

EMMA ARMSTRONG-CARTER

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ACADEMIC AND PROFESSIONAL APPOINTMENTS

National Science Foundation Post-Doctoral Research Fellow

University of North Carolina at Chapel Hill (UNC) October 2022-September 2024
with Dr. Eva Telzer

Post-Doctoral Research Fellow

University of California, Berkeley April 2022 – October 2022
with Dr. Ron Dahl

EDUCATION

Ph.D., Stanford University

Developmental and Psychological Sciences, Graduate School of Education 2022
Minor in Data Science
Certificate in Research Practice Partnerships

B.A., University of North Carolina at Chapel Hill (UNC)

Psychology & Neuroscience; Geographic Information Science, cum laude 2016

GRANTS

National Science Foundation SPRF Post-Doctoral Fellowship 2022-2024
\$54,000 per year for two years

Institute of Education Science Fellowship 2018, 2019, 2020, 2021, 2022
In Quantitative Education Policy Analysis
\$45,000 per year for four years

Stanford Data Science Fellowship 2020, 2021, 2022
50% Research Assistantship
Stanford Tuition
\$4,000 Research Funds

Karr Grant 2021, 2022
\$2,599 Research Funds for Interdisciplinary Research

HONORS & AWARDS

Honorable Mention, National Science Foundation Graduate Student Fellowship 2018, 2019
Elected Member, Chapel Hill Parks and Recreation Commission 2017, 2018

Buckley Public Service Scholar 2016
Degree with Distinction, UNC 2016
Dean's List, UNC 2012, 2013, 2014, 2015, 2016

PUBLICATIONS

Peer-Reviewed Publications (N = 35)

Rathore, M.*, **Armstrong-Carter, E.***, Siyal, S., Yousafzai, A., Obradović, J., Investigating the association between the number of older siblings and preschooler's executive functions in rural Pakistan. *Journal of Family Psychology*. ***contributed equally as first authors.**

Armstrong-Carter, E., & Telzer, E.H., (in press). Biological sensitivity to environmental context fluctuates dynamically within individuals from day to day. *Nature Scientific Reports*.

Demange, P. A., Hottenga, J. J., Abdellaoui, A., Eilertsen, E. M., Malanchini, M., Domingue, B. W., ... **Armstrong-Carter E.**...Cheesman, R. (in press). Estimating effects of parents' cognitive and non-cognitive skills on offspring education using polygenic scores. *Nature Communications*.

Armstrong-Carter, E., Siskowski, C., Belkowitz, J., Johnson, C., Olson, E. Child and adolescent caregiving for family: Emotional, social, physical, and academic risk and individual differences. (2022). *Journal of Family Psychology*. doi.org/10.1037/fam0000969.

Armstrong-Carter, E., & Telzer, E.H. Adolescents take more risks on days they experience high emotional distress or show high total cortisol output. (2022). *Comprehensive Psychoneuroendocrinology*.

Armstrong-Carter, E., Bibby, E., Burrough, M., Flannery, J., Duell, N., Nelson, B., Prinstein, M. J., Telzer, E.H., Adolescents are more likely to help others on days they take risks and crave social connections. (2021) *Journal of Research on Adolescence*.

Armstrong-Carter, E., Do, K., Guassi-Moreira, J., Prinstein, M.J, Telzer, E.H. (2021) Introducing the prosocial risk-taking measure in a longitudinal sample of ethnically diverse adolescents. *Journal of Adolescence*.

Armstrong-Carter, E., & Telzer, E. H. (2021). Advancing measurement and research on youths' prosocial behavior in the digital age. *Child Development Perspectives*, 15(1), 31–36. doi.org/10.1111/cdep.12396

Armstrong-Carter, E., Wertz, J., & Domingue, B. W. (2021). Genetics and child development: Recent advances and their implications for developmental research. *Child Development Perspectives*, 15(1), 57–64. doi.org/10.1111/cdep.12400

Armstrong-Carter, E., Miller, J. G., Hill, L., & Domingue, B.W. (2021). Young children's prosocial behavior protects against academic risk in neighborhoods with low socioeconomic status. *Child Development*. doi.org/10.1111/cdev.13549

Gray, K., MacCormack, J. K., Henry, T. Banks, E., Schein, C., Abrams, S. **Armstrong-Carter, E.**, & Muscatell, K. A. The affective harm account of moral judgment: Reconciling cognition and affect, dyadic morality and disgust, harm and purity (2021). *Journal of Personality and Social Psychology*.

