# DIVYANGANA RAKESH, PhD

### EDUCATION

<ul> <li>Doctor of Philosophy - Neuroscience, University of Melbourne</li> <li>Thesis: Early adversity, brain development, and mental health during adolescence: advisors: Professors Sarah Whittle and Andrew Zalesky</li> </ul>
Master of Research - Neuroscience, Université de Bordeaux
» Ranked 1 <sup>st</sup> in the cohort, 'Mention Très Bien' (highest honours)
Post-graduate degree in Business Management (MBA), MICA, Ahmedabad
Thesis: studying the behavioural response of women to the use of the colour pink in advertisements directed towards females
Bachelor of Science (Honours) - Biochemistry, University of Delhi
» First Division (Highest class)
<ul> <li>Study emphases: Human physiology, metabolism, immunology, cell biology, molecular biology, genetics</li> </ul>
<b>Rishi Valley School - Krishnamurthy Foundation India</b> (Ranked 1 <sup>st</sup> in cohort)

# ACADEMIC APPOINTMENTS

Lecturer, King's College London, Institute of Psychiatry, Psychology & Neuroscience
<ul> <li>Postdoctoral Fellow, Harvard University</li> <li>Studying the effects of early adverse experiences on brain development</li> </ul>
and mental health during childhood and adolescence » Advisor: Professor Katie McLaughlin
Research Assistant, University of Melbourne
<ul> <li>Projects: designing and implementing pipelines for open science practices in the lab, examining associations between brain development and mental health during adolescence</li> <li>Supervisor: Professor Sarah Whittle</li> </ul>
Supervisor. Professor Sarah Whittee Posearch Assistant Murdoch Children's Posearch Institute
<ul> <li>Wellcome active ingredients initiative: systematic review of the association between school connectedness and depression and anxiety in adolescents</li> <li>Supervisors: Prof. George Patton, Prof. Susan Sawyer, Dr. Monika Raniti</li> </ul>

### PEER-REVIEWED PUBLICATIONS

#### Trainee authors are underlined.

#### Under review/in revision

- 1. **Rakesh, D.**, Flournoy, J., McLaughlin, K. Socioeconomic status indicators and mental health trajectories during early adolescence, *JAMA Psychiatry [under review]*
- 2. Thomas, M., **Rakesh, D.**, Whittle, S., Upthegrove, R., Sheridan, M., Cropley, V. The neural, stress hormone and inflammatory correlates of childhood deprivation and threat in psychosis: A systematic review, *Psychoneuroendocrinology* [revision under review]
- 3. <u>Zhang, L.</u>, **Rakesh, D.**, Cropley, V., Whittle, S. A systematic review of the link between the brain and resilience function in childhood and adolescence, *Clinical Psychology Reviews [revision under review]*

#### <u>Published</u>

- 1. **Rakesh, D.**, Whittle, S., Sheridan, M., McLaughlin, K. (2023) Childhood socioeconomic status and the pace of structural neurodevelopment: Accelerated, delayed, or simply different? *Trends in Cognitive Sciences*
- <u>Rakesh, D.</u>, <u>Elzeiny, R.</u>, Vijayakumar, N., Whittle, S. (2023) A longitudinal study of childhood maltreatment, subcortical development and subcortico-cortical structural maturational coupling from early to late adolescence, *Psychological Medicine [in press]*

