

Ayesha Sania

Division of Developmental Neuroscience
Department of Psychiatry
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Education

- ♦ **Harvard T. H. Chan School of Public Health**
Doctor of Science, Epidemiology Aug 2008 – May 2013
Minor in Biostatistics, Pediatric & Perinatal Epidemiology
Dissertation: “Fetal Growth in Relation to Pregnancy Complications, Infant Mortality, and Child Undernutrition in Tanzania”
Committee: Wafaie Fawzi (advisor), Donna Spiegelman, Janet Rich-Edwards
- ♦ **James P. Grant School of Public Health, BRAC University, Bangladesh**
Master of Public Health Feb 2005 – Feb 2006
Supervisors: Demissie Habte and Shams El Arifeen
- ♦ **Dhaka Medical College, Bangladesh**
Bachelor of Medicine and Surgery (MBBS) Aug 1997 – Jan 2003

Research Experience

- ♦ **Columbia University**
Department of Psychiatry, Associate Research Scientist Apr 2020 –present
Department of Psychiatry, Adjunct Associate Research Scientist Oct 2018 – Mar 2020*
Department of Neurology, Post-Doctoral Research Scientist Oct 2017 – Sep 2018*
ICAP and Department of Epidemiology, Post-Doctoral Fellow Sep 2014 – Aug 2016
- ♦ **Harvard T. H. Chan School of Public Health**
Department of Global Health and Population, Post-Doctoral Fellow Jul 2013 – Aug 2014
- ♦ **Child Health Unit, Public Health Sciences Division, ICDDR,B**
Research Investigator Aug 2006 – Jul 2008

Research Assistantships

- ♦ **Harvard Center for Population and Development Studies** Jul 2011 – Aug 2012
Data analyst for project “Social networks and suicide mortality risk among men: 22-year follow up of health professionals in the U.S.”
- ♦ **Population Research Center, University of Texas at Austin** Jun 2009 – Aug 2009
Data analyst for project “Measuring wealth in health disparities research”
- ♦ **Child Health Unit, Public Health Sciences Division, ICDDR,B** Mar 2006 – Aug 2006
Project: “Validation of birth weight measurement by health workers”

Teaching Experience

- ♦ **Department of Biostatistics, Harvard T. H. Chan School of Public Health** Spring 2011
Teaching Assistant, BIO 210 course on analysis of rates and proportions
Instructor: Robert Glynn, ScD

*Taken time off from full-time paid work to care for my son who had multiple health challenges

- ♦ **Department of Epidemiology, Harvard T. H. Chan School of Public Health** Fall 2011
Teaching Assistant, EPI 200 course on principles of Epidemiology
Instructor: Mary Kay Fawzi, ScD
- ♦ **Department of Community Medicine, Bangladesh Medical College** Jun 2004 – Feb 2005
Lecturer, Taught Introductory Public Health and Epidemiology of Infectious Diseases to 3rd and 4th year medical students

Consultancies

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- ♦ **UNICEF Nutrition, UNICEF, New York** Apr 2014 – May 2015
Data analysis of a randomized controlled trial examining the efficacy of micronutrient sprinkles with zinc on anemia and other outcomes in Peruvian children aged 6-17 months
 - ♦ **Public Health Sciences Division, ICDDR, Dhaka** Aug 2013 – Dec 2013
Review on gender based violence on child health outcomes in Bangladesh

Clinical Experience

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- ♦ **Dhaka Medical College Hospital** Apr 2003 – Apr 2004
In Service Trainee – Clinical management of patients attending inpatient and outpatient units of Medicine, Gynecology & Obstetrics Departments

