DR MATTHEW JOHNSTON | CV

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PROFESSIONAL SUMMARY

Research interests in social, cognitive and emotional development. Strong publication record (H-index 6; see preprint for most recent work) with expertise in experimental design, statistical analysis, and advanced data collection methods (including EEG, eye-tracking, survey and behavioural data). Demonstrative ability to secure external grants and to work both independently and within teams. Proficient programming skills with experience in R, Python, JavaScript and Matlab. Substantial leadership and teaching experience at undergraduate and master's levels with AFHEA qualification. Passionate about good-quality science and designing creative experiments that capture latent psychological and social constructs.

EDUCATION AND QUALIFICATIONS

AFHEA	Associate Fellowship Advance Higher Education | *Queen's University Belfast* Demonstrates experience in teaching and **ability to communicate information effectively**.	July 2022
PhD	**Developmental Psychology** | *Queen's University Belfast* (Viva: August 2022) Part of **interdisciplinary project** exploring the nature of the emotion of relief Involved designing computerised experiments to examine real-world behaviours	2018 – 2022
BSc	Psychology (1st Class Honours; top performing thesis student) | *Queen's University Belfast* Earned the *Degree Plus* award demonstrating **commitment to professional development**. Six months as an Erasmus Student in Madrid.	2014 - 2017

RESEARCH EXPERIENCE

Oct 2022 – Sep 2025 | *Postdoctoral Researcher, University of Edinburgh*

Project: Developmental dynamics between cognitive control and statistical learning

- Lead researcher on project, responsible for hiring and managing research assistants, analysing data (using lmer and lavaan packages in R) **writing progress reports to the funder**, and **disseminating results through conferences and publications**.
- Oversaw data collection for longitudinal study (N=187) with a paid RA and a team of volunteer RAs.
- Shows **broad knowledge of cognitive psychology** and **ability to research new topics**.
- Involved in behavioural and EEG data-collection at weekends and out-of-hours (PVG check obtained).
- **Programmed a range of tasks collecting behavioural, eye-tracking, and EEG data**, including a novel statistical learning task.
- Responsible for the analysis of longitudinal, cross-sectional, and individual-differences datasets (using a r**ange of packages in R studio, including lavaan, lmer**).
- Expertise in integrated analysis by combing EEG and eye-tracking measures using Matlab scripts.
- Involved **complex longitudinal analysis techniques** (see preprint here).
- Investigated neural correlates of Post Error Slowing in an exploratory analysis (see preprint here).
- Undertook **knowledge exchange and impact activities including obtaining a grant for a public engagement event.**

Sep 2024 – Sep 2025 | *Principal Investigator, Carnegie Trust (self-obtained funding, £12,612)*

- Secured this grant independently, **showing initiative and commitment to professional development.**
- Project explored statistical learning as a compensatory mechanism in older adults who struggle with cognitive control declines. Demonstrates interest in **applying psychological theory to address real-world outcomes.**
- Two studies tested the efficacy of a novel measure developed to test statistical learning in older adults and compare this process with cognitive control (N=180). Shows ability to **design experiments to explore my own research ideas.**
- Task was piloted **online** showing my ability to use Java Script to programme online experiments and Prolific to recruit participants.
- Obtaining this grant and managing the deliverables of this project alongside my postdoc demonstrates **time management skills and ability to work autonomously whilst meeting deadlines.**

Oct 2018 – Nov 2022 | *Funded PhD, Queen's University Belfast School of Psychology*

Thesis: The development of relief

- PhD was part of a **multidisciplinary project** working with philosophers and psychologists to explore the nature and functions of relief
- Assisted in the development of surveys in which we analysed 1,835 first-person reports of real-life experiences of relief. **Analysed this large corpus of open-ended text data** to distinguish between two precursors to relief (counterfactual and temporal precursors).
- Collaborated with a multidisciplinary team to design a series of studies to explore how anticipating emotions can lead to healthy decision-making (in the context of vaccinations and cancer screening).
- This involved creating surveys to explore how priming the anticipation of regret and relief can lead to shifts in people's intentions to get vaccinations or engage in cancer screening (used control groups and pre- and post-testing sessions to establish causality).
- This body of work shows my **broad knowledge of applied behavioural science** including the theory of planned behaviour constructs.
- Related, collaborated with the team to explore the role of relief and regret in reactions to **politically divisive outcomes.**
- The empirical work of my PhD was primarily focused on the development of these two relief types in children.
- Related to this I carried **out five experiments (N=539) with 4-12-year-olds** exploring children's understanding of relief and temporal emotions. Carrying out such a large body of work demonstrates my **scientific curiosity and enthusiasm.**

