

Daniela T. Sotres-Alvarez

Collaborative Studies Coordinating Center (CSCC)
Department of Biostatistics
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EDUCATION

- 2005-2010** **University of North Carolina at Chapel Hill, DrPH in Biostatistics**
Gillings School of Global Public Health
Doctoral Dissertation: "Generalized Latent Class Models and Latent Transition Models for Dietary Pattern Analysis"
Research Advisor: Amy H. Herring, ScD
- 2000-2002** **University of North Carolina at Chapel Hill, MS in Biostatistics**
Gillings School of Global Public Health
Master's paper: "Are Disabled Women at Increased Risk of Physical Assault? Results from the NC BRFSS (Behavioral Risk Factor Surveillance System)"
Research Advisor: Lawrence L. Kupper, PhD
- 1992-1997** **The Autonomous Technological Institute of Mexico (ITAM), BS in Applied Mathematics**
Thesis: "Credit Scoring and Bayesian Techniques for Statistical Classification"
Research Advisor: Manuel Mendoza-Blanco, PhD

PROFESSIONAL AND RESEARCH EXPERIENCE

- July 2018 - **Associate Professor**
Collaborative Studies Coordinating Center (CSCC) - Department of Biostatistics, Gillings School of Global Public Health, UNC Chapel Hill
- PI of HCHS/SOL FLOR (Family and Lifestyle Outcomes Research) Ancillary
 - PI for Coordinating Center subcontracts for 5+ HCHS/SOL Ancillaries
 - Co-Investigator of HCHS/SOL Study
 - Chair of HCHS/SOL QC Committee
 - Co-Chair Statistics Committee, Dietary Scientific Interest Group, Physical activity & Sedentary Behavior Scientific Interest Group
 - Member/Reviewer for Ancillary Studies Committee
 - Reviewer for Publications Committee
- Aug 2010 –
June 2018 **Assistant Professor**
Collaborative Studies Coordinating Center (CSCC) - Department of Biostatistics, Gillings School of Global Public Health, UNC Chapel Hill
- Co-Investigator of HCHS/SOL Study (75% FTE)
 - PI for Coordinating Center subcontracts for 5+ HCHS/SOL Ancillaries

- Mar 2010 -
Jul 2010
- Postdoc Research Associate**
Department of Biostatistics, UNC Chapel Hill
- Derived dietary patterns for the National Birth Defects Prevention Study (NBDPS)
 - Studied whether dietary patterns predict birth defects
- Aug 2007 -
Dec 2009
- Graduate Research Assistant**
for Kelly Evenson, PhD, Principal Investigator of Postpartum Physical Activity Project for the Pregnancy, Infection and Nutrition Study.
Department of Epidemiology, UNC Chapel Hill
- Derived construct scores to assess street characteristics (physical incivilities, walkability, arterial or thoroughfare) with a neighborhood audit and geographic information systems (GIS) using factor analysis on categorical outcomes
 - Wrote the statistical methods and results sections for publication
 - Performed data cleaning and data management
- Aug 2005 –
Jul 2007
- Graduate Research Assistant**
for Alumni Distinguished Professor Lawrence L. Kupper, PhD
Department of Biostatistics, University of North Carolina at Chapel Hill
- Performed statistical analyses for nutritional epidemiology and environmental health studies
- Sept 2002 –
Jul 2005
- Biostatistician**
Center for Research on Nutrition and Health
Mexican National Institute of Public Health (INSP)
Cuernavaca, Morelos, México
- Coordinated the Statistical and Data Management Department
 - Performed longitudinal data analyses for health program evaluations
 - Provided advanced statistical consulting to nutritional epidemiologists (e.g. power analysis, generalized linear models, sample survey, propensity score methodology)
- Jun 2001 –
Jul 2002
- Graduate Research Assistant**
for Professor Gary Koch, PhD
Biometric Consulting Laboratory (BCL)
Department of Biostatistics, University of North Carolina at Chapel Hill
- Provided collaborative statistical consultation for study design and categorical data analysis for biomedical applications

- Aug 1998 –
Jul 2000 **Statistician**
PROGRESA (Education, Health, and Nutrition Program), Ministry of Social Security
Mexico City, México
- Performed statistical models (generalized linear models and hierarchical models) to monitor and evaluate the program’s impact (measure effectiveness) on health and education outcomes
 - Drafted some chapters for the Quantitative Evaluation Documents
- Jun 1997 –
Jul 1998 **Statistician**
Bank Bital (currently HSBC)
Mexico City, México
- Developed prediction models using classification and regression trees (CART) for credit scoring and market segmentation
 - Performed exploratory analysis

HONORS AND AWARDS

- 2005-2009 Scholarship for DrPH in Biostatistics awarded by CONACYT (Mexican National Council for Science and Technology)
- 2007 One of 20 students selected to participate at the 3rd Summer Institute in Reproductive and Perinatal Epidemiology, 2007 organized by the National Institute of Child Health & Human Development (NICHD) and Institute of Human Development, Child, and Youth Health (IHDCYH).
- 2006 Special Commendation on Preliminary Doctoral Written Exam, University of North Carolina at Chapel Hill
- 2001 Delta Omega Honorary Society in Public Health, UNC student inductee
- 2000-2002 Scholarship for MS in Biostatistics awarded by CONACYT (Mexican National Council for Science and Technology)
- 1997 Honoric Mention on bachelor’s thesis, ITAM, Mexico

PROFESSIONAL AFFILIATIONS

- International Biometric Society (Eastern North American Region - ENAR)
- American Statistical Association (ASA)
- International Society for the Measurement of Physical Behavior (ISMPB)

BOOK CHAPTERS

1. **Sotres Alvarez D**, Tellez-Rojo Solís MM. Capítulo XII: Regresion Lineal Simple. Epidemiología: Diseño y Análisis de Estudios. Editor Mauricio Hernández Avila. Ed. Medica Panamericana, 2007. P. 273-298.
2. **Sotres Alvarez D**, Tellez-Rojo Solís MM. Capítulo XIII: Regression Lineal Múltiple. Epidemiología: Diseño y Análisis de Estudios. Editor Mauricio Hernández Avila. Ed. Medica Panamericana, 2007. P. 299-320.
3. Tellez-Rojo Solís MM, Lamadrid Figueroa H, **Sotres Alvarez D**. Capítulo XIV: Regresion Logística. Epidemiología: Diseño y Análisis de Estudios. Editor Mauricio Hernández Avila. Ed. Medica Panamericana, 2007. P. 321- 352.

PUBLICATIONS (Over 125 peer-reviewed articles)

Refereed journal articles: <http://www.ncbi.nlm.nih.gov/pubmed/?term=sotres-alvarez>

Research: http://www.researchgate.net/profile/Daniela_Sotres-Alvarez

Citations (Google scholar): <https://scholar.google.com/>

METHODS

1. * Baldoni PL, **Sotres-Alvarez D**, Lumley T, Shaw PA. On the use of Regression Calibration in a Complex Sampling Design with Application to the Hispanic Community Health Study/Study of Latinos. *Am J Epidemiol*. 2021 Jan 28;kwab008. Online ahead of print. [PMID: [33506244](#)]
2. **Sotres-Alvarez D**, Siega-Riz AM, Herring AH, Carmichael SL, Feldkamp ML, Hobbs CA, Olshan AF, and the National Birth Defects Prevention Study. Maternal Dietary Patterns are Associated with Risk of Neural Tube and Congenital Heart Defects. *Am J Epidemiol*. 2013 Jun 1;177(11):1279-88. [PMID: [23639938](#)] [PMCID: [PMC3664332](#)]
3. **Sotres-Alvarez D**, Herring AH and Siega-Riz AM. Latent transition models to study women changing dietary patterns from pregnancy to one year postpartum. *Am J Epidemiol*. 2013;177(8): 852–861. [PMID: [23538942](#)] [PMCID: [PMC3668424](#)]
4. **Sotres-Alvarez D**, Herring AH, Siega-Riz AM. Latent Class Analysis Is Useful to Classify Pregnant Women into Dietary Patterns. *J Nutr*. 2010 Dec; 140(12): 2253-2259. [PMID: [20962151](#)] [PMCID: [PMC2981007](#)]

