

Taren Sanders

RESEARCHER & DATA SCIENTIST

Institute for Positive Psychology and Education, Australian Catholic University

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Education

Doctor of Philosophy

WESTERN SYDNEY UNIVERSITY

2016

- Thesis title: Investigating Associations Between Neighbourhood Green Space and Weight Status: A Longitudinal Study of Australian Children Aged 4 to 13 Years Old.

Bachelor of Health Science (Honours; First Class)

WESTERN SYDNEY UNIVERSITY

2012

- Thesis title: Measuring adolescent boys' physical activity: Bout length and the influence of accelerometer epoch length.

Bachelor of Health Science (PDHPE)

WESTERN SYDNEY UNIVERSITY

2011

Employment History

Deputy Program Leader

INSTITUTE FOR POSITIVE PSYCHOLOGY AND EDUCATION, AUSTRALIAN CATHOLIC UNIVERSITY

2017–Current

- Work with Institute Executive Management to support academic and professional staff to complete their duties.
- Developed and implemented new project management processes within the program, including making agile management strategies standard practice.
- Acting Program Leader Feb–March 2022.

Research Fellow

INSTITUTE FOR POSITIVE PSYCHOLOGY AND EDUCATION, AUSTRALIAN CATHOLIC UNIVERSITY

2016–Current

- Conduct original, high-impact, and translational research in the areas of health, education, and psychology.
- Overseen the development and evaluation of multiple large-scale school-based research projects, including iPLAY (145 schools) and Transform-Us! (20 schools in NSW). Intervention content I created has been delivered to more than 2,500 teachers and impacted more than 40,000 students.
- Conducted analyses of primary and secondary data, and provided statistical support to colleagues including statistics workshops.
- Worked with industry partners (NSW Department of Education, NSW Health, Sport Australia) to provide project updates and seek input.
- Author and co-author academic outputs, including book chapters, journal articles, and grant applications, as well as non-academic outputs such as stakeholder reports and data visualisations.
- Mentor doctoral and honours students, including reviewing and evaluating their analyses and writing.

Research Summary

Publications	Citations	h-Index	Mean CNCI	Mean Impact Factor	Funding
31	906	16	2.4	6.8	> \$1 million

Technical Skills

Programming Languages

R, PYTHON, STATA, JULIA

Software Development

R PACKAGES (INCLUDING CRAN SUBMISSION), PYTHON PACKAGES

Statistical Methods

MACHINE LEARNING (INCL. COMPUTER VISION), MULTILEVEL MODELLING, INTERVENTION EVALUATION, GROWTH CURVE MODELLING

Research Methods

STUDY DESIGN, INTERVENTION DEVELOPMENT, ETHICS AND RECRUITMENT

Research Funding

Australian Research Council	\$658,544
CHIEF INVESTIGATOR — DISCOVERY PROJECT DP200101912	2020–2023
SQUARE EYES OR ALL LIES? UNDERSTANDING CHILDREN’S EXPOSURE TO SCREENS.	
NSW Department of Education	\$20,000
CHIEF INVESTIGATOR	2019–2020
IPLAY FOR INCLUSION	
Sport Australia	\$248,802
CHIEF INVESTIGATOR — ‘MOVE IT AUS’ PARTICIPATION GRANT PROGRAM	2019–2020
IPLAY FOR INCLUSION	
Australian Sports Commission	\$54,546
CHIEF INVESTIGATOR	2019–2019
IPLAY SPORTING SCHOOLS PILOT PROJECT	
Australian Catholic University	\$7,865
CHIEF INVESTIGATOR (LEAD) — FACULTY OF HEALTH SCIENCES RESEARCH PROJECT GRANT SCHEME	2018–2018
INVESTIGATING THE CORRELATES OF CHILDREN’S SCREEN TIME	
NSW Department of Education	\$11,500
CHIEF INVESTIGATOR	2018–2018
IPLAY NUTRITION PROOF-OF-CONCEPT MODULE	