- Additionally, I designed a computerised task using **Python and Open Sesame** to examine impact of counterfactual emotions on children's risk taking (N=42). Demonstrates **technical expertise** and strong interest in **applying psychological theory to study decision-making**.
- Innovated successful and creative methodology for collecting data online during pandemic. Demonstrates **resilience to external stressors** and **reflective skills** to change recruitment approach.
- **Organised student-led events** including a PhD student-lend conference, and a "Psych Hike" event for which I obtained funding.

Apr 2018 – Apr 2019 | *Research Assistant, Queen´s University Belfast School of Nursing*

Project: Training attention control of very preterm infants: a feasibility study

- Collected and analysed data for a randomised controlled trial piloting an intervention to foster attention control in premature infants.
- Ran Matlab scripts to administer attention control training programs which responded to infants' gaze in pre-specified criteria. Shows an **ability to learn new skills on the job.**
- Worked within a **multidisciplinary** team of psychologists, stakeholders (i.e., charities) and medical doctors to recruit vulnerable populations. Shows experience in **working with teams from different backgrounds.**
- Met with families at charity events to promote study and discuss recruitment strategies. Evidences my experience **working collaboratively with stakeholders to enhance research outcomes.**
- Contributed to write-up of three manuscripts of which I am co-author (latest paper here).

RELEVANT SKILLS

- **R** (Advanced) – ability to analyse longitudinal, cross-sectional, and individual differences datasets (using *lmer*, *brms*, *lavaan* packages). Also proficient in using Excel, SPSS, and JASP to teach students.
- **Python** (Intermediate-Advanced) – ability to design cognitive experiments within Spyder, Anaconda IDEs or within experiment builders such as OpenSesame and Psychopy
- **E-Prime** (Intermediate-Advanced): Created two tasks for EEG data collection during postdoc. One of these tasks also concurrently measured gaze patterns. I am currently working on an analysis strategy that integrates EEG and eye-tracking data together.
- **JavaScript/jsPsych** (Intermediate): **Developed online task** versions of behavioural tasks using JavaScript within OpenSesame. Edited jsPsych code to adapt experiments for young participants (e.g., modified instructions, extended feedback screens). Task was run using JATOS servers during postdoc.
- **Matlab** (Basic-Intermediate): Developed pipelines to preprocess EEG data during postdoc.
- **HTML** (basic): Used within the online Open Sesame experiments for consent form and introductory screens.
- Experience designing reaction-time, eye-tracking, and EEG-based cognitive tasks for a range of ages (**technical expertise**).
- Ability to analyse eye-tracking (i.e., fixation and pupillometry), EEG, behavioural and survey data.
- Use of **Bayesian and frequentist** analysis approaches.
- Taught myself to programme in R and Python during PhD demonstrating an ability to **learn new skills on the job**.
- Ability to c**ollaborate with multidisciplinary and international teams**, as evidenced by my collaborative work during my PhD and ability to **organise an international symposium** during my postdoc.
- **Experience guiding and/or supervising others to conduct data collection/analysis** as demonstrated during my postdoctoral position.
- Obtaining grant for an additional project during my postdoc shows an ability to: **manage own time efficiently, work independently to generate new research ideas, and experience of writing successful grants.**
- **Possess a keen attention to quality and detail when designing experiments**
- Experience engaging with **Open Science principles** by pre-registering studies, uploading data to OSF database, and using preprints.
- **Communication skills:** Ability to communicate complex information clearly, orally and in writing as evidenced through publications and presentations at academic conferences and public-facing events.

