

# Taylor Heffer

ASSISTANT PROFESSOR

*Ontario Tech University, Oshawa*

+1 857 706 9988 | [theffer@fas.harvard.edu](mailto:theffer@fas.harvard.edu) | 0000-0001-5586-5640 | [tvheffer](#)

## Academic Appointments

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Assistant Professor

ONTARIO TECH UNIVERSITY

*Oshawa, ON*

*2024-present*

## Education and Training

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Postdoctoral (NSERC) Fellow

HARVARD UNIVERSITY

*Cambridge, MA*

*2022-23*

PhD, Lifespan Development Psychology

BROCK UNIVERSITY

*St. Catharines, ON*

*2017-22*

MA, Lifespan Development Psychology

BROCK UNIVERSITY

*St. Catharines, ON*

*2015-17*

BA, Honors Psychology and Child and Youth

BROCK UNIVERSITY

*St. Catharines, ON*

*2011-15*

## Honors and Awards

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### Academic and Research

Natural Sciences and Engineering Research Postdoctoral Fellowship

HARVARD UNIVERSITY

*Cambridge, MA*

*2022*

- Application ranked 1st in psychology

Student Presentation Award (Second Place)

DEVELOPMENT CONFERENCE

*Alberta, Canada*

*2022*

Faculty of Social Science Research Assistantship

BROCK UNIVERSITY

*2022*

Susan Sydor Graduate Scholarship

BROCK UNIVERSITY

*2022*

Ontario Graduate Scholarship

BROCK UNIVERSITY

*2021*

Ralph D. Morris Graduate Student Award

BROCK UNIVERSITY

*2019*

Match of Minds

BROCK UNIVERSITY

*2019*

Dean of Graduate Studies Excellence Scholarship

BROCK UNIVERSITY

*2018-20*

Joseph-Armand Bombardier Canada Graduate (PhD)

SOCIAL SCIENCES AND HUMANITIES RESEARCH COUNCIL

*2017-20*

Jack M. Miller Excellence in Research Award

BROCK UNIVERSITY

*2017*

Distinguished Graduate Student Award MA and PhD

BROCK UNIVERSITY

*2017/20*

Certificate of Academic Excellence (MA Thesis)

CANADIAN PSYCHOLOGICAL ASSOCIATION

*2017*

## Library Open Access Publishing Fund

BROCK UNIVERSITY

2017

## Ontario Graduate Scholarship

BROCK UNIVERSITY

2016

## Joseph-Armand Bombardier Canada Graduate Scholarship (MA)

SOCIAL SCIENCES AND HUMANITIES RESEARCH COUNCIL

2015

## Research Fellowship & Match

BROCK UNIVERSITY

2015

## Entrance Scholarship

BROCK UNIVERSITY

2015

## Ontario Graduate Scholarship (Declined)

BROCK UNIVERSITY

2015

## Leadership and Community Engagement

### Scotiabank Graduate Award

BROCK UNIVERSITY

2020/21

### Barb Daly Excellence and Student Leadership

BROCK UNIVERSITY

2020

### Dr. Liette Vasseur Graduate Scholarship

BROCK UNIVERSITY

2020

### President Surgite Award

BROCK UNIVERSITY

2020

### Wendy Murphy Memorial Fund (Peer Nominated)

BROCK UNIVERSITY

2020

## Publications

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Refereed Published Academic Papers (19):

1. **Heffer, T.**, Van Noordt S.J.R., & Willoughby, T. (2023). Developmental trajectories of sensitivity to threat in children and adolescents predict larger medial frontal theta differentiation during response inhibition. *Social Cognitive and Affective Neuroscience*.
2. Shahid, H., **Heffer, T.**, Borg, M. E., \*Buma-Wiens, A., & Willoughby, T. (2022). Differentiating profiles of vaping, alcohol, and cannabis use among early adolescents. *The Journal of Early Adolescence*. <https://doi.org/10.1177/02724316221116043>
3. Willoughby, T., **Heffer, T.**, Borg, M. E. (2022). Deliberate Self-injury in Children and Associations with Negative Adjustment. *JAMA Pediatrics*.
4. Van Noordt S.J.R., **Heffer, T.**, Willoughby, T. (2021). A developmental examination of medial frontal theta dynamics and inhibitory control. *NeuroImage*.
5. **Heffer, T.**, & Willoughby, T. (2021). Investigating the consistency of threat-related ERPs among children and adolescents. *Cognitive Affective Behavioral Neuroscience*.
6. Willoughby, T., **Heffer, T.**, Van Noordt S.J.R., Desjardins, J., Segalowitz, S., Schmidt, L. (2021). An ERP investigation of children and adolescents' sensitivity to wins and losses during a peer observation manipulation. *Developmental Cognitive Neuroscience*.
7. Willoughby, T., **Heffer, T.**, Good, M., Magnacca, C. (2021). Is adolescence a time of heightened risk taking? An overview of types of risk-taking behaviors across age groups. *Developmental Review*.
8. Willoughby, T., Dykstra, V.W., **Heffer, T.**, \*Braccio., J. Shahid, H., (2021). A long-term study of what best predicts graduating from university versus leaving prior to graduation. *Journal of College Student Retention: Research, Theory & Practice*. <https://doi.org/10.1177/1521025120987993>