- 3. **Rakesh, D.**, Zalesky, A., Whittle, S. (2023). The role of school environment in brain structure, connectivity, and mental health in children a multi-modal investigation, *Biological Psychiatry: Cognitive Neuroscience and Neuroimaging*, 8(1), 32-41.
- 4. Jameei, H., **<u>Rakesh, D.</u>**, Zalesky, A., M.J., Reay, W.R., Wray, N., Di Biase, M. (2023) Linking MRI brain indices to polygenic risk for schizophrenia: a systematic review, *Schizophrenia Bulletin*
- Pozzi, E., <u>Rakesh, D.</u>, Gracia-Tabuenca, Z., Bray, K., Richmond, S., Seal, M., Schwartz, O., Vijayakumar, N., Yap, M., Whittle, S. (2023) Maternal neglectful behavior is associated with delayed development of functional connectivity during the transition from late childhood early adolescence, *Biological Psychiatry: CNNI [in press]*
- 6. **Rakesh, D.**, Zalesky, A., Whittle, S. (2022) Assessment of Parent Income and Education, Neighborhood Disadvantage, and Child Brain Structure. *JAMA Network Open*, 5(8), e2226208-e2226208.
- 7. Raniti, M., **Rakesh, D.**, Patton, G., Sawyer, S. M. (2022) School connectedness and depression and anxiety during adolescence a systematic review of prospective studies, *BMC public health*, 22(1), 1-24
- Saragosa-Harris, N., Chaku, N., MacSweeney, N., Williamson, V. G., Scheuplein, M., Feola, B., ... Rakesh, D., & Mills, K. L. (2022). A practical guide for researchers and reviewers using the ABCD Study and other large longitudinal datasets. *Developmental cognitive neuroscience*, 101115.
- Whittle, S., Pozzi, E., <u>Rakesh, D.</u>, Kim, J. M., Yap, M. B., Schwartz, O. S., ... & Vijayakumar, N. (2022). Harsh and inconsistent parental discipline is associated with altered cortical development in children. *Biological Psychiatry: Cognitive Neuroscience and Neuroimaging*, 7(10), 989-997
- <u>Rakesh, D.</u><sup>1</sup>, Whittle, S<sup>1</sup>... ENIGMA consortium (2022). The role of educational attainment and brain morphology in major depressive disorder: findings from the ENIGMA Major Depressive Disorder consortium, *Journal of Psychopathology and Clinical Science*, 131(6), 664
- 11. **Rakesh, D.**, Whittle, S. (2021) Socioeconomic status and the developing brain a systematic review of neuroimaging findings in youth. *Neuroscience and Biobehavioral Reviews*, 130, 379-407.
- Rakesh, D., Zalesky, A., Whittle, S. (2021). Similar but distinct-Effects of different socioeconomic indicators on resting state functional connectivity: findings from the Adolescent Brain Cognitive Development (ABCD) Study<sup>®</sup>. Developmental Cognitive Neuroscience, 101005.
- 13. **Rakesh, D.**, Cropley, V., Zalesky, A., Vijayakumar, N., Allen, N. B., & Whittle, S. (2021). Neighborhood disadvantage and longitudinal brain-predicted-age trajectory during adolescence. *Developmental Cognitive Neuroscience*, 101002.
- 14. **Rakesh, D.**, Allen, N. B., & Whittle, S. Longitudinal changes in within-salience network functional connectivity mediate the relationship between childhood abuse and neglect, and mental health during adolescence, *Psychological Medicine*, 1-13
- 15. <u>Rakesh, D.</u>, Seguin, C., Zalesky, A., Cropley, V., & Whittle, S. (2021) Associations between neighborhood disadvantage, resting-state functional connectivity, and behavior in the Adolescent Brain Cognitive Development (ABCD) Study<sup>®</sup>: Moderating role of positive family and school environments, *Biological Psychiatry: Cognitive Neuroscience and Neuroimaging*, 6(9), 877-886.
- 16. <u>Rakesh, D.</u><sup>1</sup>, Bastin, C.<sup>1</sup>, Harrison, B. J., Davey, C. G., Allen, N. B., Muller, S., & Whittle, S. (2021). Feelings of shame and guilt are associated with distinct neural activation in youth. *Biological Psychology*, 159, 108025.
- Rakesh, D., Kelly, C., Vijayakumar, N., Zalesky, A., Allen, N. B., & Whittle, S. (2021). Unraveling the consequences of childhood maltreatment: deviations from typical functional neurodevelopment mediate the relationship between maltreatment history and depressive symptoms. *Biological Psychiatry: Cognitive Neuroscience and Neuroimaging*, 6(3), 329-342
- Rakesh, D., Lv, J., Zalesky, A., Allen, N. B., Lubman, D. I., Yücel, M., & Whittle, S. (2021). Altered resting functional connectivity patterns associated with problematic substance use and substance use disorders during adolescence. *Journal of Affective Disorders*, 279, 599-608.
- 19. **Rakesh, D.**<sup>1</sup> & Díaz-Arteche, C.<sup>1</sup> (2020). Using neuroimaging to predict brain age: insights into typical and atypical development and risk for psychopathology. *Journal of Neurophysiology*, *124*(2), 400-403.
- 20. Pozzi, E.<sup>1</sup>, Vijayakumar, N.<sup>1</sup>, **Rakesh, D.**, & Whittle, S. (2021). Neural Correlates of Emotion Regulation in Adolescents and Emerging Adults: A Meta-analytic Study. *Biological Psychiatry*, 89(2), 194-204.
- <u>Rakesh, D.</u>, Allen, N. B., & Whittle, S. (2020). Balancing act: Neural correlates of affect dysregulation in youth depression and substance use-A systematic review of functional neuroimaging studies. *Developmental cognitive neuroscience*, 42, 100775.
- 22. **Rakesh, D.**, Fernando, K. B., & Mansour L, S. (2020). Functional dedifferentiation of the brain during healthy aging. *Journal of neurophysiology*, 123(4), 1279-1282.
- Cabanas, M., Pistono, C., Puygrenier, L., <u>Rakesh, D.</u>, Jeantet, Y., Garret, M., & Cho, Y. H. (2019). Neurophysiological and behavioral effects of anti-orexinergic treatments in a mouse model of Huntington's disease. *Neurotherapeutics*, 16(3), 784-796.
- Cabanas, M., Piquemal, M., Pistono, C., Arnaud, S., <u>Rakesh, D.</u>, Poinama, E., ... & Cho, Y. H. (2020). Correlations between mutant huntingtin aggregates and behavioral changes in R6/1 mice. *Journal of Huntington's disease*, 9(1), 33-45.