COLLABORATIVE**Diet**

5. Palacios C, Pérez CM, González-Sepúlveda L, Corsino L, Albrecht SS, Siega-Riz AM, Durazo-Arvizu RA, Casagrande S, Sotres-Alvarez D, Avilés-Santa ML. Vitamin D, Calcium, Magnesium, and Potassium Consumption and Markers of Glucose Metabolism in the Hispanic Community Health Study/Study of Latinos. *J Am Coll Nutr.* 2020 Nov 30;1-10. [PMID: [33252321](#)]
6. Celestin Missikpode, Ana C. Ricardo, Ramon A Durazo-Arvizu, Anjella Manoharan, Josiemer Mattei, Carmen R Isasi, Yasmin Mossavar-Rahmani, Gregory A Talavera, **Daniela Sotres-Alvarez**, Martha L. Daviglius, James P Lash. Association of Diet Quality Indices with Longitudinal Changes in Kidney Function in U.S. Hispanics/Latinos: Findings from the Hispanic Community Health Study/Study of Latinos (HCHS/SOL). *Accepted at Kidney360.*
7. Siega-Riz AM, Vladutiu CJ, Butera NM, Daviglius M, Gellman M, Isasi CR, Stuebe AM, Talavera GA, Van Horn L, **Sotres-Alvarez D**. Preconception Diet Quality Is Associated with Birth Weight for Gestational Age Among Women in the Hispanic Community Health Study/Study of Latinos. *J Acad Nutr Diet.* 2020 Nov 10:S2212-2672(20)31349-6. [PMID: [33187928](#)].
8. Figueroa R, Isasi CR, Perreira KM, McClain A, Gallo LC, **Sotres-Alvarez D**, Delamater AM, Daviglius M, Van Horn L, Mattei J. Targeting family functioning, acculturative stress, and sugar-sweetened beverage consumption for obesity prevention: Findings from the Hispanic Community Children's Health Study/Study of Latino Youth. *BMC Public Health.* 2020 Oct 14;20(1):1546. [PMID: [33054741](#)].
9. Pereira JL, Mattei J, Isasi CR, Van Horn L, Carnethon MR, Daviglius ML, Perera MJ, **Sotres-Alvarez D**, Fisberg RM. Diet quality, excess body weight and cardiometabolic risk factors in adolescents living in São Paulo, Brazil and in the USA: differences and similarities. *Public Health Nutr.* 2020 [PMID: [32907665](#)].
10. Colón-Ramos U, Monge-Rojas R, Smith-Castro V, Wang J, Cheng YI, Perreira KM, Van Horn L, **Sotres-Alvarez D**, Isasi CR, Gallo LC. Family function and eating behaviours among Hispanic/Latino youth: results from the Hispanic Community Children's Health Study/Study of Latino Youth (SOL Youth). *Public Health Nutr.* 2020 Aug 25;1-11. [PMID: [32838832](#)].
11. Stephenson B, **Sotres-Alvarez D**, Siega-Riz AM, Mossavar-Rahmani Y, Daviglius M, Van Horn L, Herring A, Cai J. Empirically Derived Dietary Patterns using Robust Profile Clustering: Results from the Hispanic Community Health Study (HCHS/SOL). *J Nutr.* 2020 Jul 25;nxaa208. [PMID: [32710754](#)].
12. Pereira JL, de Castro MA, Crispim SP, Fisberg RM, Isasi CR, Mossavar-Rahmani Y, Van Horn L, Carnethon MR, Daviglius ML, Perreira KM, Gallo LC, **Sotres-Alvarez D**, Mattei J. Comparing Methods from the National Cancer Institute vs Multiple Source Method for Estimating Usual Intake of Nutrients in the Hispanic Community Health Study/Study of Latino Youth. *J Acad Nutr Diet.* 2020. [PMID: [32773213](#)].

13. Estrella ML, Durazo-Arvizu RA, Mattei J, Mossavar-Rahmani Y, Perreira KM, Siega-Riz AM, **Sotres-Alvarez D**, González HM, Gallo LC, Daviglius ML, Lamar M. Alternate Healthy Eating Index is Positively Associated with Cognitive Function Among Middle-Aged and Older Hispanics/Latinos in the HCHS/SOL. *J Nutr*. 2020. Volume 150, Issue 6, June 2020, Pages 1478–1487. [PMID: [32091597](#)]
14. Sanders AE, Cardel MI, Laniado N, Kaste LM, Finlayson TL, Perreira, KM, **Sotres-Alvarez D**. Diet quality and dental caries in the Hispanic Community Health Study/Study of Latinos. *J Public Health Dent*. 2020 Feb 7. [PMID: [32031253](#)].
15. Han YY, Jerschow E, Forno E, Hua S, Mossavar-Rahmani Y, Perreira K, **Sotres-Alvarez D**, Afshar M, Punjabi NM, Thyagarajan B, Shivappa N, Hébert JR, Kaplan RC, Celedón JC. Dietary Patterns, Asthma, and Lung Function in the Hispanic Community Health Study/Study of Latinos (HCHS/SOL). *Ann Am Thorac Soc*. 2019 Nov 5. [PMID: [31689128](#)]
16. Joyce BT, Wu D, Hou L, Dai Q, Castaneda SF, Gallo LC, Talavera GA, **Sotres-Alvarez D**, Van Horn L, Beasley JM, Khambaty T, Elfassy T, Zeng D, Mattei J, Corsino L, Daviglius ML. DASH diet and prevalent metabolic syndrome in the Hispanic Community Health Study/Study of Latinos. *Prev Med Rep*. 2019 Jul 16;15:100950. doi: 10.1016/j.pmedr.2019.100950. eCollection 2019 Sep. [PMID: [31367513](#)]
17. Siega-Riz, **Sotres-Alvarez D**, Pace N, Daviglius ML, Harnack L, Mossavar-Rahmani Y, Perreira RI, Rock C, Van Horn L. How Well Do U.S. Hispanics Adhere to the Dietary Guidelines for Americans? Results from the Hispanic Community Health Study/Study of Latinos. *Health Equity*. 2019 Jul 11;3(1):319-327. [PMID: [31338484](#)]
18. Elfassy T., **Sotres-Alvarez D.**, Van Horn L., Angell S., Schneiderman N., Rundek T., Raij L., Smoller S.W., Mossavar-Rahmani Y., Daviglius M., Hanna D.B., Zeki Al Hazzouri A. Daily intake of sodium and potassium among diverse US Hispanics/Latinos: the Hispanic Community Health Study/Study of Latinos. *Am J Hypertens*. 2019 May 6. pii: hpz073. [PMID: [31056652](#)]
19. Mendez MA, Miles DR, Poti JR, **Sotres-Alvarez D** and Popkin BM (2018). Persistent disparities over time in the distribution of sugar-sweetened beverage intake among children in the United States. *Am J Clin Nutr*. 2019 Jan 1;109(1):79-89. [PMID: [30535176](#)]
20. * Arandia G, **Sotres-Alvarez D**, Siega-Riz AM, Arredondo E, Carnethon MR, Delamater M, Linda Gallo, Carmen R Isasi, Ashley N Marchante, David Pritchard, Linda Van Horn, Krista Perreira. Associations between Acculturation, Ethnic Identity, and Diet Quality among U.S. Hispanic/Latino Youth: Findings from the HCHS/SOL Youth Study. *Appetite*. 2018 Oct 1;129:25-36. doi: 10.1016/j.appet.2018.06.017. Epub 2018 Jun 19. [PMID: [29928939](#)]
21. Salazar CR, Laniado N, Mossavar-Rahmani Y, Borrell LN, Qi Q, **Sotres-Alvarez D**, Morse DE, Singer RH, Kaplan RC, Badner V, Lamster IB. Better diet quality is associated with lower odds of severe periodontitis in US Hispanics/Latinos. *J Clin Periodontol*. 2018 May 19. [PMID: [29779261](#)]