GRANT APPLICATIONS

Application (type)	Funder	Outcome	Amount	Date
Early-Career Award	Leverhulme Trust	Pending	£18,000	October 2025
Early-Career Award	Wellcome Trust	Unsuccessful	£425,238.00	September 2025
Early-Career Award	John Templeton Foundation	Unsuccessful	£341,674	August 2025
PPLS KEI Funds	PPLS, University of Edinburgh	Successful	£1,000	June 2024
Research Incentive Grant	Carnegie Trust	Successful	£12,612	September 2024
Gorilla & Prolific Grant Application	Gorilla Experiment Builder	Runner-up award	£500	December 2023
Extension to stipend for PhD project	Queen's University Belfast, SU	Successful	3 months additional stipend	August 2021
PsyPAG Workshop Grant	PsyPAG	Successful	£750	March 2019

RESEARCH OUTPUT

Published Papers or Manuscripts with Revise and Resubmit (3 first authorships and 9 co-authorships)

Resubmit **Johnston, M.,** Dolan, J., Németh, D., Chevalier, N. (minor revisions at *Child Development*, preprint at PsyArXiv). Statistical learning in childhood: dimensions, developmental trajectory, and relation with cognitive control.

2025 Feeney, A., Lorimer, S., Graham, A. J., Hoerl, C., Beck, S. R., **Johnston, M.,** & McCormack, T. Counterfactual Relief. *Memory & Cognition.*

2025 Lorimer, S., McCormack, T., Graham, A. J., Hoerl, C., Beck, S. R., **Johnston, M.,** & Feeney, A. An experimental investigation of the effects of anticipating regret and relief on intentions and decisions to get the influenza vaccination. *Social Science & Medicine,* 118517.

2025 Lorimer, S., McCormack, T., Hoerl, C., Beck, S. R., **Johnston, M.**, & Feeney, A. (2025). Testicular self-examination: The role of anticipated relief and anticipated regret. *British Journal of Health Psychology*, *30*(1), e12756.

2024 **Johnston, M.**, McCormack, T., Jaroslawska, A. J., Lorimer, S., Beck, S., Hoerl, C., & Feeney, A. (2024). Children's understanding of temporally mediated stated emotions. *Journal of Experimental Child Psychology*.

2024 Lorimer, S., McCormack, T., Hoerl, C., Beck, S. R., **Johnston, M.**, & Feeney, A. (2024). Do both anticipated relief and anticipated regret predict seasonal influenza vaccine intentions and uptake? *British Journal of Health Psychology*.

2022 Graham, A. J., McCormack, T., Lorimer, S., **Johnston, M.**, Hoerl, C., & Feeney, A. (2022). Relief in everyday life. *Emotion*.

2022 **Johnston, M.**, McCormack, T., Jaroslawska, A. J., Lorimer, S., Beck, S., Hoerl, C., & Feeney, A. (2022). Children's understanding of counterfactual and temporal relief in others. *Journal of Experimental Child Psychology*.

2022 Perra, O., Wass, S., McNulty, A., Sweet, D., Papageorgiou, K. A., **Johnston, M.**, & Alderdice, F. (2022). Attention abilities, focused attention, and social communication skills of very preterm infants after training attention control: results from a feasibility study of a randomised controlled trial. *PLoS One*, *17*(9), e0273767.

2021 Lorimer, S., McCormack, T., Graham, A. J., Hoerl, C., Beck, S. R., **Johnston, M.**, & Feeney, A. (2021). Getting Brexit done: Leavers and Remainers experience different types of relief about Britain's decision to leave the EU. *Social Psychological and Personality Science*, 19485506211066712.

2021 Perra, O., Wass, S., McNulty, A., Sweet, D., Papageorgiou, K. A., **Johnston, M.**, Bilello, D., & Alderdice, F. (2021). Very preterm infants engage in an intervention to train their control of attention: results from the feasibility study of the Attention Control Training (ACT) randomised trial. *Pilot and Feasibility Studies*, *7*(1), 1-23.