#### In preparation

- 1. **Rakesh, D.**, McLaughlin, K., Flouri, E. The protective effect of green space in infant development: findings from the Millennium Cohort Study
- 2. **Rakesh, D.\***, Rosen, M.\*, Sheridan, M., Humphreys, K., McLaughlin, K. Environmental experience and cognitive development: the role of cognitive stimulation
- 3. **Rakesh, D.**, <u>Lee, P.</u>, <u>Kim, M.</u>, <u>Riveron, S.</u>, <u>Gaikwad, A.</u>, McLaughlin, K. Associations between socioeconomic status and cognitive function and academic achievement during childhood and adolescence a systematic review of mechanisms and buffering factors
- 4. **Rakesh, D.,** Flournoy, J., P., McLaughlin, K. Child opportunity in the neighborhood, brain structure, and cognitive function during early adolescence: findings from the ABCD study
- 5. **Rakesh, D.**, Lee, P., McLaughlin, K. Associations between socioeconomic status and cognitive function and academic achievement during childhood and adolescence a systematic review of mechanisms and buffering factors
- 6. <u>Zhang, L.</u>, Cropley, V., Whittle, S.\*, **Rakesh, D.\***, Adolescent Resilience in the Face of the Global Pandemic: The Interplay Between Trauma, COVID-19 Stressors, and Protective Factors
- 7. <u>Pollmann, A., **Rakesh, D.**</u>, McLaughlin, K., Fuhrmann, D. Modifiable Resilience Factors after Adversity in Early Adolescence
- 8. MacSweeney, N., Thompson, P., **<u>Rakesh, D.</u>** Associations between pubertal timing, tempo, and internalizing problems in adolescent girls
- 9. Colich, N., **Rakesh D.**, .... McLaughlin, K. Associations between early adversity and multiple metrics of biological aging
- 10. Rosen, M., **Rakesh, D.**, Romeo, R.R. The role of socioeconomic status in shaping associations between sensorimotor and prefrontal structure and implications for executive function
- 11. McCormick, E., **Rakesh, D.,** McLaughlin, K. Testing acceleration versus delayed brain development: a novel methodology
- 12. Whittle, S., **Rakesh, D.**, Vijayakumar, N. Brain structural alterations in youth MDD: A survival analysis
- 13. Flournoy, J., **Rakesh, D.**, Byrne, M. Exclusions threaten inference in ABCD
- 14. <u>Berg, E.</u>, **Rakesh, D.**, Byrne, M. Associations between lifestyle factors and development of fluid cognitive functioning during adolescence
- 15. Mygind, L., **Rakesh, D.,** Allen, N. B., Vijayakumar, N., Youssef, G., Enticott, P.G., & Whittle, S. Associations Between Residential Greenness, Neurodevelopment, and Emotion Regulation in Adolescence

<sup>1</sup>Co-first or senior authors

# RESEARCH FELLOWSHIPS AND SCHOLARSHIPS

May 2023	Harvard University Mind Brain and Behavior Research Fellowship (\$50,000) - awarded to conduct an independent research project on SES and the pace of brain development
May 2022	<b>Flux Travel Award</b> (\$750), awarded to talented students based on scientific merit and an evaluation of a written application.
Oct 2018 to Apr 2022	<b>Melbourne Research Scholarship (\$70,000p.a. * 3.5 years)</b> - full fee remission of \$39,000p.a. + \$31,000p.a. living allowance). Awarded to high achieving PhD students.
Oct 2018 to Oct 2021	<b>Nick Christopher Scholarship (\$18000)</b> , awarded to the two highest ranked incoming PhD students.
Dec 2020	<b>Society for Biological Psychiatry (SOBP) Predoctoral Travel Fellowship</b> ( <b>\$2000 stipend</b> + waived registration fees for three years). International fellowship awarded based on past excellence in scholarly work, potential for scholarly growth in biological psychiatry and clinical neuroscience, and overall excellence.
Feb 2020	<b>Graham Burrows Travel Scholarship (\$4500)</b> , awarded by the University of Melbourne to one student annually for research related travel.
Nov 2018	<b>Rowden White Scholarship (\$6500)</b> , awarded annually by the University of Melbourne to a few talented, high quality PhD students.
May 2018	<b>Trinity College Dublin PhD Studentship Award (€21,000p.a. * 3 years)</b> - full fee remission of €14,500p.a. + €6500p.a. living allowance). Awarded to high achieving PhD students *Declined in order to accept the Melbourne Research Scholarship