22. Elfassy T, Mossavar-Rahmani Y, Van Horn L, Gellman M, **Sotres-Alvarez D**, Schneiderman N, Daviglius M, Beasley JM, Llabre MM, Shaw PA, Prado G, Florez H, Zeki Al Hazzouri A. Associations of Sodium and Potassium with Obesity Measures Among Diverse US Hispanic/Latino Adults: Results from the Hispanic Community Health Study/Study of Latinos. *Obesity* (Silver Spring). 2018 Feb;26(2):442-450. Epub 2018 Jan 10. [PMID: [29318759](#)] [PMCID: [PMC5783725](#)]
23. Casagrande S. S., **Sotres-Alvarez D.**, Avilés-Santa L.M., O'Brien, Palacios, Pérez, Reina, Wang, Giachello, Espinoza Giacinto, Cowie. Variations of dietary intake by glycemic status and Hispanic/Latino heritage in the Hispanic Community Health Study/Study of Latinos (HCHS/SOL). *BMJ Open Diabetes Res Care*. 2018 Jan 30;6(1):e000486. [PMID: [29449952](#)] [PMCID: [PMC5808640](#)]
24. McClain AC, Ayala GX, **Sotres-Alvarez D**, Siega-Riz AM, Kaplan RC, Gellman MD, Gallo LC, Van Horn L, Daviglius ML, Perera MJ, Mattei J. Frequency of Intake and Type of Away-from- Home Foods Consumed Are Associated with Diet Quality in the Hispanic Community Health Study/Study of Latinos (HCHS/SOL). *J Nutr*. 2018 Mar 1;148(3):453-463.[PMID: [29546313](#)].
25. Corsino L, **Sotres-Alvarez D**, Butera NB, Albrecht SS, Espinoza Giacinto RA, Palacios C, Perera MJ, Pérez CM, Siega-Riz AM, Van Horn L, Aviles-Santa L. Association of the DASH dietary pattern with insulin resistance and diabetes in U.S. Hispanic/Latino adults: results from the Hispanic Community Health Study/Study of Latinos (HCHS/SOL). *BMJ Open Diabetes Research and Care* 2017;5:e000402. [PMID: [28761660](#)] [PMCID: [PMC5530245](#)]
26. Mattei J, **Sotres-Alvarez D**, Gellman M, Castañeda SF, Hu FB, Tucker KL, Siega-Riz AM, Kaplan RC. Diet quality, inflammation, and the ankle brachial index in adults with or without cardiometabolic conditions. *Clin Nutr*. 2017 Jun 8. pii: S0261-5614(17)30213-3. [PMID: [28666597](#)] [PMCID: [PMC5722708](#)]
27. * Wright M, **Sotres-Alvarez D**, Mendez M, Adair L. The association of trajectories of protein intake and age specific protein intakes from 2-22y with body mass index in early adulthood. *Br J Nutr*. 2017 Mar;117(5):750-758. Epub 2017 Mar 28. [PMID: [28347359](#)]
28. Mossavar-Rahmani Y, **Sotres-Alvarez D**, Wong WW, Loria CM, Gellman MD, Van Horn L, Alderman MH, Beasley JM, Liu K, Lora CM, Siega-Riz AM, Shaw PA. Applying urinary biomarkers to calibrate sodium and potassium intakes in the Hispanic Community Health Study/Study of Latinos (HCHS/SOL). *J Hum Hypertens*. 2017 Feb 16. doi: 10.1038/jhh.2016.98. [Epub ahead of print] [PMID: [28205551](#)] [PMCID: [PMC5475267](#)]
29. Martin CL, Siega-Riz AM, **Sotres-Alvarez D**, Robinson WR, Daniels JL, Perrin EM, Stuebe AM. Maternal Dietary Patterns during Pregnancy Are Associated with Child Growth in the First 3 Years of Life. *J Nutr*. 2016 Nov;146(11):2281-2288. [PMID: [27683873](#)] [PMCID: [PMC5086788](#)]
30. Mattei J, **Sotres-Alvarez D**, Daviglius M, Gallo L, Gellman M, Hu FB, Tucker KL, Willett WC, Siega-Riz AM, Van Horn L, Kaplan RC. Diet Quality and Its Association with Cardiometabolic Risk Factors Vary by Hispanic and Latino Ethnic Background in the Hispanic Community Health Study/Study of Latinos. *J Nutr*. 2016 Oct;146(10):2035-2044. [PMID: [27605403](#)] [PMCID: [PMC5037869](#)]

31. * Wright M, Mendez MA, **Sotres-Alvarez D**, Adair L. Breastfeeding and Protein Intake Influence Body Mass Index from 2 Months to 22 Years in the Cebu Longitudinal Health and Nutrition Survey. *J Nutr.* 2016 Oct;146(10):2085-2092. [PMID: [27581582](#)]
32. Beasley JM, Jung M, Tasevska N, Wong WW, Siega-Riz AM, **Sotres-Alvarez D**, Gellman MD, Kizer JR, Shaw PA, Stamler J, Stoutenberg M, Van Horn L, Wylie-Rosett J, Mossavar-Rahmani Y. Biomarker-predicted sugars intake compared with self-reported measures in US Hispanics/Latinos: Results from the HCHS/SOL SOLNAS Study. *Public Health Nutr.* 2016 Jun 24:1-9. [PMID: [27339078](#)] [PMCID: [PMC5348247](#)]
33. Martin CL, Siega-Riz AM, **Sotres-Alvarez D**, Robinson WR, Daniels JL, Perrin EM, Stuebe AM. Maternal dietary patterns are associated with lower levels of cardiometabolic markers during pregnancy. *Paediatr Perinat Epidemiol.* 2016 May;30(3):246-55. [PMID: [26848932](#)] [PMCID: [PMC4818661](#)]
34. Wang X, Jung M, Mossavar-Rahmani Y, **Sotres-Alvarez D**, Giacinto RE, Pirzada A, Reina SA, Casagrande SS, Wang T, Aviles-Santa L, Kaplan RC, Qi Q. Macronutrient intake, diagnosis status and glycemic control among U.S. Hispanics/Latinos with diabetes. *J Clin Endocrinol Metab.* 2016 Apr;101(4):1856-64. [PMID: [26950682](#)] [PMCID: [PMC4880152](#)]
35. * Batis C, Mendez MA, Gordon-Larsen P, Adair L, **Sotres-Alvarez D**, Popkin B. Using both Principal Component Analysis and Reduced Rank Regression to Study Dietary Patterns and Diabetes in Chinese Adults. *Public Health Nutrition.* Public Health Nutr. 2016 Feb;19(2):195-203. [PMID: [26784586](#)] [PMCID: [PMC4721264](#)]
36. Mossavar-Rahmani Y, Jung M, Patel SR, **Sotres-Alvarez D**, Arens R, Ramos A, Redline S, Rock CL, Van Horn L. Eating behavior by sleep duration in the Hispanic Community Health Study/Study of Latinos. *Appetite.* 2015 Dec 1;95:275-84. [PMID: [26189885](#)] [PMCID: [PMC4589504](#)]
37. Martin CL, **Sotres-Alvarez D**, Siega-Riz AM. Maternal Dietary Patterns during the Second Trimester Are Associated with Preterm Birth. *J Nutr.* 2015 Aug;145(8):1857-64. [PMID: [26084362](#)] [PMCID: [PMC4516771](#)]
38. Mossavar-Rahmani Y, Shaw PA, Wong WW, **Sotres-Alvarez D**, Gellman MD, Van Horn L, Stoutenberg M, Daviglius M, Wylie-Rosett J, Siega-Riz AM, Ou FS, Prentice RL. Applying recovery biomarkers to calibrate self-report measures of energy and protein in the Hispanic Community Health Study/Study of Latinos. *Am J Epidemiol.* 2015 Jun 15;181(12):996-1007. [PMID: [25995289](#)] [PMCID: [PMC4462334](#)]
39. Mendez MA, **Sotres-Alvarez D**, Miles DR, Slining MM, Popkin BM. Reply to Schoeller et al. *J Nutr.* 2015 Jan;145(1):151-2. [PMID: [25667947](#)] [PMCID: [PMC4264020](#)]
40. Mendez M, **Sotres-Alvarez D**, Miles DR, Slining M and Popkin BM. Shifts in the recent distribution of dietary intake among US children ages 2-18 reflect potential abatement of earlier declining trends. *J Nutr.* 2014 Aug;144(8):1291-7. [PMID: [24919689](#)] [PMCID: [PMC4093985](#)]