Publications

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1. Shuffrey LC, Myers MM, Isler JR, Lucchini M, **Sania A**, Pini N, Nugent JD, Condon C, Ochoa T, Brink L, du Plessis C, Odendaal HJ, Nelson ME, Friedrich C, Angal J, Elliott AJ, Groenewald C, Burd L, Fifer WP; PASS Network. Association Between Prenatal Exposure to Alcohol and Tobacco and Neonatal Brain Activity: Results From the Safe Passage Study. *JAMA Netw Open*. 2020 May 1;3(5):e204714.
 2. **Sania A**, Sudfeld CR, Danaei G, Fink G, McCoy DC, Zhu Z, Fawzi MCS, Akman M, Arifeen SE, Barros AJD, Bellinger D, Black MM, Bogale A, Braun JM, van den Broek N, Carrara V, Duazo P, Duggan C, Fernald LCH, Gladstone M, Hamadani J, Handal AJ, Harlow S, Hidrobo M, Kuzawa C, Kvestad I, Locks L, Manji K, Masanja H, Matijasevich A, McDonald C, McGready R, Rizvi A, Santos D, Santos L, Save D, Shapiro R, Stoecker B, Strand TA, Taneja S, Tellez-Rojo MM, Tofail F, Yousafzai AK, Ezzati M, Fawzi W. "Early life risk factors of motor, cognitive and language development: a pooled analysis of studies from low/middle-income countries." *BMJ Open* 2019;9(10):e026449.
 3. **Sania A**, Smith E, Manji K, Duggan C, Masanja H, Kisenge R, Msamanga G, Urassa W, Fawzi F. "Neonatal and infant mortality risk associated with preterm and small-for-gestational-age births in Tanzania: individual level pooled analyses using the intergrowth standard." *Journal of Pediatrics* doi: 10.1016/j.jpeds.2017
 4. Lee AC, Kozuki N, Cousens S, Stevens GA, Blencowe H, Silveira MF, **Sania A**, Rosen HE, Schmiegelow C, Adair LS, Baqui AH, Barros FC, Bhutta ZA, Caulfield LE, Christian P, Clarke SE, Fawzi W, Gonzalez R, Humphrey J, Huybregts L, Kariuki S, Kolsteren P, Lusingu J, Manandhar D, Mongkolchat A, Mullany LC, Ndyomugenyi R, Nien JK, Roberfroid D, Saville N, Terlouw DJ, Tielsch JM, Victora CG, Velaphi SC, Watson-Jones D, Willey BA, Ezzati M, Lawn JE, Black RE, Katz J; CHERG SGA/Preterm Birth Working Group. "Estimates of burden and consequences of infants born small for gestational age in low and middle income countries with INTERGROWTH-21st standard: analysis of CHERG datasets." *BMJ*, 358:j3677, 2017.
 5. **Sania A**, Brittain K, Phillips TK, Zerbe A, Ronan A, Myer L, Abrams EJ. "Effect of alcohol consumption

- and psychosocial stressors on preterm and small-for-gestational-age births in HIV-infected women in South Africa: a cohort study." *BMJ Open*, 7(3):e014293, 2017.
6. Danaei G, Andrews KG, Sudfeld CR, Fink G, McCoy DC, Peet E, **Sania A**, Smith Fawzi MC, Ezzati M, and Fawzi WW. "Risk Factors for Childhood Stunting in 137 Developing Countries: A Comparative Risk Assessment Analysis at Global, Regional, and Country Levels." *PLoS Medicine*, 13(11):e1002164, 2016.
 7. **Sania A**, Spiegelman D, Rich-Edwards JW, Hertzmark E, Mwiru R, Kisenge R, Fawzi WW. "The contribution of preterm birth and intrauterine growth restriction to childhood undernutrition in Tanzania." *Maternal and Child Nutrition*, 11(4): 618-30, 2015.
 8. Kozuki N, Katz J, Lee AC, Vogel JP, Silveira MF, **Sania A**, Stevens GA, Cousens S, Caulfield LE, Christian P, Huybregts L, Roberfroid D, Schmiegelow C, Adair LS, Barros FC, Cowan M, Fawzi W, Kolsteren P, Merialdi M, Mongkolchat A, Saville N, Victora CG, Bhutta ZA, Blencowe H, Ezzati M, Lawn JE, Black RE. "Short Maternal Stature Increases Risk of Small-for-Gestational-Age and Preterm Births in Low- and Middle-Income Countries: Individual Participant Data Meta-Analysis and Population Attributable Fraction." *Journal of Nutrition*, 145(11):2542-50, 2015.
 9. Kozuki N, Katz J, Christian P, Lee AC, Liu L, Silveira MF, Barros F, Tielsch JM, Schmiegelow C, **Sania A**, Roberfroid D, Ndyomugenyi R, Mullany LC, Mongkolchat A, Huybregts L, Humphrey J, Fawzi W, Baqui AH, Adair L, Oddo VM, Black RE; CHREG SGA/Preterm Birth Working Group. "Comparison of US Birth Weight References and the International Fetal and Newborn Growth Consortium for the 21st Century Standard." *JAMA Pediatrics*, 169(7):e151438, 2015.
 10. Tsai AC, Lucas M, **Sania A**, Kim D, Kawachi I. "Social integration and suicide mortality among men: 24-year cohort study of U.S. health professionals." *Annals of Internal Medicine*, 161(2):85-95, 2014.
 11. **Sania A**, Spiegelman D, Rich-Edwards J, Okuma J, Kisenge R, Msamanga G, Urassa W, Fawzi WW. "The contribution of preterm birth and intrauterine growth restriction to infant mortality in Tanzania." *Paediatric and Perinatal Epidemiology*, 28(1):23-31, 2014.
 12. Lee AC, Katz J, Blencowe H, Cousens S, Kozuki N, Vogel JP, Adair L, Baqui AH, Bhutta ZA, Caulfield LE, Christian P, Clarke S, Ezzati M, Fawzi W, Gonzalez R, Huybregts L, Kariuki S, Kolsteren P, Lusingu J, Marchant T, Merialdi M, Mongkolchat A, Mullany LC, Ndirangu J, Newell ML, Nien JK, Osrin D, Roberfroid D, Rosen HE, **Sania A**, Silveira MF, Tielsch J, Vaidya A, Willey BA, Lawn JE, Black RE; CHERG SGA/Preterm Birth Working Group. "National and regional estimates of term and preterm babies born small for gestational age in 138 low-income and middle-income countries in 2010." *Lancet Global Health*, 1(1):e26-36, 2013.
 13. Kozuki N, Lee AC, Silveira MF, **Sania A**, Vogel JP, Adair L, Barros F, Caulfield LE, Christian P, Fawzi W, Humphrey J, Huybregts L, Mongkolchat A, Ntozini R, Osrin D, Roberfroid D, Tielsch J, Vaidya A, Black RE, Katz J; CHREG SGA/Preterm Birth Working Group. "The associations of parity and maternal age with small-for-gestational-age, preterm, and neonatal and infant mortality: a meta-analysis." *BMC Global Health*, 13 Suppl 3:S2, 2013.
 14. Christian P, Lee SE, Donahue Angel M, Adair LS, Arifeen SE, Ashorn P, Barros FC, Fall CH, Fawzi WW, Hao W, Hu G, Humphrey JH, Huybregts L, Joglekar CV, Kariuki SK, Kolsteren P, Krishnaveni GV, Liu E, Martorell R, Osrin D, Persson LA, Ramakrishnan U, Richter L, Roberfroid D, **Sania A**, Ter Kuile FO, Tielsch J, Victora CG, Yajnik CS, Yan H, Zeng L, Black RE. "Risk of childhood undernutrition related to small-for-gestational age and preterm birth in low- and middle-income countries." *International Journal of Epidemiology*, 42(5):1340-55, 2013.
 15. Katz J, Lee AC, Kozuki N, Lawn JE, Cousens S, Blencowe H, Ezzati M, Bhutta ZA, Marchant T, Willey