# HONOURS AND AWARDS

Jul 2023	The Chancellor's Prize for Excellence in the PhD Thesis, University of Melhourne
Nov 2022	<b>Dean's Award for Excellence in Graduate Research</b> (awarded to recognise outstanding achievements by Graduate Researchers, University of Melbourne;
Jun 2022	\$1000) <b>Flux Dissertation Award</b> (awarded annually to one person to recognise an exceptional, rigorous, and meticulous dissertation by one of the Flux Societies
Apr 2022	trainee members) <b>Finalist - Schmidt Science Fellowship</b> (finalist amongst a group of highly accomplished candidates, nominated from 83 of the world's leading universities and research institutes, and recognized by University of Melbourne
Feb 2022	as one of their most promising PhD students) <b>Best Paper Award</b> (PhD Student - Basic Science Category; \$1000 + free registration and membership) Society for Montal Health Research (SMHR)
Dec 2021	<b>Mendelsohn Neuroscience Thesis Prize</b> (Second Runner-up), Awarded annually to outstanding doctoral students in the Neurosciences, University of
Sep 2021	Melbourne <b>Student &amp; Early Career Researcher Excellence Plenary</b> , Biological Psychiatry Australia for outstanding achievement in biological psychiatry research and aimificant contribution to estimatific here denship and outpresses
June 2021	People's Choice Award, Australian Society for Social and Affective Neuroscience (AS4SAN) annual YouTube competition
Dec 2020	<b>Best Oral Presentation Award</b> , Department of Psychiatry Annual Research Symposium, University of Melbourne
Dec 2020	<b>Best Abstract Award</b> , Mental Health PhD Program Annual Conference, University of Melbourne
Sep 2020	<b>Velma Stanley Award</b> for paper entitled 'Altered whole-brain functional connectivity patterns associated with substance use disorders and problematic substance use during adolescence'. Awarded annually by the University of Melbourne to one person for an essay/paper on substance use (\$2500).
Oct 2019	Best Poster Presentation Award, Biological Psychiatry Australia, 2019
Aug 2019	<b>Best Poster Presentation Award</b> , Department of Psychiatry Annual Research Symposium, University of Melbourne
Jun 2018	<b>Ranked 1</b> <sup>st</sup> in the program - Masters by Research, Neuroscience
Jun 2018	<b>Best Oral Presentation Award</b> at 'International Scientific Day', the annual student symposium (organised by the Neuroscience in Bordeaux Association)

# INVITED TALKS AND PANELS

- 1. **Panelist** (May 2023), Developmental Cognitive Neuroscience in the Era of Big Data, talk delivered by Damien Fair for the Mast. General Hospital Psychiatry Grand Rounds
- <u>Rakesh, D.</u> (2023 May), Socioeconomic disadvantage and the pace of brain development, upcoming Invited Talk at the Nelson Lab Meeting, Harvard University
- 3. **Rakesh, D.** (2023 Mar), Socioeconomic disadvantage and the pace of brain development, **Invited Talk** at the Population Neuroscience Group Meeting, Harvard University
- 4. <u>Rakesh, D.</u> (2023 Mar), Socioeconomic disadvantage, brain functional connectivity, and mental health and cognition, **Invited Talk** at Smith College, MA
- 5. **Rakesh, D.** (2022 Dec), Early Adversity, brain development, and mental health and cognition, **Invited Talk** at the **UCL and Birkbeck Centre for Educational Neuroscience** <u>Seminar Series</u>
- 6. <u>Rakesh, D.</u> (2022 Sep), Early Adversity, brain development, and mental health and cognition, **Invited Talk** Dissertation Award Talk, Flux Congress 2022, Paris, France
- <u>Rakesh, D.</u> (2021 Oct), The role of school environment in brain structure, connectivity, and mental health in children - a multi-modal investigation, **Invited Talk** at Centre for Adolescent Health, Murdoch Children's Research Institute
- 8. <u>Rakesh, D.</u> (2021 Oct), Early Adversity, brain development, and mental health and cognition, **Keynote:** Student and ECR Excellence Plenary, Biological Psychiatry Australia
- 9. <u>Rakesh, D.</u> (2021 Sep), Early Adversity, brain development, and mental health and cognition, **Invited Talk** at McLaughlin lab, Harvard University
- 10. <u>Rakesh, D.</u> (2021 Jun), Functional connectivity methods. **Invited talk and hands-on workshop** at the Australian Society for Social and Affective Neuroscience