Awards

- 2013 **Australian Postgraduate Award** Western Sydney University. \$105,000AUD plus tuition fees.
- 2017 **ACU Discipline Winner and National Finalist** 5 Minute Research Pitch.
- 2021 **Excellence and Innovation in Public Health Education and Research** Council of Academic Public Health Institutions Australasia. Team Award
- 2021 **Vice-Chancellor’s Staff Excellence Award: Excellence in Research and Research Partnership** Australian Catholic University. Team Award

Publications

PEER-REVIEWED PUBLICATIONS

Note: In health and medicine, the last author is considered the ‘senior’ author. Citations from Web of Science; JIF = Journal Impact Factor; CNCI = Category Normalised Citation Index.

Antczak, D., Lonsdale, C., del Pozo Cruz, B., Parker, P., & **Sanders, T.** (2021). Reliability of GENEActiv accelerometers to estimate sleep, physical activity, and sedentary time in children. *International Journal of Behavioral Nutrition and Physical Activity*, 18(1), 73. <https://doi.org/10.1186/s12966-021-01143-6> | Citations: 2; JIF: 6.5; CNCI: 2

Noetel, M., Griffith, S., Delaney, O., Harris, N. R., **Sanders, T.**, Parker, P., del Pozo Cruz, B., & Lonsdale, C. (2021). Multimedia Design for Learning: An Overview of Reviews With Meta-Analysis. *Review of Educational Research*. <https://doi.org/10.3102/00346543211052329> | JIF: 12.6

Parker, P. D., **Sanders, T.**, Anders, J., Parker, R. B., & Duineveld, J. J. (2021). Maternal Judgments of Child Numeracy and Reading Ability Predict Gains in Academic Achievement and Interest. *Child Development*, 92(5), 2020–2034. <https://doi.org/10.1111/cdev.13573> | JIF: 5.9

Lee, J., **Sanders, T.**, Antczak, D., Parker, R., Noetel, M., Parker, P., & Lonsdale, C. (2021). Influences on User Engagement in Online Professional Learning: A Narrative Synthesis and Meta-Analysis. *Review of Educational Research*, 91(4), 518–576. <https://doi.org/10.3102/0034654321997918> | JIF: 12.6

Kennedy, S. G., **Sanders, T.**, Estabrooks, P. A., Smith, J. J., Lonsdale, C., Foster, C., & Lubans, D. R. (2021). Implementation at-scale of school-based physical activity interventions: A systematic review utilizing the RE-AIM framework. *Obesity Reviews*, 22(7). <https://doi.org/10.1111/obr.13184> | Citations: 3; JIF: 9.2; CNCI: 1.9

Lonsdale, C., **Sanders, T.**, Parker, P., Noetel, M., Hartwig, T., Vasconcellos, D., Lee, J., Antczak, D., Kirwan, M., Morgan, P., Salmon, J., Moodie, M., McKay, H., Bennie, A., Plotnikoff, R. C., Cinelli, R., Greene, D., Peralta, L., Cliff, D., ... Lubans, D. R. (2021). Effect of a Scalable School-Based Intervention on Cardiorespiratory Fitness in Children: A