9. **Heffer, T.**, \*Lundale, C., Wylie, B.E., Willoughby, T. (2021). Investigating sensitivity to threat with the Behavioral Inhibition Scale (BIS) among children, adolescents and adults: The role of negatively-phrased questions. *Personality and Individual Differences*.
10. **Heffer, T.**, & Willoughby, T. (2021). A person-centered examination of emotion dysregulation, sensitivity to threat, and impulsivity among children and adolescents: An ERP study. *Developmental Cognitive Neuroscience*.
11. Willoughby, T., **Heffer, T.**, Dykstra, V.W., Shahid, H., \*Braccio., J. (2020). A person-centred analysis of first-year university students: Associations with psychosocial adjustment across seven years and post-university outcomes. *Journal of Youth and Adolescence*. 49(12), 2459-2475.
12. **Heffer, T.**, & Willoughby, T. (2020). A longitudinal study investigating trajectories of sensitivity to threat and their association with alpha asymmetry among children and adolescents. *Developmental Cognitive Neuroscience*. 46, 100863. <https://doi.org/10.1016/j.dcn.2020.100863>
13. **Heffer, T.**, & Willoughby, T. (2020). Sensitivity to negative feedback among children and adolescents: An ERP study comparing developmental differences between high-worriers and low-worriers. *Cognitive, Affective, & Behavioral Neuroscience*, 20, 624-635. <https://doi.org/10.3758/s13415-020-00791-8>
14. **Heffer, T.**, Wylie, B.E., & Willoughby, T. (2019). An investigation of adolescents' reported and self-perceived risk-taking. *The Journal of Early Adolescence*, 40(6), 772-788.
15. **Heffer, T.**, Good, M., Daly, O., MacDonell, E., Willoughby, T. (2019). The longitudinal association between social media use and depressive symptoms among adolescents and young adults: An empirical reply to Twenge et al. (2018). *Clinical Psychological Science*, 7(3), 462-470.

- This work is included as one of the most read articles in this journal in the last 6 months

16. **Heffer, T.**, & Willoughby, T. (2018). The role of emotion dysregulation: A longitudinal investigation of the interpersonal theory of suicide. *Psychiatry Research*, 260, 379-383.
17. **Heffer, T.**, & Willoughby, T. (2017). A count of coping strategies: A longitudinal study investigating an alternative method to understanding coping and adjustment. *PloS one*, 12(10).
18. Willoughby, T., **Heffer, T.**, & Hamza C.A. (2015). The link between nonsuicidal self-injury and acquired capability for suicide: A longitudinal study. *Journal of Abnormal Psychology*, 1110-1115.
19. Hamza, C. A., Willoughby, T., & **Heffer, T.** (2015). Impulsivity and nonsuicidal self-injury: A review and meta-analysis. *Clinical Psychology Review*, 3813-24. doi:10.1016/j.cpr.2015.02.010.

#### Non-refereed publications:

1. Gallant, C., & **Heffer, T.** (2016). A Collaborative Approach to Graduate Training at Brock University. *Canadian Psychological Association, Mind Pad*.