2020 Perra, O., Wass, S., McNulty, A., Sweet, D., Papageorgiou, K., **Johnston, M.**, Bilello, D., & Alderdice, F. (2020). Training attention control of very preterm infants: protocol for a feasibility study of the ACT. *Pilot and Feasibility Studies*, *6*(1), 1-11.

Publications under review or in progress (6) (*indicates shared first authorship)

Under review **Johnston, M.**, Dolan, J., Farkas, B., Chevalier, N. (under review at *Child Development*, preprint at PsyArXiv). Developmental dynamics between cognitive control and statistical learning in middle childhood – a longitudinal study.

Under review Rohini, S.*, **Johnston, M.***, Dolan, J., Chevalier, N. (under review at *Developmental Science*, preprint at PsyArXiv). The Dynamics of Post-Error Slowing and Cognitive Control in Children.

In prep **Johnston, M.**, Dolan, J., Chevalier, N. Cognitive demands impact statistical learning in both adults and children.

In prep **Johnston, M.**, Dolan, J., Chevalier, N. Exploring the neural correlates of cue-action prioritisation in middle childhood.

In prep **Johnston, M.***, Wolfe, K.* Statistical learning abilities are negatively associated with cognitive control in older adults.

In prep Wolfe, K.***, Johnston, M.***, Assessing a novel 'online' measure of older adults' ability to learn deterministic sequences.

Selected Symposia and Conference Presentations

2025 **Johnston, M.,** Wolfe, K. (2025, May). The interplay between cognitive control and statistical learning processes in older adults. Poster presented at EUCAS 2025 - Aging & Cognition conference. Pavia, Italy

2025 **Johnston, M.**, Dolan, J., Chevalier, N. (2025, May). Developmental dynamics between cognitive control and three types of statistical learning. As part of symposium organised by me on statistical learning, sponsored by the Leverhulme Trust. Society for Research and Child Development, MN USA.

2024 **Johnston, M.**, Dolan, J., Chevalier, N. (2024, June 1st). Relation between cognitive control and statistical learning. Talk presented at the Jean Piaget Society, Toronto, Canada.

2024 **Johnston, M.**, Dolan, J., Chevalier, N. (2024, June 1st). Does immature cognitive control promote statistical learning? Talk presented at the PPLS Research Day conference at the University of Edinburgh, Edinburgh.

2022 **Johnston, M.**, McCormack, T., Lorimer, S., Hoerl, C., & Feeney, A. (2022, April). Children's understanding of temporally mediated emotions. Cognitive Development Society Biennial Meeting. Madison, WC, USA.

2021 **Johnston, M.**, McCormack, T., Jaroslawska, A.J., Beck, S.R., Hoerl, C., & Feeney, A. (2021). Children's understanding of relief in others. Talk presented virtually at Budapest CEU conference on Cognitive Development.

2019 **Johnston, M.**, McCormack, T., Jaroslawska, A.J., Beck, S.R., Hoerl, C., & Feeney, A. (2019). Phew! Well, that's a relief for you –understanding relief in others. As part of symposium on Time and Counterfactuals, sponsored by the Leverhulme Trust. European Society for Philosophy and Psychology conference, Athens.

Public Engagement Events and Knowledge Exchange Publications (8)

2025 **Johnston, M.**, Dolan, J., Simpson, H., (2025, August 1). How the mind works – a cognitive science discovery day. Drop-in public-facing event during the Edinburgh Fringe Festival to disseminate departmental findings and to show families and teachers what developmental psychologists do.

2024 **Johnston, M.**, MacPherson, S., Wolfe., K. (2024, October 2). Validating an online collaborative learning task for older adults. Talk given at Healthy Ageing Showcase at Heriot-Watt University, Scotland.

2024 **Johnston, M.**, MacPherson, S., Wolfe., K. (2024, October 31). Collaborative learning: developing and validating a computerised barrier task. Talk given at Gorilla Online Experiment Builder "Meet the Scientist" webinar.

2023 **Johnston, M.**, Dolan, J., Chevalier, N. (2023, May). Developmental dynamics between cognitive control and statistical learning. Talk presented in-person at the Child Young Person Education Research conference allowing researchers to exchange knowledge

2023 **Johnston, M.**, Chevalier, N. (2023, June 13th). Development dynamics between cognitive control and statistical learning – a focus on recruitment and experimental processes. Talk given at virtual journal club at Open University.