Obradović, J., Sulik, M. J., & **Armstrong-Carter, E.** (2021) Video-based learning intervention to teach deep breathing reduces respiratory sinus arrhythmia and heart rate in young children. *Developmental Psychobiology*.

Armstrong-Carter, E., Nelson, B. W., & Telzer, E. H. (2021). Prior night sleep moderates the daily spillover between conflict with peers and family and diurnal cortisol. *Developmental Psychobiology*, 63(8), e22209. Doi.org/10.1002/dev.22209

Armstrong-Carter, E., Miller, J. Obradović, J. (2021) Concurrent and lagged dynamic associations between parent-child behavioral and physiological synchrony during dyadic interaction tasks. *Developmental Psychobiology*. 63(7)1-25. doi.org/10.1002/dev.22196

Armstrong-Carter, E., Telzer, E. H. (2021). Family assistance predicts adolescents' positive academic behaviors and prosocial behavior to peers the next day. *Journal of Research on Adolescence*. doi.org/10.1111/jora.12629

Armstrong-Carter, E., & Telzer., E.H., (2021). Understanding prosocial development in the context of systemic inequalities in the US and worldwide. *Current Research in Behavioral Sciences*. doi.org/10.1016/j.crbeha.2021.100040

Armstrong-Carter, E., Siskowski, C., Belkowitz, J., Johnson, C., Olson, E., (2021). The United States should recognize and support caregiving youth. 34(2) 1-25. *Society for Research in Child Development Social Policy Report*. doi: 10.1002/sop2.14.

Armstrong-Carter, E., Sulik, M. J., Siyal, S., Yousafzai, A., & Obradović, J. (2021). Early and concurrent home stimulation: Unique and indirect links with fine motor skills among four-year-old children in rural Pakistan. *Developmental Psychology*. doi.org/10.1037/dev0001185

MacCormack, J., **Armstrong-Carter, E.**, Gaudier-Diaz, M., Meltzer-Brody, S., Lindquist, K., Muscatell, K., (2021) Beta-adrenergic contributions to emotion and physiology during an acute psychosocial stressor. *Psychosomatic Medicine*.

Caruso, T., **Armstrong-Carter, E.**, Rama, A., Neiman, N., Taylor, K., Madill M., Lawrence K., Hemphill, S., Domingue, B. (2021). The physiologic and emotional effects of virtual reality vs in-person simulation: A non-inferiority, randomized controlled trial. *Simulation in Healthcare*.

MacCormack, J. K., **Armstrong-Carter, E.**, Humphreys, K. L., & Muscatell, K. A. (2021). Neurophysiological contributors to advantageous risk-taking: An experimental psychopharmacological investigation. *Social Cognitive and Affective Neuroscience*. doi: 10.1093/scan/nsab047

Armstrong-Carter, E., & Telzer, E. H. (2021). Daily provision of instrumental and emotional support to friends is associated with diurnal cortisol during adolescence. *Developmental Psychobiology*, doi: 10.1002/dev.22101.

Armstrong-Carter, E., & Telzer, E. H. (2021). Bidirectional spillover across days between family assistance and physical health experiences during adolescence. *Journal of Family Psychology*. doi.org/10.1037/fam0000836

MacCormack, J. K., Gaudier-Diaz, M. M., **Armstrong-Carter, E.,** Arevalo, J. M. G., Meltzer-Brody, S., Sloan, E. K., Cole, S. W., & Muscatell, K. A. (2021). Beta-adrenergic blockade blunts inflammatory and antiviral/antibody gene expression responses to acute psychosocial stress. *Neuropsychopharmacology*, 46(4), 756–762. doi.org/10.1038/s41386-020-00897-0

Armstrong-Carter, E., Sulik, M. J., & Obradović, J. (2020). Self-regulated behavior and parent-child co-regulation are associated with young children’s physiological response to receiving critical adult feedback. *Social Development* (00) 1– 18, doi.org/10.1111/sode.12498