BA, Adair L, Barros F, Baqui AH, Christian P, Fawzi W, Gonzalez R, Humphrey J, Huybregts L, Kolsteren P, Mongkolchat A, Mullany LC, Ndyomugenyi R, Nien JK, Osrin D, Roberfroid D, **Sania A**, Schmiegelow C, Silveira MF, Tielsch J, Vaidya A, Velaphi SC, Victora CG, Watson-Jones D, Black RE; CHERG SGA/Preterm Birth Working Group. "Mortality risk in preterm and small-for-gestational-age infants in low-income and middle-income countries: a pooled country analysis." *Lancet*, 382(9890):417-25, 2013.

16. Pollack CE, Cubbin C, **Sania A**, Hayward M, Vallone D, Flaherty B, Braveman PA. "Do wealth disparities contribute to health disparities within racial/ethnic groups?" *Journal of Epidemiology and Community Health*, 67(5):439-45, 2013.
17. Cubbin C, Pollack C, Flaherty B, Hayward M, **Sania A**, Vallone D, Braveman P. "Assessing alternative measures of wealth in health research." *American Journal of Public Health*, 101(5):939-47, 2011.
18. Mannan I, Rahman SM, **Sania A**, Seraji HR, Arifeen SE, Winch PJ, Darmstadt GL, Baqui A; Bangladesh Projahnmo Study Group. "Can early postpartum home visits by trained community health workers improve breastfeeding of newborns in rural Bangladesh?" *Journal of Perinatology*, 28(9):632-40, 2008.

Under Review

19. **Sania A**, Pini N, Shuffrey L, Lucchini M, Myers MM, Elliot AJ, Fifer, W. "The K nearest neighbor algorithm for imputation of missing prenatal alcohol data in a longitudinal study."