## Presentations

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### Invited Talks

#### Psychology Department Research Talk

ONTARIO TECH UNIVERSITY

April 2023

#### Affective Neuroscience and Development Lab

HARVARD UNIVERSITY

Feb 2021

#### Developing Brains in Context Lab

UNIVERSITY OF OREGON

Nov 2020

#### Youth Engagement Committee

BROCK UNIVERSITY

2018/19/22

- Invited to discuss research and facilitate youth involvement in research

#### Panelist: Career Night

PSYCHOLOGY SOCIETY, BROCK UNIVERSITY

March, 2018

## Symposiums

1. Symposium Chair & Speaker. Factors that affect social behavior among children, adolescents, and emerging adults with anxiety-related temperament styles. *Development* 2022. (Alberta, Canada)
  - Awarded 2nd best student talk

## Conference Presentations

1. Flournoy, J.C., Baum G., **Heffer, T.**, Lama R., The Human Connectome Project in Development Consortium, Somerville, L.H. (2023, September). HCP-D: Cognitive Control Behavior in Adolescence and the Role of Reward. Research presented at FLUX Congress, Santa Rosa, CA.
2. **Heffer, T.**, Borg, M.E., Willoughby, T. (2023, April). “What are some of the things you are worried about?” An analysis of adolescents’ open-ended responses of current worries. Research presented at the Society for Research on Adolescence, San Diego, CA.
3. Borg, M.E., **Heffer, T.**, & Willoughby, T. (2023, April). Investigating perceptions of the impact of the COVID-19 pandemic and associations with trajectories of wellbeing among adolescents. Flash talk presented at the meeting of Society for Research on Adolescence, San Diego, CA.
4. **Heffer, T.**, Omary, A., Flournoy, J.C., Baum, G.L., Barch D.M., HCP-D Consortium, Somerville, L.H. (2023, March). The impact of reward and punishment history on response inhibition from childhood to early adulthood. Research accepted to the Society for Affective Science Conference.
5. Omary, A., **Heffer, T.**, Flournoy, J. C., Baum, G. L., Curtis, M., Colich, N. L., Mair, P., Barch, D. M., HCP-D Consortium, & Somerville, L. H. (2023, April). Testing the mediating role of pubertal hormones on age-related changes and sex differences in adolescent behavioral inhibition and Activation. Research presented at the Social & Affective Neuroscience Society 2023 Conference.
6. **Heffer, T.**, van Noordt, S.J.R., Willoughby, T. (2021). The role of medial frontal theta among children and adolescents with consistently high threat sensitivity. Research presented at the Virtual FLUX Congress
7. **Heffer, T.**, Willoughby, T. (2021, April). Investigating the consistency of threat-related ERP’s among children and adolescents. Research presented to the Virtual Society for Research on Child Development Conference.
8. **Heffer, T.**, Willoughby, T. (2020, September). A person-centered examination of regulation, sensitivity to threat, and impulsivity among children and adolescents: An ERP study. Research accepted to the Virtual FLUX Congress.
9. **Heffer, T.**, Willoughby, T. (2020, canceled). Investigating Children and Adolescent Worriers’ Neural Sensitivity to Negative Feedback: Comparing Pubertal Status and Grade Level. Research accepted to Society for Research on Adolescence Conference, San Diego, CA.
10. **Heffer, T.**, Willoughby, T. (2019, September). Right Alpha Activation Moderates the Stability of Punishment Sensitivity Over Time. Research presented at Society for Psychophysiological Research Conference, Washington, DC.
11. Willoughby, T., **Heffer, T.**, van Noordt, S., Desjardins, J., Segalowitz, S., Schmidt, L. (2019, August). An ERP investigation of children and adolescents’ sensitivity to wins and losses during a perceived peer observation manipulation. Research presented at the FLUX Congress, New York, New York.
12. **Heffer, T.**, Willoughby, T. (2019, August). Investigating ERP Consistency across Child and Adolescent Worriers in Tasks Measuring Sensitivity to Punishment. Research presented at the FLUX Congress, New York, New York.
13. **Heffer, T.**, Willoughby, T. (2019, March). An ERP Study Investigating Sensitivity to Punishment among High and Low Worriers. Research presented at the Society for Research on Child Development Conference, Baltimore, Maryland.
14. Wylie, B., **Heffer, T.**, Willoughby, T. (2019, March). Adolescent Risk-Taking: A Comparison of Self-Reported Behaviors and Self-Perceptions. Research presented at the Society for Research on Child Development Conference, Baltimore, Maryland.