Armstrong-Carter, E., & Telzer, E. H. (2020). Family meals buffer the daily emotional risk associated with family conflict. *Developmental Psychology*, 56(11), 2110–2120. doi.org/10.1037/dev0001111

Armstrong-Carter, E., Guassi Moreira, J. F., Ivory, S. L., & Telzer, E. H. (2020). Daily links between helping behaviors and emotional well-being during late adolescence. *Journal of Research on Adolescence*. doi.org/10.1111/jora.12572

Obradović, J., & **Armstrong-Carter, E.** (2020). Addressing educational inequalities and promoting learning through studies of stress physiology in elementary school students. *Development and Psychopathology*, 32, 1899–1913. doi.org/10.1017/S0954579420001443

Domingue, B., Trejo, S., **Armstrong-Carter, E.,** & Tucker-Drob, E. (2020). Interactions between polygenic scores and environments: Methodological and conceptual challenges. *Sociological Science*, 7, 365–386. doi.org/10.15195/v7.a19

Caruso, T. J., Qian, J., Lawrence, K., **Armstrong-Carter, E.,** & Domingue, B. W. (2020). From Socrates to virtual reality: A historical review of learning theories and their influence on the training of anesthesiologists. *The Journal of Education in Perioperative Medicine*, 22(2), E638. doi.org/10.46374/volxxii-issue2-Caruso

Armstrong-Carter, E., Finch, J. E., Siyal, S., Yousafzai, A. K., & Obradović, J. (2020). Biological sensitivity to context in Pakistani preschoolers: Hair cortisol and family wealth are interactively associated with girls’ cognitive skills. *Developmental Psychobiology*. doi.org/10.1002/dev.21981

Armstrong-Carter, E., Trejo, S., Hill, L. J. B., Crossley, K. L., Mason, D., & Domingue, B. W. (2020). The earliest origins of genetic nurture: The prenatal environment mediates the association between maternal genetics and child development. *Psychological Science*, 31(7), 781–791. doi.org/10.1177/0956797620917209

Armstrong-Carter, E., Ivory, S., Lin, L. C., Muscatell, K. A., & Telzer, E. H. (2020). Role fulfillment mediates the association between daily family assistance and cortisol awakening response in adolescents. *Child Development*, 91(3). doi.org/10.1111/cdev.13213

Armstrong-Carter, E., Olson, E., & Telzer, E. (2019). A unifying approach for investigating and understanding youth's help and care for the family. *Child Development Perspectives*, 13(3), 186–192. doi.org/10.1111/cdep.12336

Cohen, M., Buzinski, S. G., **Armstrong-Carter, E.**, Clark, J., Buck, B., & Reuman, L. (2019). Think, pair, freeze: The association between social anxiety and student discomfort in the active learning environment. *Scholarship of Teaching and Learning in Psychology*, 5(4), 265–277. doi.org/10.1037/stl0000147

In Revision (N = 5)

Armstrong-Carter, E., Garrett, S., Nick, E., Prinstein, M.J., Telzer, E.H., Momentary links between adolescents' social media use and social experiences and motivations: Individual differences by peer susceptibility. *Developmental Psychology*.

Armstrong-Carter, E., Fuligni, A., Wu, X., Gonzales, N., & Telzer, E.H., A 28-day, two-year study reveals that adolescents are more fatigued and distressed on days with greater NO₂ and CO air pollution. *Nature Scientific Reports*.

Armstrong-Carter, E., Do, K., Duell, N., Kwon, S.J, Lindquist, K., Prinstein, M. J., Telzer, E.H., Adolescents' perceptions of social risk and prosocial tendencies: Developmental change and individual differences. Preprint. *Social Development*.

Armstrong-Carter, E., African American adolescents' support to the family: Links with education and individual differences by household income. *Social Development*.

Armstrong-Carter, E., Bush, N., Boyce, T.W, Obradović, J., Cortisol reactivity marks biological sensitivity to kindergartners' social hierarchies for emerging school engagement. *Developmental Psychobiology*.

Under Review (N = 3)

Armstrong-Carter, E., Osborn, S., Smith, O., Siskowski, C., Olson, E.A. Middle and high school students who take care of siblings, parents and grandparents: Associations with school engagement, belonging, and wellbeing.

Armstrong-Carter, E., Panter, A., Hutson, B., Olson, A. A University-Wide Survey of Caregiving Students in the US: Individual Differences and Associations with Emotional and Academic Adjustment.