41. Siega-Riz AM, **Sotres-Alvarez D**, Ayala GX, Ginsberg M, Himes JH, Liu K, Loria CM, Mossavar-Rahmani Y, Rock CL, Rosemond B, Shor-Posner G, Van Horn L. Food Group and Nutrient Dietary Intakes by Hispanic/Latino background among the Hispanic Community Health Study/Study of Latinos (HCHS/SOL). *Am J Clin Nutr.* 2014 Apr 23;99(6):1487-1498. [PMID: [24760972](#)] [PMCID: [PMC4021787](#)]
42. * Batis C, Mendez, MA., **Sotres-Alvarez D**, Gordon-Larsen P, Popkin B. Dietary pattern trajectories during 15 years of follow-up and hba1c, insulin resistance and diabetes prevalence among Chinese adults. *J Epidemiol Community Health.* 2014 Aug;68(8):773-9. doi: 10.1136/jech-2013-203560. Epub 2014 Apr 12. [PMID: [24729424](#)] [PMCID: [PMC4082755](#)]
43. * Batis C, **Sotres-Alvarez D**, Gordon-Larsen P, Mendez MA, Adair L, Popkin B. Longitudinal Analysis of Dietary Patterns in Chinese Adults from 1991 to 2009. *Br J Nutr.* 2014; 111, 1441–1451. [PMID: [24331247](#)] [PMCID: [PMC3966951](#)]
44. * López Flores F, Neufeld LM, **Sotres-Alvarez D**, García Guerra A, Ramakrishnan U. Compliance to micronutrient supplementation in children 3 to 24 months of age from a semi-rural community in Mexico. *Salud Publica Mex.* 2012 Oct;54(5):470-8. [PMID: [23011498](#)]
45. * Mejia-Rodriguez F, **Sotres-Alvarez D**, Neufeld LM, Garcia-Guerra A, Hotz C. Use of Nutritional Supplements among Mexican Women and the Estimated Impact on Dietary Intakes below the EAR and above the UL. *J Am Coll Nutr.* 2007 Feb; 26(1):16-23. [PMID: [17353579](#)]
46. Rivera JA, **Sotres-Alvarez D**, Habicht JP, Shamah T, Villalpando S. Impact of the Mexican program for education, health, and nutrition (Progresa) on rates of growth and anemia in infants and young children: a randomized effectiveness study. *JAMA.* 2004 Jun 2; 291(21): 2563-70. [PMID: [15173147](#)]

Physical Activity/Sedentary Behavior

47. Vásquez, PM., Durazo-Arvizu, RA., Marquez, DX., Argos, M., Lamar, M., Odoms-Young, A., Gallo, LC., **Sotres-Alvarez, D.**, Castañeda, S., Perreira, K., Vidot, DC., Isasi, C., Gellman, MD., and Daviglius, ML. Association of accelerometer-measured physical activity and cardiovascular health in the Hispanic Community Health Study/Study of Latinos (HCHS/SOL). *Accepted at Hispanic Health Care International.*
48. Hannan M, Ricardo AC, Cai J, Franceschini N, Kaplan R, Marquez DX, Rosas SE, Schneiderman N, **Sotres-Alvarez D**, Talavera GA, Daviglius ML, Lash JP. *Kidney360* December 2020, 10.34067/KID.0006202020; DOI: <https://doi.org/10.34067/KID.0006202020>
49. Bejarano CM, Gallo LC, Castañeda SF, Garcia ML, **Sotres-Alvarez D**, Perreira KM, Isasi CR, Daviglius M, Van Horn L, Delamater AM, Savin KL, Cai J, Carlson JA. Patterns of Sedentary Time in the Hispanic Community Health Study/ Study of Latinos (HCHS/SOL) Youth (SOL Youth). *J Phys Act Health.* 2020 Dec 22:1-9. doi: 10.1123/jpah.2020-0135. [PMID: [33361472](#)].

50. Mossavar-Rahmani Y, Hua S, Qi Q, Strizich G, **Sotres-Alvarez D**, Talavera GA, Evenson KR, Gellman MD, Stoutenberg M, Castañeda SF, Gallo LC, Perreira KM, Sanchez-Johnsen L, Kaplan RC. Sedentary behavior, physical activity and change in cardiometabolic biomarkers: A longitudinal study in HCHS/SOL. *BMC Public Health*. 2020 Sep 14;20(1):1400. [PMID: [32928159](#)]
51. Xue X, Qi Q, **Sotres-Alvarez D**, Roesch SC, Llabre MM, Bainter SA, Mossavar-Rahmani YA, Kaplan R, Wang T. Modeling daily and weekly moderate and vigorous physical activity using zero-inflated mixture Poisson distribution. *Stat Med*. 2020 Sep 18. [PMID: [32949036](#)]
52. Vásquez PM, Durazo-Arvizu RA, Marquez DX, Argos M, Lamar M, Odoms-Young A, Gallo LC, **Sotres-Alvarez D**, Carrion VD, Perreira KM, Castañeda SF, Isasi CR, Talavera GA, Lash JP, Daviglius ML. Physical activity, stress, and cardiovascular disease risk: HCHS/SOL Sociocultural Ancillary Study. *Prev Med Rep*. 2020 Aug 28;20:101190. [PMID: [32995142](#)]
53. Chen GC, Qi Q, Hua S, Moon JY, Spartano NL, Vasan RS, **Sotres-Alvarez D**, Castaneda SF, Evenson KR, Perreira KM, Gallo LC, Pirzada A, Diaz KM, Daviglius ML, Gellman MD, Kaplan RC, Xue X, Mossavar-Rahmani Y. Accelerometer-assessed physical activity and incident diabetes in a population covering the adult life span: the Hispanic Community Health Study/Study of Latinos. *Am J Clin Nutr*. 2020. [PMID: [32910816](#)]
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- 115.** McCurley JL, Mills PJ, Roesch SC, Carnethon M, Giacinto RE, Isasi CR, Teng Y, **Sotres-Alvarez D**, Llabre MM, Penedo FJ, Schneiderman N, Gallo LC. Chronic Stress and Glucose Regulation in US Hispanics/Latinos from the HCHS/SOL Sociocultural Ancillary Study. *Psychophysiology.* 2015 Aug;52(8):1071-9. [PMID: [25898909](#)] [PMCID: [PMC4640890](#)]

116. Llabre MM, Arguelles W, Schneiderman N, Gallo LC, Daviglius ML, Chambers EC, **Sotres-Alvarez D**, Chirinos DA, Talavera GA, Castaneda SF, Roesch SC, and Heiss G. Do all components of metabolic syndrome cluster together in US Hispanics/Latinos? A latent variable model based on data from the Hispanic Community Health Study (HCHS/SOL). *Ann Epidemiol*. 2015 Jul;25(7):480-5. [PMID: [25818844](#)] [PMCID: [PMC4457574](#)]
117. Gallo LC, Roesch SC, Fortmann AL, Carnethon MR, Penedo FJ, Perreira K, Birnbaum-Weitzman O, Smoller S, Castañeda SF, Talavera GA, **Sotres-Alvarez D**, Daviglius ML, Schneiderman N, and Isasi CR. Associations of chronic stress burden, perceived stress, and traumatic stress with cardiovascular disease prevalence and risk factors in the HCHS/SOL Sociocultural Ancillary Study. *Psychosom Med*. 2014 Jul-Aug;76(6): 468-475. [PMID: [24979579](#)] [PMCID: [PMC4349387](#)]

