and determine risk to orofacial birth defects

BIBLIOGRAPHY:

Published

1. Li, D., Gaynor, S. M., Quick, C., Chen, J. T., **Stephenson, B. K.,** Coull, B. A., Lin, X. (2021). Identifying US County-Level Characteristics Associated with High COVID-19 Burden. *BMC Public Health.* 2021 May 28; 21(1): 1007.
2. **Stephenson BJK**, Sotres-Alvarez D, Siega-Riz AM, et al. Empirically Derived Dietary Patterns Using Robust Profile Clustering in the Hispanic Community Health Study/Study of Latinos. *J Nutr*. 2020 Oct 12; 150(10): 2825-2834
3. **Stephenson B**, Herring A, Olshan A. Robust Clustering with Subpopulation-specific Deviations. *Journal of the American Statistical Association* 2020; 115(530): 521-537
4. Phillips MR, Khoury AL, **Stephenson BJ**, Edwards LJ, Charles AG, McLean SE. Outcomes of Pediatric Patients with Abdominal Sepsis Requiring Surgery and Extracorporeal Membrane Oxygenation Using the Extracorporeal Life Support Organization Database. *The American Surgeon*. 2015 Mar; 81 (3) 245-251
5. Weiss J, **Stephenson BJ**, Edwards LJ, Rigney M, Copeland A. Public Attitudes About Lung Cancer: Stigma, Support, and Predictors of Support. *Journal of Multidisciplinary Healthcare*. 2014 Jul; 7:293-300.
6. Keating K, Walko C, **Stephenson B**, ONeil BH, Weiss J. Incidence of Cetuximab-related Infusion Reactions in Oncology Patients Treated at the University of North Carolina Cancer Hospital. *Journal of Oncology Pharmacy Practice*. 2014 Dec; 20(6): 409-416.

7. Veeramachaneni NK, Feins RH, **Stephenson BJ**, Edwards LJ, Fernandez FG. Management of Stage IIIA Non-small Cell Lung Cancer by Thoracic Surgeons in North America. *The Annals of Thoracic Surgery*. 2012 Sep; 94(3): 922-926.

Submitted/Under Review:

8. Stephenson B, Willett W. Racial/Ethnic Heterogeneity in Diet of Low-income Adult Women in the United States: Results from National Health and Nutrition Examination Surveys 2011-2018. medRXiv:2022.04.06.22273539v1. 2022 Apr 13. *Under review at American Journal of Clinical Nutrition*

9. **Stephenson B**, Dominici F. Identifying Dietary Consumption Patterns from Survey Data: A Bayesian Nonparametric Latent Class Model. medRxiv preprint. medRXiv:2021.11.18.21266543. 2021 Nov 21.

10. **Stephenson B**, Herring A, Olshan A. Supervised Robust Profile Clustering. arXiv preprint. arXiv:2007.04509. 2020 Jul 9. Under review *Journal for the Royal Statistical Society C.*

11. Maduekwe MN*, **Stephenson BJK***, Yeh JJ, Troester M, Sanoff HK. Cluster identification of early stage pancreatic adenocarcinoma patients at greatest risk for disparities of care. *Submitted to Journal of National Cancer Institute.*

12. DeVito R*, **Stephenson BJK***, Sotres-Alvarez D, Siega-Riz AM, Mattei J, Parpinel M, Peters BA, Bainter SA, Daviglus ML, Van Horn L, Edefonti V. Shared and ethnic background site-specific dietary patterns in the Hispanic Community Health Study/Study of Latinos (HCHS/SOL). medRXiv:2022.06.30.22277013. *Submitted to American Journal of Clinical Nutrition*.

In preparation:

13. **Stephenson BJK**, Sotres-Alvarez D, Siega-Riz AM, Herring A, Cai J. Effect of dietary patterns on cardiometabolic health using Bayesian nonparametric techniques: results from Hispanic Community Health Study/Study of Latinos. *Prepared for American Journal of Epidemiology*.

14. **Stephenson B**, Sotres-Alvarez D, Cai J. Supervised Robust Profile Clsutering for Ordinal Outcomes.

