

EMMA ARMSTRONG-CARTER

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ACADEMIC AND PROFESSIONAL APPOINTMENTS

Assistant Professor, Tufts University August 2023 - Present

National Science Foundation Post-Doctoral Research Fellow
University of North Carolina at Chapel Hill October 2022 – September 2023

Post-Doctoral Research Fellow
University of California, Berkeley April 2022 – October 2022

EDUCATION

Ph.D., Stanford University 2022
Developmental and Psychological Sciences, Graduate School of Education
Minor in Data Science
Certificate in Research Practice Partnerships

B.A., University of North Carolina at Chapel Hill 2016
Psychology & Neuroscience; Geographic Information Science, cum laude

GRANTS

1K12TR004384 NIH/NCATS Freund / Inker (MPI) 07/05/23 - 06/30/24
Tufts Clinical and Translational Science Institute Mentored Career Development. Supporting
Caregiving Youth in School Settings.
Role: Scholar

National Science Foundation SPRF Post-Doctoral Fellowship 2022-2024
\$69,000 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
\$2,600 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 = 45)

Garrett, S. *, Burnell K., Nelson, B., **Armstrong-Carter, E.**, Prinstein., M.J., Telzer., E.H., (in press) Links Between Objectively Measured Hourly Smartphone Use and Adolescent Wake Events across Two Weeks. *Journal of Clinical Child and Adolescent Psychology*.

Garrett, S.*, **Armstrong-Carter, E.**, Prinstein., M.J., Telzer., E.H., (in press) Linking Video Chatting, Phone Calling, Text Messaging, and Social Media with Peers to Adolescent Connectedness. *Journal of Research on Adolescence*. ***student mentee**

Armstrong-Carter, E., Osborn, S., Smith, O., Siskowski, C., Olson, E.A. (2023). Middle and high school students who take care of siblings, parents and grandparents: Associations with school engagement, belonging, and wellbeing. *AERA Open*.

Armstrong-Carter, E., Bush, N., Boyce, T.W, Obradović, J., (2023). Cortisol reactivity marks biological sensitivity to kindergartners' social hierarchies for emerging school engagement. *Developmental Psychobiology*.

Armstrong-Carter, E., Garrett, S.,* Nick, E., Prinstein., M.J., Telzer., E.H., (2023). Momentary links between adolescents' social media use and social experiences and motivations: Individual differences by peer susceptibility. *Developmental Psychology*. ***student mentee**

Miller, J. **Armstrong-Carter, E.**, Balter, L.,* Lorah, J. (2023) A Meta-Analysis of Mother-Child Synchrony in Respiratory Sinus Arrhythmia. *Developmental Psychobiology*. ***student mentee**

Armstrong-Carter, E., Fuligni, A., Wu, X., Gonzales, N., & Telzer., E.H., (2022). 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., 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., (2022). Black adolescents' support to the family and educational outcomes: Differences by household income. *Social Development*. doi.org/10.1111/sode.12627.

Rathore, M.*, **Armstrong-Carter, E.**, Siyal, S., Yousafzai, A., Obradović, J., (2022). Pakistani preschoolers' number of older siblings and cognitive skills: Moderations by home stimulation and gender. *Journal of Family Psychology*. doi.org/10.1037/fam0001018. ***student mentee**

Armstrong-Carter, E., & Telzer., E.H., (2022). Biological sensitivity to environmental context fluctuates dynamically within individuals from day to day. *Nature Scientific Reports* 12, 11134. doi.org/10.1038/s41598-022-14481-7.

Armstrong-Carter, E., Do, K., Duell, N., Kwon, S.J, Lindquist, K., Prinstein, M. J., Telzer, E.H., (2022). Adolescents' perceptions of social risk and prosocial tendencies: Developmental change and individual differences. *Social Development*. doi.org/10.1111/sode.12630.

Armstrong-Carter, E., Panter, A., Hutson, B., Olson, A. (2022). A university-wide survey of caregiving students in the US: Individual differences and associations with emotional and academic adjustment. *Humanities and Social Sciences Communications*. doi.org/10.1057/s41599-022-01288-0.

Demange, P. A., Hottenga, J. J., Abdellaoui, A., Eilertsen, E. M., Malanchini, M., Domingue, B. W., ... **Armstrong-Carter E.**...Cheesman, R. (2022). Estimating effects of parents' cognitive and non-cognitive skills on offspring education using polygenic scores. *Nature Communications*. doi.org/10.1101/2020.09.15.296236

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*. doi.org/10.1016/j.cpnec.2021.100106

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., & 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., 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*. doi.org/10.1111/jora.12705

Armstrong-Carter, E., Do, K., Guassi-Moreira, J., Prinstein, M.J, Telzer, E.H. (2021) Examining a new prosocial risk-taking scale in a longitudinal sample of ethnically diverse adolescents. *Journal of Adolescence*. doi.org/10.1016/j.adolescence.2021.11.002

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*. doi.org/10.1037/pspa0000310

Obradović, J., Sulik, M. J., & **Armstrong-Carter, E.** (2021) Taking a few deep breaths significantly reduces children's physiological arousal in everyday settings: Results of a preregistered video intervention. *Developmental Psychobiology*. doi.org/10.1002/dev.22214

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) Parent–child physiological synchrony: Concurrent and lagged effects during dyadic laboratory interaction. *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., 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*. doi: 10.1097/PSY.0000000000001009

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 360-Degree Video Simulation on Head-Mounted Display vs In-Person Simulation: A Non-Inferiority, Randomized Controlled Trial. *Simulation in Healthcare*. doi: 10.1097/SIH.0000000000000587

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

Armstrong-Carter, E., Osborn, S., Smith, O., Siskowski, C., Olson, E.A. (in revision). “I missed school to take care of someone else”: Middle and high school students’ caregiving responsibilities as a reason for absenteeism. *Journal of School Health*.

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.

OP-EDS

Hetchinger Report (2023; January). Why the U.S. must recognize and support caregiving students in middle and high schools.

MEDIA COVERAGE

Higher Education Dive (2022, September 8). Over 1 in 20 students at a state flagship are caregivers, researchers found. They face these challenges. [Link](#).

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](#).

Greater Good Magazine (2022, January 7). How four deep breaths can help calm kids down. [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	
Applied Early Developmental Psychology	

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

Invited Guest Lecturer (selected)	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

2018-2021

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

President

October 2023

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