15. Ilieff, M., Hamza, C. A., Willoughby, T. & **Heffer, T.** (2019, March). Maladaptive and adaptive perfectionism and nonsuicidal self-injury. Poster presented at the International Society for the Study of Self-Injury.
16. **Heffer, T.**, Willoughby, T. (2018, May). Investigating the Role of Worry in Children and Adolescents: An EEG Study. Symposium presented at Development 2018 Conference, Brock University.
17. **Heffer, T.**, Willoughby, T. (2018, May). Worry, Sleep Problems and Alcohol Use: A Longitudinal Study. Research presented at Development 2018 Conference, Brock University.
18. Willoughby, T., Desjardins, J., Segalowitz, S., Schmidt, L., **Heffer, T.**, Semplonius, T. (2018, May). An ERP Investigation of Children and Adolescents' Sensitivity to Wins and Losses during a Perceived Peer Observation Manipulation. Symposium presented at Development 2018 Conference, Brock University.
19. **Heffer, T.**, Willoughby, T. (2018, April). A Longitudinal Study of Emotion Regulation and Problem Behaviours. Research presented at Society for Research on Adolescence Conference, Minneapolis, Minnesota
20. **Heffer, T.**, Willoughby, T. (2017, May). The Role of Emotion Dysregulation: A Longitudinal Investigation of the Interpersonal Theory of Suicide. Research presented at Association for Psychological Science Conference, Boston, Massachusetts.
21. **Heffer, T.**, Willoughby, T. (2017, April). A Count of Coping Strategies: A Longitudinal Study Investigating Repertoire Richness and Adjustment. Research presented at Society for Research in Child Development Conference, Austin, Texas.
22. **Heffer, T.**, Willoughby, T. (2017, April). The Association between NSSI and Suicide Ideation: The role of Maladaptive Perfectionism. Research presented at Society for Research in Child Development Conference, Austin, Texas.
23. **Heffer, T.**, Willoughby, T., & Hamza C.A. (2016, March). The link between nonsuicidal self-injury and acquired capability for suicide: A longitudinal study. Research presented at the Society for Research on Adolescence Conference, Baltimore, Maryland.
24. **Heffer, T.**, Willoughby, T., (2015, April). Investigating Joiner's Theory of Suicide: Identifying Predictors of Suicide Ideation in a Sample of University Students. Annual Ontario Psychology Undergraduate Thesis Conference, London, Ontario, Canada

## Teaching

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### Instructor Positions

#### Data Science for Academic and Applied Research

BROCK UNIVERSITY (UNDERGRADUATE 4TH YEAR COURSE)

Jan 2022

#### [R] is for research: A beginner's guide to using R

BROCK UNIVERSITY (4 WORKSHOPS HELD)

August 2022/23

### Invited Guest Lectures

#### Brain-behavior and Adolescence

NORTH EASTERN UNIVERSITY (UNDERGRADUATE 3RD YEAR COURSE)

November 2023

#### Professional Issues

ONTARIO TECH UNIVERSITY (GRADUATE COURSE)

November 2023

#### Adolescence and Emerging Adulthood

WESLEYAN UNIVERSITY (UNDERGRADUATE 3RD YEAR COURSE)

April 2023

#### Data Science for Academic and Applied Research

BROCK UNIVERSITY (UNDERGRADUATE 4TH YEAR COURSE)

Nov 2020

#### Adolescent Development

BROCK UNIVERSITY (UNDERGRADUATE 3RD YEAR COURSE)

March 2019

### Other Teaching Activities

## Teaching Assistantships

### BROCK UNIVERSITY

- PSYC 4P08: Data Science for Academic and Applied Research (2020/21)
- PSYC 2P12: Lifespan Development (2015/18/19)
- PSYC 4P07: Transition to workplace (2018)
- PSYC 3P39: Statistics (2016/17)
- PSYC 3P18: Adolescent Development (2016)
- PSYC 3P77: Social Development (2015)

## Project Teach

### ANDL, HARVARD UNIVERSITY

2022

- Co-created and taught a seminar for 7th grade students on developmental cognitive neuroscience topics

## Resiliency Class: Brock University

### NAMIBIA, AFRICA

2013

- Created and taught lessons in Math/English to grades 8-12 for three weeks

## Mentoring

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### Undergraduate Students

#### HARVARD UNIVERSITY

- Jady Mathews (Honors thesis)
- Nicole Uribe (Research Assistant)

#### BROCK UNIVERSITY

- Cody Ellis (Honors thesis)
- Annelise Wiens (Honors thesis & Independent study)
- Joelle Braccio (Independent study)
- Carly Lundale (Honors thesis & Independent study)