Other

118. Perera MJ, Schneiderman N, **Sotres-Alvarez D**, Daviglius M, Mirabal SM, Llabre MM. Are Anxious and Depressive Symptoms Associated with Gastro-Intestinal Symptoms in the Hispanic Community Health Study/Study of Latinos (HCHS/SOL)? *J Racial Ethn Health Disparities*. 2020 Aug 1. [PMID: [32737849](#)]
119. Kaplan RC, Wang Z, Usyk M, **Sotres-Alvarez D**, Daviglius ML, Schneiderman N, Talavera GA, Gellman MD, Thyagarajan B, Moon JY, Vázquez-Baeza Y, McDonald D, Williams-Nguyen JS, Wu MC, North KE, Shaffer J, Sollecito CC, Qi Q, Isasi CR, Wang T, Knight R, Burk RD. Gut microbiome composition in the Hispanic Community Health Study/Study of Latinos is shaped by geographic relocation, environmental factors, and obesity. *Genome Biol*. 2019 Nov 1;20(1):219. doi: 10.1186/s13059-019-1831-z. [PMID: [31672155](#)]
120. Harville EW, Mishra GD, Yeung E, Mumford SL, Schisterman EF, Jukic AM, Hatch EE, Mikkelsen EM, Jiang H, Ehrental DB, Porucznik CA, Stanford JB, Wen SW, Harvey A, Symons Downs D, Yajnik C, Santillan D, Santillan M, McElrath TF, Woo JG, Urbina EM, Chavarro JE, **Sotres-Alvarez D**, Bazzano L, Zhang J, Steiner A, Gunderson EP, Wise LA. The Preconception Period analysis of Risks and Exposures Influencing health and Development (PrePARED) consortium. *Paediatr Perinat Epidemiol*. 2019 Nov;33(6):490-502. doi: 10.1111/ppe.12592. Epub 2019 Oct 28. [PMID: [31659792](#)]
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122. * Eastman M, Foshee V, Ennett S, **Sotres-Alvarez D**, Reyes HLM, Faris R, North K. Profiles of internalizing and externalizing symptoms associated with bullying victimization. *Journal of Adolescence*, 2018; 65, 101-110. [PMID: [29573643](#)] [PMCID: [PMC5932115](#)]

123. * Jeffries, J. K., Lytle, L. A., **Sotres-Alvarez, D.**, Golden, S., Aiello, A., & Linnan, L. (2018). Chronic Disease Risk Typologies among Young Adults in Community College. *Am J Health Behav.* 2018 Mar 1;42(2):71-84. [PMID: [29458516](#)]
124. Fox RS, Mills SD, Roesch SC, **Sotres-Alvarez D**, Gonzalez P, Bekteshi V, Cai J, Lounsbury DW, Talavera GA, Penedo FJ, Malcarne VL. Perceptions of Cancer Risk/Efficacy and Cancer-Related Risk Behaviors: Results From the HCHS/SOL Sociocultural Ancillary Study. *Health Educ Behav.* 2017 Dec 1;1090198117744242. doi: 10.1177/1090198117744242. [PMID: [29284295](#)]
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126. Gallo L, Penedo FJ, Isasi C, Carnethon MR, **Sotres-Alvarez D** et al. HCHS/SOL Sociocultural Ancillary Study: Rationale, Objectives, Participants, and Procedures. *Ethn Dis.* 2014;24[1]:77-83. [PMID: [24620452](#)] [PMCID: [PMC3986116](#)]
127. Martin SL, Ray N, **Sotres-Alvarez D**, Kupper LL, Moracco KE, Dickens PA, Scandlin D, Gizlice Z. Physical and sexual assault of women with disabilities. *Violence Against Women.* 2006, Sep;12(9): 823-37. [PMID: [16905675](#)]
128. Brodala N, Merricks EP, Bellinger DA, Damrongsri D, Offenbacher S, Beck J, Madianos P, **Sotres D**, Chang YL, Koch G, Nichols TC. Porphyromonas gingivalis bacteremia induces coronary and aortic atherosclerosis in normocholesterolemic and hypercholesterolemic pigs. *Arterioscler Thromb Vasc Biol.* 2005 Jul, 25(7):1446-51. [PMID: [15845905](#)]

Articles submitted

1. Vladutiu CJ, Butera NM, **Sotres-Alvarez D**, Stuebe AM, Aviles-Santa L, Daviglius M, Gellman M, Isasi CR, Cordero C, Talavera GA, Van Horn L, Siega-Riz AM. Preconception cardiometabolic markers and birth outcomes among U.S. Hispanic/Latina women in the HCHS/SOL.
2. * Luis Maldonado, Linda S Adair; **Daniela Sotres-Alvarez**; Josiemer Mattei; Yasmin Mossavar-Rahmani; Krista M Perreira; Carmen R Isasi; Linda C Gallo; Linda Van Horn; Martha Daviglius; Sandra Albrecht. Dietary Patterns and Years Living in the US by Hispanic/Latino Heritage in HCHS/SOL.
3. Poteat TC, Gallo LC, Harkness A, Isasi CR, Matthews P, Schneiderman N, Thyagarajan B, **Sotres-Alvarez D**, M Perreira KM. Stress, Gender, and Minority Status in Hispanic Community Health Study/Study of Latinos: Sample, Design, and Procedures.

4. Nicole A Karazurna, Caitlin M Porter, Semra Aytur, Tammy Scott, Josiemer Mattei, Sabrina Noel, Hector M Gonzalez, Yasmin Mossavar-Rahmani, **Daniela Sotres-Alvarez**, Linda C Gallo, Martha L Daviglius, Linda Van Horn, Tali Elfassy, Marc D Gellman, Ashley E Moncrieft, Katherine L Tucker, Robert C Kaplan, Sherman J Bigornia. Associations between dietary fatty acid patterns and cognitive function among adults: The Hispanic Community Health Study/ Study of Latinos.
5. Wu, Benson; Tarraf, Wassim; Wallace, Douglas; Stickel, Ariana; Schneiderman, Neil; Redline, Susan; Patel, Sanjay; Gallo, Linda; Mossavar-Rahmani, Yasmin; Daviglius, Martha; Zee, Phyllis; Talavera, Gregory; **Sotres-Alvarez**, Daniela; Gonzalez, Hector; Ramos, Alberto. Sleep apnea phenotypes in middle-aged and older Hispanics/Latinos: Results from the Hispanic Community Health Study/Study of Latinos (HCHS/SOL).
6. Guo-Chong Chen, Jin Choul Chai, Zhilei Shan, Bing Yu, Yasmin Mossavar-Rahmani, Daniela **Sotres-Alvarez**, Josiemer Mattei, Martha L. Daviglius, David L. Perkins, Robert D. Burk, Eric Boerwinkle, Robert C. Kaplan, Frank B. Hu, and Qibin Qi. Metabolomic Markers of Multiple Healthful Dietary Patterns and Cardiometabolic Risk: the Hispanic Community Health Study/Study of Latinos.

Manuscripts in preparation

1. Stephenson B, Edefonti V, **Sotres-Alvarez D**, DeVito R. Dietary Patterns using Bayesian Multi-Study Factor Analysis.
2. Stephenson B, **Sotres-Alvarez D**, Siega-Riz AM, Carmen Isasi, Mossavar-Rahmani Y, Ramon Durazo-Arvizu, Mingan Yang, Daviglius M, Van Horn L, Herring A, Cai J. Effect of Dietary Patterns on Cardio-metabolic health using Bayesian Nonparametric techniques: results from HCHS/SOL.
3. Shaw PA, Gustafson P, Kipnis V, **Sotres-Alvarez D**, Park E, Shen J, Freedman L. On the use of predicted values in epidemiology: Example from the Hispanic Community Health Study/Study of Latinos (HCHS/SOL)
4. Shaw PA, Rengyi Xu, Jeannette M Beasley, Marc D Gellman, Anna Maria Siega-Riz, Daniela **Sotres-Alvarez**, Linda Van Horn, Judith Wylie-Rosett, Yasmin Mossavar-Rahmani. Biomarker-calibrated energy and protein consumption and risk of diabetes: Results from the Hispanic Community Health Study/Study of Latinos.
5. Elfassy T, **Sotres-Alvarez D**, Rundek T, Raij L, Schneiderman N, Van Horn L, Smoller S, Daviglius M, Youngblood ME, Llabre M, Castaneda S, Al Hazzouri AZ. Dietary sodium, potassium and blood pressure changes among diverse US Hispanics/Latinos in the Hispanic Community Health Study/Study of Latinos.
6. Jee-Young Moon et al. Association of Sugar-Sweetened Beverage Consumption with Prediabetes and Glucose Metabolism Markers in Hispanic/Latino Adults in the United States: Results from HCHS/SOL.