- 11. <u>Rakesh, D.</u> (2021 Jun), Neighborhood disadvantage and brain-predicted-age, **Biological Psychiatry** Australia Virtual Symposium
- 12. <u>Rakesh, D.</u> (2021 Apr), Associations between neighborhood disadvantage, resting-state functional connectivity, and behavior in the Adolescent Brain Cognitive Development (ABCD) Study<sup>®</sup>: Moderating role of positive family and school environments, **Invited Talk** at Silk Lab, Deakin University
- 13. <u>Rakesh, D.</u> (2021 Feb), Associations between neighborhood disadvantage, resting-state functional connectivity, and behavior in the Adolescent Brain Cognitive Development (ABCD) Study<sup>®</sup>: Moderating role of positive family and school environments, **Invited Talk** at Uddin Lab, University of Miami

## CONFERENCE AND POSTER PRESENTATIONS

#### Trainee authors/presenters are underlined.

#### Talks and Symposia

- Raniti, M., <u>Rakesh, D.</u>, Patton, G., Sawyer, S. M. (2022 Nov) School connectedness and depression and anxiety during adolescence - a systematic review of prospective studies, Society for Mental health Research
- Raniti, M., <u>Rakesh, D.</u>, Patton, G., Sawyer, S. M. (2022 Dec), Health Promoting Schools at the Centre for Adolescent Health, Invited presentation MCRI Global Health Forum
- 3. <u>Zhang, L.</u>, **Rakesh, D.**, Cropley, V., Whittle, S. (2022 Dec), A systematic review of the link between the brain and resilience function in childhood and adolescence, Melbourne Mental Health Symposium
- 4. Raniti, M., **Rakesh, D.**, Patton, G., Sawyer, S. M. (2022 Nov), Harnessing the potential of whole-school approaches for (mental) health and wellbeing, Invited keynote at Victorian Department of Education Respectful Relationships (Barwon) forum, Deakin University
- Pozzi, E., <u>Rakesh, D.</u>, Gracia-Tabuenca, Z., Bray, K., Richmond, S., Seal, M., Schwartz, O., Vijayakumar, N., Yap, M., Whittle, S., (2022 Sep) Maternal neglectful behavior is associated with delayed development of functional connectivity during the transition from late childhood early adolescence, Flux Congress, Paris, France
- 6. Raniti, M., **Rakesh, D.,** Patton, G., Sawyer, S. M. (2022 Sep), Invited webinar with Education Perfect and DECODE, Harnessing the potential of whole-school approaches for young people's mental health
- Raniti, M., <u>Rakesh, D.</u>, Patton, G., Sawyer, S. M. (2022 Jul), Whole-school approaches to health and wellbeing: what's new and what's next?, invited presentation to Australian Communities that Care (CTC) Coordinators network meeting, Melbourne
- 8. <u>Zhang, L.</u>, **Rakesh, D.**, Cropley, V., Whittle, S. (2022 Jun), A systematic review of the link between the brain and resilience function in childhood and adolescence, Australian Society for Social and Affective Neuroscience
- 9. Raniti, M., **Rakesh, D.**, Patton, G., Sawyer, S. M. (2022 Feb), Centre for Adolescent Health staff meeting, The role of school connectedness in the prevention of youth depression and anxiety: a systematic review with youth consultation
- Rakesh, D., Zalesky, A., Whittle, S. (2021 Dec), The role of school environment in brain structure, connectivity, and mental health in children - a multi-modal investigation, Department of Psychiatry Symposium, University of Melbourne
- 11. <u>Rakesh, D.</u>, Seguin, C., Zalesky, A., Cropley, V., & Whittle, S. (2021 Jun), Associations between neighborhood disadvantage, resting-state functional connectivity, and behavior in the Adolescent Brain Cognitive Development (ABCD) Study<sup>®</sup>: Moderating role of positive family and school environments, Australian Society for Social and Affective Neuroscience
- 12. Whittle, S., **Rakesh, D.** (2021 May), Neighborhood disadvantage and longitudinal brain-predicted-age trajectory during adolescence. Invited talk at the Healthy Brain and Mind Research Centre Forum, Australian Catholic University
- 13. Whittle, S., **Rakesh, D.** (2021 May), Neighborhood disadvantage and longitudinal brain-predicted-age trajectory during adolescence. Invited talk at the Institute of Social Neuroscience
- 14. **Rakesh, D.,** Kelly, C., Vijayakumar, N., Zalesky, A., Allen, N. B., & Whittle, S. (2020 Dec), Unraveling the consequences of childhood maltreatment: deviations from typical functional neurodevelopment mediate the relationship between maltreatment history and depressive symptoms, Graduate Research Conference, University of Melbourne
- 15. **Rakesh, D.**, Cropley, V., Zalesky, A., Vijayakumar, N., Allen, N. B., & Whittle, S. (2020 Dec), Neighborhood disadvantage and longitudinal brain-predicted-age trajectory during adolescence, Mental Health PhD Program Annual Conference, University of Melbourne
- Rakesh, D., Cropley, V., Zalesky, A., Vijayakumar, N., Allen, N. B., & Whittle, S. (2020 Nov), Neighborhood disadvantage and longitudinal brain-predicted-age trajectory during adolescence, The University of Melbourne Psychiatry Symposium (awarded Best Presentation)