15. Varela J, Mattei J, Sotres-Alvarez D, **Stephenson B**. Nutrient Intake Patterns and its Association to Cardiovascular Disease Risk Factors in US Hispanic/Latino Populations: Results from NHANES and HCHS/SOL. *Prepared for American Journal of Clinical Nutrition.*

16. **Stephenson B**, Bleich S, Willett W. Supervised Clustering Approaches to Identify Dietary Exposure Patterns Associated with Cardiovascular Disease Risk of Low-income Adults in the United States.

17. Turbull K, **Stephenson B**. Understanding COVID-19 Behaviors, Feelings, and Symptoms of African-American and Hispanic/Latino users of How We Feel mobile app.

18. Li M, **Stephenson B***, Wu Z*. Interpretable Clustering of Hierarchical Dependent Binary Data. *Prepared for Journal for the Royal Statistical Society B.*

TEACHING AND TRAINING:

TEACHING COURSES AT HSPH:

2020-	BST 228/Applied Bayesian Analysis	Primary Instructor

TEACHING COURSES AT OTHER INSTITUTIONS:

2019	BIOS 600/Principles of Statistical Inference UNC Chapel Hill	Instructor
2018	BIOS 600/Principles of Statistical Inference UNC Chapel Hill	Instructor
2015	BIOS 600/Principles of Statistical Inference UNC Chapel Hill	Teaching Assistant
2014	BIOS 600/Principles of Statistical Inference UNC Chapel Hill	Instructor
2013	BIOS 600/Principles of Statistical Inference UNC Chapel Hill	Teaching Assistant
2010	PUBH 202/Biostatistical Applications for Public Health The George Washington University	Small Group Lecturer

ADVISORY AND SUPERVISORY RESPONSIBILITIES:

<u>Doctor of Philosophy</u>

2021- Matthew Lee, Dissertation committee, Member
Current position: preparing for oral exam

2021- Keya Joshi, Dissertation committee, Member
Current position: preparing for oral exam

2021- Stephanie Wu, Dissertation Co-Advisor
Current position: preparing for oral exam

2021- Amy Zhou, Dissertation committee, Member
Current position: preparing for oral exam

2020- Gopal Kotecha, Dissertation committee, Member
Current position: Passed oral exam

2019-2021 Kelsey Vercammen, Oral exam committee, Member
Examining drivers and points of intervention for adiposity and cardiovascular disease risk in the United States

2019-2021 Onisha Etkins, Dissertation committee, Member
Using intersectionality theory to examine mental health in disadvantaged communities

Master of Science

2020-2021 Jeanette Varela, SM80 Biostatistics, Independent study
Nutrient Intake Patterns and its Association to Cardiovascular Disease Risk Factors in US Hispanic/Latino populations: Results from HCHS/SOL and NHANES

2019-2020 Anna Booman, CBQG Thesis committee, Member

INVITED PRESENTATIONS:

Professional Meetings

12/2021	Your Model is Wrong: Robustness and misspecification In Probabilistic modeling, *Panel Discussant*	NeurIPS 2021 Virtual Workshop
12/2021	Dietary patterns accounting for Hispanic Heritage and Geographic variation using Robust Profile Clustering	HCHS-SOL Women's Health Initiative Scientific Interest Group/Virtual
5/2021	Statistical Methods to understand temporal dietary Exposure patterns among understudied populations	NHLBI/PRIDE Spring Annual Meeting/Virtual
3/2021	Statistical methods to accommodate population Diversity in Large Cohort studies	ENAR Spring Meeting/ Virtual
11/2020	Dietary patterns using Bayesian Multi-study Factor Analysis	HCHS-SOL Statistics Interest Group/Virtual
11/2020	Dietary patterns using Bayesian Multi-study Factor Analysis	HCHS-SOL Diet Scientific Interest Group/Virtual
8/2020	Clustering Methods to Empirically Derive Dietary Patterns in the United States	JSM/Virtual (COVID-19)
9/2019	StatFest 2019: Opportunities in Statistics/Data Science (Government & Academia), *Panelist*	UTHSC/Houston, TX
8/2019	Diversity Workshop & Mentoring Program: Success in Graduate school, *Panelist*	JSM/Denver, CO
8/2018	Supervised Robust Profile Clustering	JSM/Vancouver, CA
6/2018	Joint Model-based clustering of Multivariate Grouped Data: Dietary effects on Cardiometabolic Markers in the Hispanic Community Health Study/	ISBA World Meeting/ Edinburgh, Scotland