Miller, J. **Armstrong-Carter, E.**, Balter, L., Lorah, J. A Meta-Analysis of Mother-Child Synchrony in Respiratory Sinus Arrhythmia.

Pre-Registered Reports

Obradović, J., Sulik, M. J., & **Armstrong-Carter, E.** (2020). Field testing brief video-based learning interventions in children. doi.org/10.17605/OSF.IO/YWQ96.

MEDIA COVERAGE

CNBC (2022, February 11). Why manners matter: Top tips for raising kind kids. [Link](#).

Forbes (2021, February 6). If you teach children to be kind you get better results in class. [Link](#).

7th Space (2021, February 6). Helping behavior may mitigate academic risk for children from low-income neighborhoods. [Link](#).

Scienmag (2021, February 6). Helping behavior may mitigate academic risk for children from low-income neighborhoods. [Link](#).

Science News Net (2021, February 6). Helping behavior may mitigate academic risk for children from low-income neighborhoods. [Link](#).

Newstral (2021, February 6). If You Teach Children to Be Kind You Get Better Results in Class. [Link](#).

EurekAlert (2021, February 6). Helping behavior may mitigate academic risk for children from low-income neighborhoods. [Link](#).

Phys.org (2021, February 6). Helping behavior may mitigate academic risk for children from low-income neighborhoods. [Link](#).

Science Codex (2021, February 6). Helping behavior may mitigate academic risk for children from low-income neighborhoods. [Link](#).

Stanford Graduate School of Education News (2021, November 29). How to calm a stressed kid? A one-minute video can help, according to Stanford researchers. [Link](#)

TEACHING EXPERIENCE

Instructor of Record Summer, 2022
University of California, Berkeley
Early Applied Child Development

Instructor of Record Fall, Spring, Winter, 2020-2021
Stanford University
Developmental and Psychological Sciences Seminar

Invited Guest Lecturer 2017
UNC Chapel Hill

Attribution Theory. Introduction to Social Psychology Course
Group Processes. Introduction to Social Psychology Course.

MENTORSHIP

Primary Mentor/Supervisor

Masters Students, Stanford University 2019-2022
Mansoor Rathore, Risa Ninomiya, Jingyue Zhang.

Undergraduate Students, Stanford University 2018-2021
Madison Ambroise, Leah Balter, Shelby Whinery, Nicole Johnson, Alexa Thompson, Michelle Zheng, Isabel Wang, Isabelle Lee, Cynthia Samano, Riley Jackson, Lisa Wang, Elie Kupperman

High School Students working with Stanford University 2018-2021
Rachel Kim, Saaili Budhiraja, Madhu Ayyer, Fei Yang, Joyce Lin, Jacqueline Woo.

Undergraduate Students, UNC 2016-2018
Emmie Banks, Krista Cannady, Arnav Singla, Alex Haag, Graham Booth, Lillian Dillard, Hasan Mustafic, William Ohley, Allen Tirado, Allie Day, Samantha Brosso, Manuela Sinisterra, Taylor Fricano

CONFERENCE TALKS

Rathore, M.*, Armstrong-Carter, E., Siyal, S., Yousafzai, A., Obradović, J., Investigating the Association between the Number of Older Siblings and Preschooler's Executive Functions in Rural Pakistan. (April 2021). Society for Research on Child Development Conference, Virtual. *Masters student mentee

Armstrong-Carter, E., Miller, J., Hill, L., D., Domingue, B., Does the Process of Changing Neighborhoods Predict Young Children's Academic Performance, Over and Above Neighborhood Quality? (April 2021). Society for Research on Child Development Conference, Virtual.

Armstrong-Carter, E., Miller, J., Hill, L., D., Domingue, B., Young Children's Prosocial Behavior Protects Against Academic Risk in Neighborhoods with Low Socio-Economic Status. (April 2021). Society for Research on Child Development Conference, Virtual.

Armstrong-Carter, E., Sulik, M., Siyal, S., Yousafzai, A., Obradović, J., Early and Concurrent Home Stimulation: Unique and Indirect Links with Preschooler's Motor Skills in Rural Pakistan. (April 2021). American for Educational Research Association, Virtual.