- 17. Whittle, S., **Rakesh, D.** (2020 Oct), Neighborhood disadvantage and longitudinal brain-predicted-age trajectory during adolescence. Invited talk at the Cognitive Neuroscience Unit (CNU) & Deakin Child Study Centre (DCSC), School of Psychology, Deakin University
- 18. **Rakesh, D.**, Kelly, C., Vijayakumar, N., Zalesky, A., Allen, N. B., & Whittle, S. (2020 Oct), Unraveling the consequences of childhood maltreatment: deviations from typical functional neurodevelopment mediate the relationship between maltreatment history and depressive symptoms, Biological Psychiatry Australia
- 19. **Rakesh, D.**, Kelly, C., Vijayakumar, N., Zalesky, A., Allen, N. B., & Whittle, S. (2020 Sep), Unraveling the consequences of childhood maltreatment: deviations from typical functional neurodevelopment mediate the relationship between maltreatment history and depressive symptoms, Flux Congress
- 20. **Rakesh, D.,** Lv, J., Zalesky, A., Allen, N. B., Lubman, D. I., Yücel, M., & Whittle, S. (2019 Nov), Altered resting functional connectivity patterns associated with problematic substance use and substance use disorders during adolescence, Society for Mental Health Research
- 21. **Rakesh, D.,** Lv, J., Zalesky, A., Allen, N. B., Lubman, D. I., Yücel, M., & Whittle, S. (2019 Nov), Altered resting functional connectivity patterns associated with problematic substance use and substance use disorders during adolescence, Australian Cognitive Neuroscience Society
- 22. <u>Fernando, K.</u>, **Rakesh, D.**, Cropley, V., Zalesky, A. (2019 Nov), Functional dysconnectivity in youth with psychotic like experiences, The University of Melbourne Psychiatry Symposium
- 23. **Rakesh, D.**, Lv, J., Zalesky, A., Allen, N. B., Lubman, D. I., Yücel, M., & Whittle, S. (2019 Oct), Altered resting functional connectivity patterns associated with problematic substance use and substance use disorders during adolescence, Students of Brain Research Annual Symposium
- 24. **Rakesh, D.**, Kees, A., Mulle, C. (2018 May), Investigating spike dependent plasticity in the CA3 using optogenetics and in vivo patch clamp, International Scientific Day, Neuroscience in Bordeaux Association (awarded Best Presentation)

#### Poster presentations

- 1. **Rakesh, D.**, Zalesky, A., Whittle, S. (2023 Apr), The role of school environment in brain structure, connectivity, and mental health in children a multi-modal investigation, Society for Biological Psychiatry, San Diego, California
- Jameei, H., <u>Rakesh, D.</u>, Zalesky, A., M.J., Reay, W.R., Wray, N., Di Biase, M. (2022 Jun), Linking MRI brain indices to polygenic risk for schizophrenia: a systematic review, Organization for Human Brain Mapping, The University of Melbourne Psychiatry Symposium
- 3. <u>Zhang, L.</u>, <u>Rakesh, D.</u>, Cropley, V., Whittle, S. (Dec 2022), A systematic review of the link between the brain and resilience function in childhood and adolescence, The University of Melbourne Psychiatry Symposium
- 4. <u>Zhang, L.</u>, **Rakesh, D.**, Cropley, V., Whittle, S. (Sep 2022), A systematic review of the link between the brain and resilience function in childhood and adolescence, Flux Congress, Paris, France
- 5. **Rakesh, D.**, Zalesky, A., Whittle, S. (Sep 2022) Assessment of Parent Income and Education, Neighborhood Disadvantage, and Child Brain Structure, Flux Congress, Paris, France
- 6. <u>Zhang, L.</u>, **Rakesh, D.**, Cropley, V., Whittle, S. (Sep 2022), A systematic review of the link between the brain and resilience function in childhood and adolescence, Flux Congress, Paris, France
- 7. Jameei, H., **<u>Rakesh, D.</u>**, Zalesky, A., M.J., Reay, W.R., Wray, N., Di Biase, M. (2022 Jun), Linking MRI brain indices to polygenic risk for schizophrenia: a systematic review, Organization for Human Brain Mapping
- 8. **Rakesh, D.**, Zalesky, A., & Whittle, S. (2022 Apr), Assessment of Parent Income and Education, Neighborhood Disadvantage, and Child Brain Structure, Society for Biological Psychiatry
- 9. <u>Elzeiny, R.</u>, **Rakesh, D.**, Vijayakumar, N., Whittle, S. A longitudinal study of childhood maltreatment, subcortical development and subcortico-cortical structural maturational coupling from early to late adolescence, *Psychological Medicine*, The University of Melbourne Psychiatry Symposium
- 10. Thomas, M., **Rakesh, D.,** Whittle, S., Upthegrove, R., Sheridan, M., Cropley, V. (2021 Oct) The neural, stress hormone and inflammatory correlates of childhood deprivation and threat in psychosis: A systematic review, Biological Psychiatry Australia
- 11. <u>Rakesh, D.</u>, Seguin, C., Zalesky, A., Cropley, V., & Whittle, S. (2021 Sep), Associations between neighborhood disadvantage, resting-state functional connectivity, and behavior in the Adolescent Brain Cognitive Development (ABCD) Study<sup>®</sup>: Moderating role of positive family and school environments, Flux Congress
- 12. **Rakesh, D.,** Seguin, C., Zalesky, A., Cropley, V., & Whittle, S. (2021 Apr), Associations between neighborhood disadvantage, resting-state functional connectivity, and behavior in the Adolescent Brain Cognitive Development (ABCD) Study<sup>®</sup>: Moderating role of positive family and school environments, Society for Biological Psychiatry annual meeting
- 13. <u>Rakesh, D.</u>, Kelly, C., Vijayakumar, N., Zalesky, A., Allen, N. B., & Whittle, S. (2020 Jun), Unraveling the consequences of childhood maltreatment: deviations from typical functional neurodevelopment mediate the relationship between maltreatment history and depressive symptoms, Organization for Human Brain Mapping annual meeting
- 14. **Rakesh, D.,** Lv, J., Zalesky, A., Allen, N. B., Lubman, D. I., Yücel, M., & Whittle, S. (2019 Oct), Altered resting functional connectivity patterns associated with problematic substance use and substance use disorders during adolescence, Biological Psychiatry Australia (awarded Best Poster)