7. * Schilsky S, **Sotres-Alvarez D**, June Stevens, Sheila F Castaneda, Qibin Qi, Carmen R Isasi, Yasmin Mossavar-Rahmani, Martha Daviglus, Linda Van Horn, Tali Elfassy, Marc D Gellman, Wayne D Rosamond. Sugar and artificially-sweetened beverages and 6 year weight change: Results from the Hispanic Community Health Study /Study of Latinos Study.
8. * Davalos A, **Sotres-Alvarez D**, Evenson K, Herring A, Cai J. The tensor mixture model for compositional data with essential zeros: Jointly profiling accelerometry-assessed physical activity and sedentary behavior in HCHS/SOL.
9. * Luis Maldonado, Sandra Albrecht, **Daniela Sotres-Alvarez**, Elizabeth J Mayer-Davis, Allison E Aiello, Josiemer Mattei, Martha Tamez, Krista M Perreira, Martha Daviglus, Linda Van Horn, Yasmin Mossavar-Rahmani, Linda S Adair. Comparison of a-posteriori diet patterns among Mexican-origin adults in Mexico and the US: findings from HCHS/SOL and ENSANUT 2012.
10. * Luis Maldonado, Sandra Albrecht, **Daniela Sotres-Alvarez**, Allison E Aiello, Elizabeth J Mayer-Davis, Krista M Perreira, Josiemer Mattei, Martha Daviglus, Linda Van Horn, Yasmin Mossavar-Rahmani, Madison N LeCroy, Linda C Gallo, Neil Schneiderman, Gregory A Talavera, Linda S Adair. A posteriori dietary patterns and risk of diabetes by cultural heritage among US Hispanic/Latinos in HCHS/SOL
11. * Luis Maldonado, Sandra Albrecht, **Daniela Sotres-Alvarez**, Carmen Isasi, Krista M Perreira, Josiemer Mattei, Amanda McClain, Linda C Gallo, Linda S Adair. Household and Child-specific Food Insecurity are Linked to Adverse Cardiometabolic Profiles in Hispanic/Latino Children: Findings from HCHS/SOL Youth.

CONFERENCE PRESENTATIONS

Invited Oral Presentations

Sotres-Alvarez D, Shaw P, Shen J, Gustafson P, Kipnis V, Freedman L. The International Conference on Diet and Activity Methods, eICDAM, Feb 2021. Estimating the distribution of usual nutrient intake using predicted values from a calibration equation in a Complex Survey Design.

Sotres-Alvarez D, Davalos AD, Cai J, Evenson K, Herring AH. The Tensor Mixture Model for Compositional Data with Essential Zeros: Jointly Profiling Accelerometry-Assessed Physical Activity and Sedentary Behavior in the Hispanic Community Health Study/Study of Latinos (HCHS/SOL). International Biometric Society, ENAR Meeting. Philadelphia, PA. March 2019.

Sotres-Alvarez D. Sedentary Behavior and Cardiometabolic Biomarkers in HCHS/SOL. School of Nursing, University of Virginia. Charlottesville, VA. April 10, 2018.

Sotres-Alvarez D, Siega-Riz Anna Maria, Shaw P, Mossavar-Rahmani Y. Calibrating Dietary Data for Analysis of Cardiometabolic Risk: Challenges, Opportunities and Results from the HCHS/SOL Cohort. UNC Nutrition Obesity Research Center, Gillings School of Global Public Health, UNC, Chapel Hill, NC. Jan 25, 2017.

Sotres-Alvarez D, Mendez M, Miles DR, Slining M and Popkin BM. *Shifts in the Recent Distribution of Energy Intake among U.S. Children Aged 2–18 Years*. Nutritional Epidemiology Seminar at Carolina Population Center (CPC), Gillings School of Global Public Health, UNC, Chapel Hill, NC. Oct 26, 2016.

Sotres-Alvarez D. “Data access and opportunities to collaborate with HCHS/SOL Study”. Professional Development Workshop: Catapult Your Research Career Using Public Data Sets. HHS/National Institutes of Health. Bethesda, MD. June 29, 2015.

Sotres-Alvarez D. “HCHS/SOL Study Design and Analysis Methods” 8-hr workshop at Summer Institute “Investing in America’s Future: Mentoring Researchers in Latino Health Disparities” funded by NHLBI to San Diego State University Graduate School of Public Health (GSPH) and Institute for Behavioral and Community Health (IBACH). San Diego, CA. Jul 2011, 2012, 2013.

Sotres-Alvarez D. Latent class models in nutritional epidemiology. Guest lecture for EPID 853: Advanced Topics in Perinatal and Pediatric Epidemiology. UNC, Apr 2013.

Sotres-Alvarez D, Herring AH, and Siega-Riz AM. *Modeling change in dietary patterns*. Nutritional Epidemiology Seminar at Carolina Population Center (CPC), UNC; Oct 2012.

Sotres-Alvarez D, Herring AH, and Siega-Riz AM. *Modeling change in dietary patterns*. University of Michigan, Biostatistics Department; Mar 2012.

Duncan B, Price D. **Sotres-Alvarez D**. *Careers in Biostatistics Panel*. Presented at The 2011 ENAR Workshop: Fostering Diversity in Biostatistics. Miami, FL. Mar 2011.

Herring AH and **Sotres-Alvarez D**. Advanced Methods in Reproductive and Perinatal Epidemiology. Joint SPER/SER-SC/ASA Statistics in Epidemiology Section. Boston, MA. Jun 2007.

Contributed Oral Presentations

* Baldoni P, **Sotres-Alvarez D**, Shaw P. Statistical Strategies for the Analysis of Diet-Disease Models that Correct for Error-Prone Exposures. International Biometric Society, ENAR Meeting, Atlanta GA. March 2018.

* Wilson R, **Sotres-Alvarez D**, Evenson KR, Bangdiwala SI. Statistical approaches that account for accelerometer non-wear and the missing mechanism at the day-segment, day, and participant levels. International Biometric Society, ENAR Meeting, Washington DC, March 2017.

Sotres-Alvarez D, Deng Y, Ayala GX, Carnethon M, Delamater AM, Isasi CR, Davis S, and Evenson KR. Impact of Data Reduction on Accelerometer Data. International Biometric Society, ENAR Meeting, Miami, FL. March 2015.

Sotres-Alvarez D, Herring AH, and Siega-Riz AM. *Latent transition models to study change in dietary patterns over time*. International Biometric Society, ENAR Meeting, San Antonio, TX. March 2009.

Sotres-Alvarez D, Habicht JP, Shamah T, Villalpando S, Rivera JA. *Impact of the Mexican Program for Education, Health, and Nutrition (PROGRESA) on rates of growth and anemia in infants and young children: a randomized effectiveness study*. FORUM 8: Global Forum for Health Research, Mexico City, México. Nov, 2004.

Posters (only as 1st author)

Sotres-Alvarez D, Herring AH, and Siega-Riz AM. *Does food-grouping makes a difference when deriving dietary patterns using latent class models? A Monte Carlo simulation study*. The Joint Statistical Meetings, Vancouver, BC, Canada. Aug. 2010.

Sotres-Alvarez D, Herring AH, and Siega-Riz AM. *Latent transition of dietary patterns from pregnancy to postpartum*. International Conference on Dietary Assessment Methods (ICDAM8), Washington, DC. June, 2009.