Under preparation:

20. **Sania A**,* Myers MM* Pini N, Lucchini M, Nugent JD, Shuffrey L, Odendaal HJ, Elliot AJ, , Fifer W. "Effects of prenatal smoking and drinking on newborn autonomic nervous system: results from the Safe Passage Study. (to be submitted on June 4, 2021)

Conference Presentations

1. Sania A. Arifin SM, Ahmad Z, Rahman M. "An agent-based model for transmission and control of COVID-19 epidemic in Bangladesh. Society Epidemiology Research Virtual Conference. June, 2021
2. **Sania A**, Pini N, Shuffrey L, Elliott A", Myers MM, Odendaal H, Fifer WP Effects of prenatal smoking and drinking on birth outcomes: results from the Safe Passage Study" Society Epidemiology Research Virtual Conference. December, 2020
3. **Sania A**, Nelson M, Shuffrey L, Elliott A, Myers MM, Fifer WP, `` The K nearest neighbor algorithm for imputation of missing prenatal alcohol data in a longitudinal study." Society Epidemiology Research Conference, Minneapolis, MN, June 2019.
4. **Sania A**, Sudfeld C, Danaei G, Fink G, McCoy D, Zhu Z, Fawzi M, Ezzati M, Fawzi WW; the Saving Brains Collaboration Group, ``Early Life Risk Factors of Motor, Cognitive, and Language Development: A Pooled Analysis of Studies from Low- and Middle-Income Countries." Society for Perinatal Epidemiology Research Conference, Baltimore, MD, June 2018.
5. **Sania A**, Brittain K, Phillips T, Zerbe A, Ronan A, Myer L, Abrams EJ. "Effect of alcohol consumption and psychosocial stressors on preterm and SGA births in HIV infected women in South Africa: a cohort study." *Pediatric HIV Workshop*, South Africa, July 2016.
6. **Sania A**, Smith E, and Fawzi WW. "Mortality Risk Associated with Preterm and SGA Stratified by Maternal HIV Status." *Conference on Retrovirus and Opportunistic Infections (CROI)*, Boston, June 2016.
7. **Sania A**, Spiegelman D, Rich-Edwards JW, Hertzmark E, Kisenge R, Urassa W, Fawzi WW.

“Multivitamin supplementation and maternal-fetal disproportion among HIV-negative women in Tanzania.” *Micronutrient Forum*, Addis Ababa, Ethiopia, June 2014.

8. **Sania A**, Spiegelman D, Rich-Edwards JW, Hertzmark E, Fawzi WW. “The contribution of preterm birth and intrauterine growth restriction to childhood undernutrition in Tanzania.” *CDC Maternal and Child Health Epidemiology Conference*, San Antonio, December 2012.
9. **Sania A**, Spiegelman D, Rich-Edwards JW, Okuma J, Kisenge R, Msamanga GI, Urassa W, Fawzi WW. “The contribution of preterm birth and intrauterine growth restriction to infant mortality in Tanzania.” *Society for Perinatal Epidemiology Research Conference*, Minneapolis, June 2012.
10. **Sania A** and Chava LA. “Menstrual beliefs, knowledge, and experiences of adolescents in rural Bangladesh.” *4th Asia Pacific Conference on Reproductive and Sexual Health and Rights*, Hyderabad, October 2007.
11. **Sania A**, Rahman SM, Mannan I, Bari S, Arifeen S, Habte D. “Immediate effect of training of nurses on newborn care at birth and implications for management of birth asphyxia.” *11th Annual Scientific Conference*, ICDDR, Dhaka, March 2007.

Other Publications

1. **Sania A**. “First breath: who takes care of the newborn in the critical minutes immediately after birth?” *Young Voices in Research for Health, Lancet Online*, October 28, 2006.

Honors and Awards

- ♦ Global HIV Implementation Science Research Training Fellowship (NIH grant T32AI114398) Sep 2014 – Aug 2016
- ♦ Harvard School of Public Health Scholarship for Doctoral Study Aug 2008 – May 2013
- ♦ Young investigator award to attend Conference on Retrovirus and Opportunistic Infections, CROI Feb 2016
- ♦ Brian McMahon Travel Scholarship to attend Society for Perinatal Epidemiology Research Conference Jun 2012
- ♦ 57th meeting of Nobel Laureates – selected from a worldwide competition of students and young researchers to meet the laureates in Medicine and Physiology at Lindau, Germany Jul 2007
- ♦ Winner of Forum 10 Essay Competition organized by *The Lancet* and Global Forum for Health Research at Cairo Oct 2006
- ♦ William B. Greenough III award for best dissertation in Master of Public Health Jan 2006

Grants

- ♦ Timing and Severity of Maternal Depression and Child Development, NIH/ORWH, Re-Entry into Biomedical Research Careers Grant, Role: Applicant. Outcome: Funded 2020
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