2021 **Johnston, M**. (2021, March) How have you had to adjust your research during the pandemic? PsyPAG Quarterly, 188. https://www.bps.org.uk/publications/psypag-quarterly.

2020 **Johnston, M.**, McCormack, T., Jaroslawska, A.J., Lorimer, S., Beck, S.R., Hoerl, C., & Feeney, A. (2020, December 1). Children's understanding relief in others. Talk given at virtual developmental journal club at University of York

2020 **Johnston, M.** (2020, November 11). Online recruitment strategies and methods for developmental scientists. Talk given at developmental journal club at Queen's University Belfast.

Reviewer Experiences (4)

2025 Reviewed paper on basic attentional functions and their social interactions in primary school children for *Cognitive Development* (September, 2025).

2025 Reviewed paper on testicular self-examination knowledge and behaviours in undergraduate students for *Next Research* (May, 2025).

2024 Reviewed 25 poster and paper abstracts for the *Society for Child Research and Development* biannual conference 2025 (October, 2024).

2022 Reviewed a paper on the Roberts Apperception Test for Children for a special issue for A*cta Psychologica* (April, 2022).

TEACHING & SUPERVISORY EXPERIENCE

Jan 2022 – Sept 2022 | *Teaching Fellow at Queen's University Belfast*

Teaching & Assessment Duties

- Delivered diverse teaching activities to UG psychology students: group tutorials, statistics labs (~80 students), lecture on experimental design in developmental psychology, supervising placement year students, and formative assessments of over 200 student assignments.
- Developed and delivered course materials within a team of 76 lecturers and teaching fellows. Evidences an **ability to work effectively within a team** to deliver teaching and learning objectives.

Leadership & Program Development Duties

- Led the School's 2022 International Summer School for students from China, Malaysia, and India (85.3% rated lessons "Very good"). **Evidences organisational skills and an ability to communicate to a diverse audience.**
- **Developed leadership skills** through working closely with a small team to plan the summer school over several months. Supporting and training a group of PhD students to teach at the summer school also evidences my **ability to lead, motivate, and support others.**

Jan 2020 – July 2020 | *Academic Tutor at The Brilliant Club*

- Designed a 7-week course during PhD on psychology and delivered at two different schools to A-level students. This was for *The Brilliant Club* a charity providing school children from low-SES backgrounds with opportunities and skills for getting into higher education.
- Shows ability to teach to students with a range of backgrounds and knowledge bases. Met with teachers and students one-to-one to provide feedback on progress. Shows experience providing support to students and **interpersonal skills in liaising with students and stakeholder.**

Sep 2017 – Sep 2018 | *Classroom Assistant at Cedar Lodge and Breda Academy*

- Supported learning for children with a range of ages (8 to 16), abilities and issues (ASD, ADHD, mental health issues). Received safeguarding training for working with disabled children and adults. Further **demonstrates ability to communicate information and support learning with a range of abilities**.

Supervisory Experiences

- Human Testing Technician (1) | Dec 2022 – Aug 2025
- Voluntary Research Assistants (12) | March 2023 – Aug 2025
- MSc thesis students (6) | Nov 2022 – Aug 2025
- UG thesis students (8) | Sep 2023 – May 2025

REFERENCES

Relationship	Name	Address	Email	Number
Postdoctoral Supervisor	Dr Nicolas Chevalier	7 George Square, Edinburgh	nicolas.chevalier@ed.ac.uk	0131 651 3083
PhD Supervisor	Professor Aidan Feeney	18-30 Malone Road, Belfast	a.feeney@qub.ac.uk	028 9097 5445
2nd PhD Supervisor	Professor Teresa McCormack	18-30 Malone Road, Belfast	t.mccormack@qub.ac.uk	028 9097 5445
Supervisor during RA position	Professor Oliver Perra	97 Lisburn Rd, Belfast BT9 7BL	o.perra@qub.ac.uk	028 9097 2233