Sotres-Alvarez D, Herring AH, and Siega-Riz AM. *Dietary patterns during pregnancy: factor analysis and latent class analysis*. Society for Epidemiologic Research, SER Meeting; Chicago, IL. June, 2008.

COURSES TAUGHT

Linear and Logistic Regression, 2002, 2004 and 2013 (~25 students each class)

Five-hour graduate level course

School of Public Health of México, Cuernavaca, Morelos, México

Longitudinal Analysis, 2003 and 2004 (~15 students each class)

Three-hour graduate level course

School of Public Health of México, Cuernavaca, Morelos, México

SAS short course, 2003 and 2004 (~25 students each class)

Ten lecture hours

School of Public Health of México, Cuernavaca, Morelos, México

SCHOLAR MENTORING

- Katelyn Holliday, PhD. Medical Instructor, Department of Family Medicine and Community Health, Duke University School of Medicine.
Duke BIRCWH scholar (Building Interdisciplinary Research Careers in Women's Health)
"Spatial patterns of physical activity into behavioral interventions that incorporate sociodemographically-relevant built environment factors".

POSTDOCTORAL FELLOW SUPERVISION

- Briana Stephenson, "Bayesian nonparametric clustering methods for dietary data from complex survey studies", HCHS/SOL Diversity Supplement 2017-2019

DOCTORAL DISSERTATION CHAIR

- Rebecca Wilson, (Biostatistics, UNC; co-chair with Shrikant Bangdiwala; 2018) "Using the multilevel generalized mixed model to impute missing accelerometry"

DOCTORAL DISSERTATION COMMITTEE MEMBER**Current:**

- Pooja Saha (Biostatistics, UNC-Chapel Hill; Anastasia Ivanova)
- Tracie Shing (Biostatistics, UNC-Chapel Hill; John Preisser)
- Samantha Schilsky (Epidemiology, UNC-Chapel Hill; Kelly Evenson)
- Giovanna Lopez Gutierrez (Nutrition, INSP-Mexico; Dalia Stern) “Dietary patterns and diabetes incidence: results from Mexican Teachers Cohort”

Completed:

- Lauren Paynter (Nutrition, UNC-Greensboro; Lenka Shriver; 2021)
- Luis E Maldonado (Nutrition, UNC-Chapel Hill; Sandra Albrecht and Linda Adair; 2020)
- Sandra Perez-Tepayo (Nutrition, INSP-Mexico; Sonia Rodriguez; 2020)
- Tania Sanchez (Nutrition, INSP-Mexico; Carolina Batis; 2020)
- Nancy P Lopez-Olmedo (Nutrition, UNC; Barry Popkin; 2018)
- Catherine Bulka (Epidemiology, UIC; Maria Argos; 2018)
- Briana Stephenson (Biostatistics, UNC; Amy Herring; 2017)
- Jayne K Jeffries (Health Behavior and Health Education, UNC; Leslie Little; 2017)
- Lindsay Fernandez-Rhodes (Epidemiology, UNC; Kari North; 2016)
- Meredith Eastman (Health Behavior and Health Education, UNC; Vangie A Foshee; 2016)
- Melecia Wright (Nutrition, UNC; Linda Adair; 2016)
- Chantel Martin (Epidemiology, UNC; Anna Maria Siega-Riz; 2015)
- Sonia Rodriguez (Nutrition, INSP-Mexico; Tere Gonzalez De Cossio; 2013)
- Ismael Campos (Nutrition, INSP-Mexico; Simon Barquera; 2013)
- Carolina Batis (Nutrition, UNC; Barry Popkin; 2013)
- Alejandra Cantoral (Epidemiology, INSP-Mexico; Mara Tellez-Rojo; 2013)

MASTERS STUDENTS SUPERVISED IN BIOSTATISTICS**Completed:**

- Angeline Sanders (May 2020), Association of Dietary Patterns and Hypertension in HCHS/SOL
- Derek Gazis (May 2018), Acculturation and Physical Activity among Hispanic Youth
- Natalie Smith (May 2017), Dietary Patterns derived by Reduced Rank Regression in HCHS/SOL
- Carolina Alvarez (May 2015), Comparison of Data Reduction Methods for Accelerometer Data: Results from HCHS/SOL Youth Ancillary Study

READER OF MASTER'S PAPER IN BIOSTATISTICS

- Yi Tang Chen (Feng-Chang Lin, May 2020), Latent subgroup analyses of the occurrence of pseudomonas aeruginosa infections in cystic fibrosis patients
- David Henke (John Preisser, May 2014), Logistic regression modeling: Compensating for an incomplete covariate via use of weights
- Tyler Bardsley (Amy Herring, May 2011), Latent Class Models for Studying Lipoprotein subclass patterns and intrauterine fetal growth

UNDERGRADUATE HONORS THESIS**Completed:**

- Jose S. Lopez (May 2020), Comparing two statistical methods to address missing data in accelerometer data in HCHS/SOL Youth study.

SERVICE**SCIENTIFIC REVIEW GROUP**

- NIH Biostatistical Methods and Research Design (BMRD) Study Section (2021)
- NIH Special Emphasis Panel / ZHL1 CCT-S (C1) - NHLBI Cardiovascular Health Study (CHS) Research Resource (2019)
- NIH Special Emphasis Panel / Scientific Review Group for Cancer, Heart, and Sleep Epidemiology Panel A Study Section (CHSA) (2016, 2017, 2018)

ADVISORY BOARD

- NHLBI Observational Study Monitoring Board (OSMB) for the Lung Health Cohort (LHC), Member
- ENAR Regional Advisory Board (RAB), Member 2018-2020 (3 year term)

JOURNAL REFEREE

- Statistics in Medicine, The International Journal of Biostatistics
- American Journal of Epidemiology, Annals of Epidemiology
- American Journal of Clinical Nutrition, Journal of Nutrition, British Journal of Nutrition, Acad Nutr Diet, Nutrition Journal, European Journal of Nutrition
- Public Health Nutrition, BMC Public Health, Salud Pública de México
- PLOS ONE, Archives of Disease in Childhood, Eastern Journal of Medicine
- International Journal of Sleep Disorders
- American Journal of Preventive Medicine, Breast Cancer Research and Treatment

UNC BIOSTATISTICS DEPARTMENT

- Doctoral Applications Examination Committee, Wrote/Graded (2014-2019)
- Masters Written Examination, Grader (2014-2019)
- Global Public Health Committee
- Faculty and Chair Search Committees

RESEARCH GRANTS**Active**

[R01 DK116028-01A1](#) (Sotres-Alvarez and Siega-Riz) 9/18/18-6/30/23
Role: Principal-Investigator 1.8 Calendar (15.0 %)
Preconceptional Health of Latinas and its Association with Child Adiposity
 National Institute of Diabetes and Digestive and Kidney Diseases, NIH

The proposed project will measure the association among maternal preconception cardiometabolic markers and diet, and child weight and adiposity (total fat mass using DEXA) in a well-characterized Hispanic/Latino population in the United States. This study will improve our understanding of the association between maternal preconception health and childhood obesity – a topic that is not well studied yet is important given the poor cardiovascular health status and high prevalence of childhood obesity among Hispanics/Latinos. The results from this study will be used to design better intervention studies to ensure the optimal health of Hispanic/Latina women before conception as well as the health and wellbeing of their offspring.

75N92019D00010 (Cai, Coordinating Center; Visit 3) 11/30/18 -11/29/25
Role: Co-Investigator, Coordinating Center 5.4 Calendar (50.0 %)
Hispanic Community Health Study/ Study of Latinos (HCHS/SOL): Coordinating Center
 National Heart, Lung & Blood Institute, NIH

The HCHS study objectives are to 1) obtain previously unavailable evidence on putative causes of chronic diseases which are highly prevalent in Hispanic/Latinos; 2) describe changes in risk and protective factors from acculturation to US society; 3) assess the combined impact of biological and lifestyle risk factors, socioeconomic and sociocultural factors, and healthcare access. The HCHS coordinating center will provide operational and scientific coordination for the field centers to ensure that the research objectives of the study are met.