	Study of Latinos	
3/2018	Robust Profile Clustering with Subpopulation-specific Deviations	ENAR Spring Meeting/ Atlanta, GA
3/2018	Identifying Dietary Patterns in a Diverse Population: a Bayesian Nonparametric SolutionRegional Meeting	Women in Data Science Washington, DC
6/2017	Robust Clustering with Subpopulation-specific Deviations	11th Conf. on Bayesian Nonparametrics/ Paris, France
3/2017	Robust Model-based Clustering from Multivariate and Grouped Data via Local Deviation Processes	ENAR Spring Meeting/ Washington, DC
3/2015	ENAR Diversity Workshop: Graduate Experiences In (Bio)statistics, *Panelist*	ENAR Spring Meeting/ Miami. FL
4/2010	Phasing out the Biologics AIDS Program Assistant Codes (PAC): A Statistical Model	FDA Biologics Field Committee Mtg/Rockville

Department Seminars

4/2022	Bayesian nonparametric techniques to understand Cardiometabolic risk in US Adults *NYU Department of Biostatistics Seminar Series*	New York University
2/2022	Bayesian Clustering Techniques for National Survey Data: Applications in nutrition and cardiovascular disease epidemiology *Boston University Department of Biostatsitics Seminar Series*	Boston University
3/2021	What's on your plate? - Statistical methods to Derive Dietary Patterns in the United States *University of California-Berkeley Neymar Lecture Series*	UC-Berkeley/Virtual
3/2021	Bayesian Model-based Clustering techniques in Large Cohort Studies *Icahn School of Medicine*	Icahn/Virtual
3/2021	What's on your plate? - Statistical methods to Derive Dietary Patterns in the United States *University of Florida Department of Biostatistics Seminar*	UF/Virtual
3/2021	Diversity and Diet: Statistical methods to derive exposure Patterns in the United States *Virginia Tech Department of Statistics Seminar*	VA Tech/Virtual

3/2021	Statistical methods to accommodate population Diversity in Population Cohort studies *University California Irvine Dept of Statistics Seminar*	UCI/Virtual
2/2021	Diet & Diversity: Statistical Methods to derive Dietary Exposure patterns in the United States *Johns Hopkins Dept of Biostatistics Seminar*	JHU/Virtual
4/2020	Amherst College Statistics Symposium *Seminar speaker* *canceled due to COVID19*	Amherst/Amherst, MA
4/2020	Harvard Applied Statistics Workshop *Seminar speaker*	Harvard/Cambridge, MA
4/2020	George Washington University Biostatistics Center *Seminar speaker* *canceled due to COVID19*	GWU/Washington, DC
1/2019	Robust Model-based Clustering for Heterogeneous populations	Emory University/Atlanta
1/2019	Robust Model-based Clustering for Heterogeneous populations	U of Washington/Seattle
1/2019	Robust Model-based Clustering for Heterogeneous populations	Fred Hutchinson Cancer Research Center/Seattle
1/2019	Robust Model-based Clustering for Heterogeneous populations	Harvard University/Boston
12/2018	Robust Model-based Clustering for Heterogeneous populations	UPenn/Philadelphia
11/2018	Robust Model-based Clustering for Heterogeneous populations	URI/Kingston, RI
4/2018	Robust Profile Clustering with Subpopulation-specific Deviations	Johns Hopkins University/ Baltimore, MD
11/2015	The Trouble with Dietary Pattern Analysis in the United States: A Bayesian Nonparametric Solution	ENVR/UNC Chapel-Hill

COMMUNITY SERVICE ACTIVITIES:

2019-	Faculty Mentor	Harvard Biostatistics Summer Pipelines

2019-	Academic Mentor	JSM Diversity Mentoring program
2012-	High school female empowerment	Delta Sigma Theta Sorority GEMS
2013-2015	Student Mentoring program	UNC Biostatistics Students Association
2003-2006	Big Sister program	Big Brother/Big Sisters of America