Armstrong-Carter, E., Miller, J., Hill, L., D., Domingue, B., Young Children's Prosocial Behavior Protects Against Academic Risk in Neighborhoods with Low Socio-Economic Status. (April 2021). American for Educational Research Association, Virtual.

Armstrong-Carter, E., Olson, E., Siskowski, C., Belkowitz, J., Johnson, C., Caregiving Youth: Findings of Prevalence and Demographics from a Florida State-Wide School-Based Survey. (2020). American Association for Caregiving Youth. Boca Raton, FL.

Armstrong-Carter, E., Sulik, M., Obradović, J., Parent-child Co-regulation and Young Children's Physiological Response to Frustration. (2020). American for Educational Research Association, San Francisco, CA. (Conference canceled).

Armstrong-Carter, E., Sulik, M., Obradović, J., Parent-child Co-regulation and Young Children's Physiological Response. (2019). Society for Psychophysiological Research, Washington DC.

Armstrong-Carter, E., Trejo, S., Hill, L., Crossley, K., Mason, D., Domingue, B. Maternal Genetics, Prenatal Environment, and Early Child Development. (2019). Integrating Genetics and the Social Sciences Conference, Boulder, CO.

Armstrong-Carter, E., Finch, J., Siyal, S., Yousafzai, A., Obradović, J., Biological Sensitivity to Context in Pakistani Preschoolers: Interactive Effects of Hair Cortisol and Family Wealth on Cognition. (2019). Society for Research on Child Development Conference, Baltimore, MD.

Armstrong-Carter, E., Olson, E., Buzinski, S. "Juggling Multiple Responsibilities: First Generation College Students Providing Family Care". (2018). National Association of School Administrators. Closing the Achievement Gap: Student Success in Higher Education Conference, Columbus, OH.

Armstrong-Carter, E., MacCormack, J., Humphreys K., Meltzer-Brody, S., Lindquist, K., & Muscatell K. "Beta-Adrenergic Blockade Impairs Performance on Emotional Learning Task". (2018, March). American Psychosomatic Society Conference. Louisville, KY.

Armstrong-Carter, E., Olson, E. "Care, Embodiment and Materiality: Geographical Possibilities for Research on Youth Caregiving in the US." (2015). Feminist Geography Conference, Omaha, NB.

OTHER INVITED TALKS (SELECTED)

Armstrong-Carter, E., "Caregiving youth in the US: Transdisciplinary research to support this "hidden" population" (2022, March). Duke University.

Armstrong-Carter, E., "Caregiving youth in the US: Transdisciplinary research to support this "hidden" population" (2022, February). University of California at Berkeley, Institute for Human Development.

Armstrong-Carter, E., "Supporting caregiving youth's wellbeing and positive development in the US" (2022, January). Wake Forest University, Department of Psychology.

Armstrong-Carter, E., "The United States should recognize and support caregiving youth". (2022, January). Duke University.

Armstrong-Carter, E., Miller, J., Hill, L., D., Domingue, B., “Young Children’s Prosocial Behavior Protects Against Academic Risk in Neighborhoods with Low Socio-Economic Status”. (2021). University of Leeds, Department of Psychology, United Kingdom.

Armstrong-Carter, E., Trejo, S., Domingue, B., “Maternal Genetics, Prenatal Environment, and Early Child Development.” (2019). Duke University, Moffitt & Caspi Research Lab.

Armstrong-Carter, E., “Why I Study Children’s Stress Physiology.” (2019). Sunnyvale Public Schools.

Armstrong-Carter, E., K.A. Muscatell, L. Lin, S. Ivory and Telzer, E.H. “Adolescents' Family Assistance and Diurnal Cortisol.” (2017). Duke University.

SERVICE

Student Body Representative

Developmental and Psychological Sciences Ph.D. Program, Stanford 2020-2021

Reviewer

Child Development, Psychological Science, Development and Psychopathology, Journal of Immigrant and Minority Health 2018-2021

President

Stanford Episcopal Lutheran Campus Ministry 2019-2021

Certified Tutor

Huntington Learning Center 2016-2018
Chapel Hill-Carrboro Public Schools, UNC College of Arts and Sciences 2015-2016

Teacher, Bungamati Public School System, Nepal 2011

Medical Assistant, Devidoss Hospital, Madurai, India 2011