### Honors & Distinctions Awarded to Mentees

#### Faculty of Social Science Student Research Award

##### ANNELISE WIENS, BROCK UNIVERSITY

2021

#### Honors thesis: Certificate of Excellence

##### CARLY LUNDALE, CANADIAN PSYCHOLOGICAL ASSOCIATION

2020

## Knowledge Mobilization

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### Community Research Talk

#### PATHSTONE MENTAL HEALTH

2019

- presented research to over 100 staff at Pathstone Mental Health

### Infographics

#### BROCK HEALTHY YOUTH PROJECT PARTNERS (E.G., WHO; UNICEF, MENTAL HEALTH COMMISSION OF CANADA; NIAGARA

2019

#### REGION SCHOOL BOARD)

### Media Interviews

#### HEFFER ET AL., 2019; CLIN.PSYC.SCI.

2019

- The results from one of my first-author publications was distributed widely and received extensive media attention, as follows:
  - Association for Psychological Science. (2019, February 27). Longitudinal Data Show No Evidence of Teens' Social Media Use Leading to Depression. Retrieved from <https://www.psychologicalscience.org/observer/longitudinal-data-show-no-evidence-of-teens-social-media-use-leading-to-depression> (also featured in Science Daily)
  - Psychology Today. (2019, February 22). Is Tech Really Hurting Teens?[Press release]. Retrieved from: <https://www.psychologytoday.com/us/blog/brainstorm/201902/is-tech-really-hurting-teens>.
  - Brock News. (2019, February 14). Brock researchers find no evidence social media use predicts future depression. [Press release]. Retrieved from: <https://brocku.ca/brock-news/2019/02/brock-researchers-find-no-evidence-social-media-use-predicts-future-depression>
  - Also distributed in Curaçao Chronicle, Psych Central, Medical News Today, Drugs.com, Consumer Affairs; Daily Mail, The Times, etc.

## Research and Teaching Development

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### Introduction to fMRI

CENTER FOR BRAIN SCIENCE, HARVARD

2022

### Bystander intervention training

HARVARD UNIVERSITY

2022

### Using R for Reproducible Research Course

BROCK UNIVERSITY

2021

### Global R Studio Conference

VIRTUAL

2021

### Advanced R workshop: A Tidyverse Language Perspective

HARVARD'S WOMEN IN PSYC

2021

### ARGH Coding Club

INFORMAL R USERS GROUP AT BROCK UNIVERSITY

2019/20

### Datathon R Workshop

BROCK UNIVERSITY

2019

### EEG Workshop

BROCK UNIVERSITY

2017-19

- One-week workshop focusing on EEG analysis

### Impedance Workshop

MINDWARE TECHNOLOGIES, OHIO

2018

- Two-day workshop on data collection and data cleaning

### Data Visualization and Programming Workshop

BROCK UNIVERSITY

2018

- Two-day workshop using Python for data visualization

### Introduction to Computer Programming for Experimental Psychology

BROCK UNIVERSITY (GRAD-LEVEL COURSE)

2018

- Introduction to MATLAB programming language

### TA Advanced Certificate in Teaching and Learning in Higher Education

CENTRE FOR PEDAGOGICAL INNOVATION, BROCK UNIVERSITY

2017

### TA Certificate in Teaching and Learning in Higher Education

CENTRE FOR PEDAGOGICAL INNOVATION, BROCK UNIVERSITY

2016

### Longitudinal Data Analysis

BROCK UNIVERSITY (GRAD-LEVEL COURSE)

2016

### 3-day R Workshop

BROCK UNIVERSITY

2015

## Service

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### Mentorship meetups (Committee Member)

HARVARD UNIVERSITY

2022-23

### Undergraduate Workshops

BROCK UNIVERSITY

2016-21

- Created and facilitated annual workshops (e.g., Thinking about Grad school?; Getting Involved in Research; External Scholarship Applications)

### Psychology Social Committee (Committee Member)

BROCK UNIVERSITY

2017-22

### Brock University Featured Graduate Student

BROCK UNIVERSITY

2020

### Development 2018 Psychology Conference (Volunteer)

BROCK UNIVERSITY

2018

<b>Psychology Department Recruitment Group (Committee Member)</b> BROCK UNIVERSITY	2017-18
<b>Psychology Social Committee (Graduate Student Representative)</b> CANADIAN PSYCHOLOGICAL ASSOCIATION	2016-19
<b>Psychology Graduate Committee (Graduate Student Representative)</b> BROCK UNIVERSITY	2016-17
<b>Recruitment Events (Graduate Student Volunteer)</b> BROCK UNIVERSITY	2016-19
<b>Psychology Department Committee (Graduate Student Representative)</b> BROCK UNIVERSITY	2015-16