- 15. **Rakesh, D.**, Lv, J., Zalesky, A., Allen, N. B., Lubman, D. I., Yücel, M., & Whittle, S. (2019 Oct), Altered resting functional connectivity patterns associated with problematic substance use and substance use disorders during adolescence, The University of Melbourne Psychiatry Symposium (awarded Best Poster)
- 16. **Rakesh, D.**, Cabanas, M., Cho, Y. (2017) Effects of orexin antagonism on sleep in a mouse model of Huntington's Disease, NeuroFrance

### TEACHING, SUPERVISION, AND MENTORSHIP

#### Teaching Experience

Sem 2, 2021	Teaching Associate, Melbourne School of Psychological Sciences, University of
	Melbourne, Course: <b>Cognitive Psychology</b>
Sem 1, 2021	Teaching Associate, Melbourne School of Psychological Sciences, University of
	Melbourne, Course: Biological Psychology
Sem 2, 2020	Teaching Associate, Melbourne School of Psychological Sciences, University of
	Melbourne, Course: <b>Cognitive Psychology</b>
Sem 1, 2020	Teaching Associate, Melbourne School of Psychological Sciences, University of
	Melbourne, Course: Biological Psychology
Sem 2, 2019	Teaching Associate, Melbourne School of Psychological Sciences, University of
	Melbourne, Course: Cognitive Psychology

#### PhD and/or Honours Thesis advisor

\* Received an award for their Thesis and/or research and extracurricular work

2022 to present	Supervisor, PhD Candidate, Lu Zhang* (awarded the Nick Christopher
	Scholarship for high-ranking PhD students; University of Melbourne). PhD
	thesis: studying resilience to mental health problems during adolescence
2021	Supervisor, Honours thesis, Reham Elzeiny* (awarded the Department of
	Psychiatry Honours Award; University of Melbourne and the Best Poster Award
	at the Department of Psychiatry Symposium). Thesis: associations between
	adversity, brain development, and mental health
2021	Supervisor, Honours thesis, Chrysoula Tsiapas (Monash University). Thesis:
	associations between adversity and mental health trajectories in ABCD
2019	Supervisor, Honours thesis, Kavisha Fernando* (awarded the Department of
	Psychiatry Honours Award and the Best Presentation Award at the Department
	of Psychiatry Annual Symposium; University of Melbourne). Thesis: examining
	aberrations in whole-brain functional connectivity in subclinical psychosis
2019	Supervisor, Master's thesis, Fenna Mensonides (University of Melbourne).
	Thesis: functional neural correlates of guilt and shame
Research Mentorship (r	nentor for specific independent projects)
Nov 2022 to present	Avla Pollmann ( <b>PhD candidate</b> , King's College London; upcoming exchange
	visitor at Harvard). Project: understanding the role of resilience factors in the

Dec 2022 to present

Ayla Pollmann (**PhD candidate**, King's College London; upcoming exchange visitor at Harvard). Project: understanding the role of resilience factors in the associations between early adversity, brain development, and mental health Emma Berg (**Honours student**, Monash University). Project: studying associations between lifestyle factors and cognitive development