[R01 HL148463-01](#) (Carlson, subcontract to Sotres-Alvarez) 7/17/19 - 6/30/24
Role: PI of subcontract, Coordinating Center 1.20 Calendar (10.00%)
Characterization of Sedentary Patterns and Cardiovascular Disease Risk Markers in Hispanics/Latinos
 National Heart, Lung & Blood Institute, NIH

This observational cohort study will investigate how various sedentary patterns are cross-sectionally (Aim 1a) and prospectively (Aim 2a) associated with CVD risk markers of adiposity, insulin resistance, and blood glucose in 2600 participants from HCHS/SOL. The role of physical activity and total sedentary time as effect modifiers of the association of sedentary patterns with CVD risk markers will also be investigated (Aims 1&2b) to inform efforts targeting the full spectrum of light, moderate, and vigorous activity. The study outcome variables will include waist-to-hip ratio, percent body fat, and body mass index (measures of adiposity), HOMA-IR (a measure of insulin resistance) and HbA1c (a measure of blood glucose), which are priorities for disease prevention in Hispanics/Latinos. Multiple novel sedentary pattern variables will be investigated to identify which aspects of sedentary time are most important for health in this population. Findings will inform practice by identifying which specific aspects of sedentary patterns should be targeted to improve risk markers.

[R01 HL146132-01](#) (Kaplan & Matsushita, subcontract to Sotres-Alvarez)**8/01/19 - 7/31/23****Role: PI of subcontract, Coordinating Center****0.60 Calendar (5.00%)****Peripheral Artery Disease Study of SOL**

National Heart, Lung & Blood Institute, NIH

The aim of the study is to characterize the impact of PAD on free-living daily physical activity and examine the value of objective assessment of daily physical activity for PAD management, diagnosis and risk stratification, from participants of HCHS/SOL. Through comprehensive clinical assessment of lower extremity blood vessels, multi-day accelerometry and physical function testing, we address the hypothesis that PAD will be identifiable by suboptimal usual activity patterns including longer sedentary time, higher activity fragmentation and diurnal patterns of activity. The study will also determine the prognostic value of 7-day physical activity, above and beyond self-reported leg symptoms and clinic-based physical function, to predict PAD-associated major health outcomes. Finally, duplex ultrasound of leg arteries in combination with other study assessments will be used to better resolve the population with indeterminate results on peripheral arterial disease clinical test. Results will help to guide the application of both clinical screening protocols and mobile technologies to identify, predict and intervene upon major health sequelae associated with PAD.

[R01-HL149778](#) (Poteat & Perreira)**3/4/2020 - 2/28/2025****Role: Co-Investigator****0.30 Calendar (2.5%)****Cardiovascular Health of Sexual and Gender Minorities (SGM) in the Hispanic Community Health Study/Study of Latinos (SGM HCHS/SOL)**

National Heart, Lung & Blood Institute, NIH

SGM inequities in cardiovascular disease (CVD) risk have been identified as early as young adulthood; and minority stress has been identified as a potential moderator. This ancillary study will collect new data on sexual orientation, gender identity, stigma, discrimination, stress, coping, social support, and CVD risk. Study findings will be used to build on identified Hispanic/Latino cultural strengths to inform adaptation and testing of family and community acceptance interventions.

[R61 HL142680-01](#) (Keyserling & Samuel-Hodge)**06/01/2019 – 05/31/24****Role: Co-Investigator****0.36 Calendar (5.0 %)****Randomized Explanatory Trial of a Mediterranean Dietary Pattern Weight Loss Intervention for Primary Care Practices**

National Heart, Lung & Blood Institute, NIH

Previously tested weight loss interventions delivered in primary care settings have not led to meaningful long term weight loss and have not promoted what we now know to be a healthful dietary pattern, commonly referred to as a Mediterranean diet, and one that includes regular intake of high quality fats and high quality carbohydrates. This study will evaluate the effectiveness of a behavioral weight loss intervention that promotes an adapted Mediterranean style dietary pattern. It will be conducted at 5 primary care sites include 350 participants, at least 40% with diabetes, male, and African American. The primary outcome is weight loss at 24 months. Secondary outcomes include change in physiologic, behavioral, and psychosocial measures.

R01 MD009738 (Sen) **23/6/15 – 31/12/21**
Role: Co-Investigator **0.36 Calendar (2.5 %)**

National Institute on Minority Health and Health Disparities, NIH
 Periodontal Treatment to eliminate Minority inequality and Rural Disparities in Stroke (PREMIERS)

Stroke remains more common in North and South Carolina, part of the "buckle" of the stroke belt, and disproportionately impacts African Americans. This study will conduct an adequately powered two-center Phase III randomized controlled trial to test whether intensive periodontal treatment reduces the risk of recurrent vascular events among ischemic stroke and TIA survivors.

Completed

HHSN268201300001I (Cai, Coordinating Center; Visit 2) 6/01/13 - 11/29/18
 HHSN268200625233C (Cai, Coordinating Center; Visit 1) 9/30/06 - 5/31/13
 Role: Co-Investigator, Coordinating Center 7.68 – 9.6 Calendar (64.0 – 80.0 %)
 Hispanic Community Health Study/ Study of Latinos (HCHS/SOL): Coordinating Center
 National Heart, Lung & Blood Institute, NIH

[R01 MD011389](#) (Kaplan, subcontract to Sotres-Alvarez) 07/08/16 - 2/28/21
 Role: PI of subcontract, Coordinating Center 0.96 Calendar (5.0 %)
 Epidemiology of the Gut Microbiome, Prediabetes, and Diabetes in Latinos (GOLD)
 National Institute on Minority Health and Health Disparities, NIH

[R01 HL136266](#) (Mossavar-Rahmani and Kaplan, subcontract to Sotres-Alvarez) 12/01/16 - 11/30/20
 Role: PI of subcontract, Coordinating Center 0.60 Calendar (5.0 %)
 Cardiometabolic Outcomes in Multi-Ethnic Physical Activity & Sedentary Behavior Study (COMPASS)
 National Heart, Lung & Blood Institute, NIH

[R01 DK106209](#) (Allison and Gallo, subcontract to Sotres-Alvarez) 7/01/15 - 6/30/20
 Role: PI of subcontract, Coordinating Center 0.36 Calendar (3.0 %)
 Neighborhood Environments and Cardiometabolic Disorders in Hispanics/Latinos
 National Heart, Lung & Blood Institute, NIH

16SFRN27940007 (Castañeda and Allison, subcontract to Sotres-Alvarez) 4/01/16- 3/31/20
 Role: PI of subcontract, Coordinating Center 0.60 Calendar (5.0 %)
 Population Project 3: Biopsychosocial and Ecological Correlates of Latina Women's Sedentary Behavior
 American Heart Association, Strategically Focused Go Red for Women Research Center

R01-HL098297 (Patel, subcontract to Sotres-Alvarez) 07/01/10 - 04/30/14
 Sleep Patterns as a Risk Factor for Disease in the Hispanic Community Health Study
 Role: PI of subcontract, Coordinating Center 0.60 Calendar (5.0 %)
 National Heart, Lung & Blood Institute, NIH

R01-HL095856 (Mossavar-Rahmani, subcontract to Sotres-Alvarez) 4/25/10 – 3/31/14
 Study of Latinos Nutrition & Physical Activity Assessment Study (SOLNAS)
 Role: PI of subcontract, Coordinating Center 1.20 Calendar (10.0 %)
 National Heart, Lung & Blood Institute, NIH

1RC2HL01649 (Gallo L & Penero F, subcontract to Sotres-Alvarez) Socio-cultural Factors and CVD Risk/Prevalence in Hispanics Study Role: PI of subcontract, Coordinating Center National Heart, Lung & Blood Institute, NIH	7/30/09 – 12/31/11 0.60 Calendar (5.0 %)
R01-HL1021301 (Bangdiwala, Coordinating Center) Hispanic Community Children's Health Study of Latino Youth Role: Co-Investigator, Coordinating Center National Institute of Heart, Lung, and Blood	04/01/11 - 11/30/16 0.60 Calendar (5.0 %)