### MEDIA AND PUBLIC OUTREACH

2022	Article in 'The Conversation', Research suggests one way to prevent
	<u>depression and anxiety is a strong sense of connection at high school</u>
2022	Article in the Medical Journal of Australia, Insight+, Disadvantage and Brain
	<u>Development: flags for GPs</u>
2022	Article for Frontiers for Young Minds - 'How the neighborhoods we grow up
	in shape our brains, and why home and school environments matter' [in press]
2022	Article in 'The Mental Elf': School connectedness, anxiety and depression:
	recent evidence and young people's perspectives
2021	Press release by Biological Psychiatry: CNNI
2021	Radio Interview: 3CR (Radical Philosophy), 'Shaping children's brains'

2021	Article in 'The Conversation', Growing up in a rough neighbourhood can
	<u>reshape kids' brains – but good parenting and schooling can help (&gt; 24,000</u>
	reads)
2021	Radio Interview: RRR 102.7FM, Featured on Einstein a go-go's
	20PhDs20Minutes
2020	<b>News Article,</b> Pursuit Magazine, " <u>The Legacy of Maltreatment on the Brain</u> "

### CONTRIBUTION TO PEER-REVIEW

2020 to present

#### Peer reviewed articles for several Q1 journals:

- » Biological Psychiatry
- » Biological Psychiatry: CNNI
- » Psychological Medicine
- » Neuroimage Clinical
- » Developmental Cognitive Neuroscience
- » Developmental Psychobiology
- » Health and Place
- » Risk Management and Healthcare Policy
- » European Journal of Neuroscience
- » Schizophrenia Bulletin
- » Development and Psychopathology
- » Neuropsychology Reviews
- » Environmental Epidemiology

### LEADERSHIP AND SERVICE

2023	co-Chair, Flux Trainee Committee
2023	Diversity, Inclusion, and Belonging Committee, Harvard University,
	Department of Psychology
2022	Flux Trainee Committee
	<ul> <li>Organised and moderated a panel discussion on grant/fellowship writing at Flux Congress 2022</li> </ul>
	» Assisting with other trainee events and concerns
2022 to 2023	Flux Society Diversity and Inclusion Committee member
2021	BrainHack 2021, Social Committee
2022	Higher Degree by Research Course Review Panel Member, University of
	Melbourne
2021 to present	<b>Department of Psychiatry Research Committee member</b> , University of Melbourne
2020 to 2022	Academic Board's Higher Degrees by Research (HDR) Committee member
	- member of a senior university committee that makes decisions on HDRs,
	University of Melbourne
2019 to 2020	Academic Board's Academic Programs Committee member - member of a
	senior university committee that makes decisions on academic programs,
	University of Melbourne
2019 to 2020	<b>Executive Committee Member</b> , Students of Neuropsychiatry Research
	(SONR) graduate group, University of Melbourne
2011 to 2013	Senior Editor and President, Literary Committee, MICA, Ahmedabad, India
2010 to 2011	Vice President, English Debating Society, SVC, University of Delhi
	Editor in Chief, Science Magazine, 'Expressions', SVC, University of Delhi

### **PROFESSIONAL EXPERIENCE**

Nov 2015 to Aug 2016	Manager - Marketing, Nykaa, Mumbai
	» Analysing market research data and digital consumer behaviour
	» Launch of the Nykaa private label and formulating the IMC
Jul 2013 to Nov 2015	Assistant Manager - Marketing, L'Oréal
	<ul> <li>Responsible for all brand growth targets and brand financials for Vichy, India</li> </ul>

- » Understanding and analysing market research data
- » Conducted consumer panels, focus group discussions and other research to derive consumer insights
- » Designed and implemented a 360° Integrated Marketing Campaign

# COMMUNITY OUTREACH

Dec 2014 to Apr 2015	<ul> <li>Mentor, Green Batti Project, Mumbai</li> <li>Mentored children from underprivileged backgrounds through academic and personal difficulties</li> </ul>
May 2009	<ul> <li>Intern, C.A.R.E (Cooperative for Assistance and Relief Everywhere)</li> <li>» Rural health initiative to implement the Integrated Child Development Scheme (ICDS), a centrally sponsored scheme to ensure proper growth and development of children in rural, tribal and slum areas of rural Jharkhand, India.</li> </ul>
June 2009	<ul> <li>Rural auditor, M.N.R.E.G.A under Jean Dreze</li> <li>» Raised awareness about 'Right to Employment', minimum wage, and audited the implementation of the Mahatma Gandhi National Rural Employment Guarantee Act while living in rural Jharkhand, India</li> </ul>
Languages	English (native), Hindi (native), French (B2), Bengali (B1), Urdu (B2)