- Cluster Randomized Clinical Trial. *JAMA Pediatrics*, 175(7), 680. <https://doi.org/10.1001/jamapediatrics.2021.0417> | Citations: 2; JIF: 16.2; CNCI: 3.1
- Parker, P., **Sanders, T.**, Anders, J., Sahdra, B., Shure, N., Jerrim, J., & Cull, N. (2021). Does school average achievement explain the effect of socioeconomic status on math and reading interest? A test of the Information Distortion Model. *Learning and Instruction*, 73, 101432. <https://doi.org/10.1016/j.learninstruc.2020.101432> | Citations: 1; JIF: 5.1; CNCI: 1.8
- Noetel, M., Griffith, S., Delaney, O., **Sanders, T.**, Parker, P., del Pozo Cruz, B., & Lonsdale, C. (2021). Video Improves Learning in Higher Education: A Systematic Review. *Review of Educational Research*, 91(2), 204–236. <https://doi.org/10.3102/0034654321990713> | Citations: 4; JIF: 12.6; CNCI: 5
- del Pozo Cruz, B., Hartwig, T. B., **Sanders, T.**, Noetel, M., Parker, P., Antczak, D., Lee, J., Lubans, D. R., Bauman, A., Cerin, E., & Lonsdale, C. (2021). The effects of the Australian bushfires on physical activity in children. *Environment International*, 146, 106214. <https://doi.org/10.1016/j.envint.2020.106214> | Citations: 3; JIF: 9.6; CNCI: 2
- Vella, S. A., Swann, C., Batterham, M., Boydell, K. M., Eckermann, S., Ferguson, H., Fogarty, A., Hurley, D., Liddle, S. K., Lonsdale, C., Miller, A., Noetel, M., Okely, A. D., **Sanders, T.**, Schweickle, M. J., Telenta, J., & Deane, F. P. (2021). An Intervention for Mental Health Literacy and Resilience in Organized Sports. *Medicine and Science in Sports and Exercise*, 53(1), 139–149. <https://doi.org/10.1249/mss.0000000000002433> | Citations: 7; JIF: NA; CNCI: 9.2
- Hartwig, T. B., **Sanders, T.**, Vasconcellos, D., Noetel, M., Parker, P. D., Lubans, D. R., Andrade, S., Ávila-García, M., Bartholomew, J., Belton, S., Brooks, N. E., Bugge, A., Caverio-Redondo, I., Christiansen, L. B., Cohen, K., Coppinger, T., Dyrstad, S., Errisuriz, V., Fairclough, S., ... del Pozo Cruz, B. (2021). School-based interventions modestly increase physical activity and cardiorespiratory fitness but are least effective for youth who need them most: An individual participant pooled analysis of 20 controlled trials. *British Journal of Sports Medicine*. <https://doi.org/10.1136/bjsports-2020-102740> | Citations: 10; JIF: 13.8; CNCI: 7.9
- Antczak, D., **Sanders, T.**, del Pozo Cruz, B., Parker, P., & Lonsdale, C. (2020). Day-to-day and longer-term longitudinal associations between physical activity, sedentary behavior, and sleep in children. *Sleep*. <https://doi.org/10.1093/sleep/zsaa219> | Citations: 2; JIF: 5.8; CNCI: 2.1
- Ronto, R., Rathi, N., Worsley, A., **Sanders, T.**, Lonsdale, C., & Wolfenden, L. (2020). Enablers and barriers to implementation of and compliance with school-based healthy food and beverage policies: A systematic literature review and meta-synthesis. *Public Health Nutrition*, 23(15), 2840–2855. <https://doi.org/10.1017/S1368980019004865> | Citations: 12; JIF: 4; CNCI: 1.3
- Alfonso-Rosa, R. M., García-Hermoso, A., **Sanders, T.**, Parker, P., Oriol-Granado, X., Arnott, H., & del Pozo Cruz, B. (2020). Lifestyle behaviors predict adolescents bullying victimization in low and middle-income countries. *Journal of Affective Disorders*, 273, 364–374. <https://doi.org/10.1016/j.jad.2020.04.065> | Citations: 5; JIF: 4.8; CNCI: 1.1
- Antczak, D., Lonsdale, C., Lee, J., Hilland, T., Duncan, M. J., del Pozo Cruz, B., Hulteen, R. M., Parker, P. D., & **Sanders, T.** (2020). Physical activity and sleep are inconsistently related in healthy children: A systematic review and meta-analysis. *Sleep Medicine Reviews*, 51, 101278. <https://doi.org/10.1016/j.smrv.2020.101278> | Citations: 12; JIF: 11.6; CNCI: 1.6
- del Pozo-Cruz, B., Perales, F., Parker, P., Lonsdale, C., Noetel, M., Hesketh, K. D., & **Sanders, T.** (2019). Joint physical-activity/screen-time trajectories during early childhood: Socio-demographic predictors and consequences on health-related quality-of-life and socio-emotional outcomes. *International Journal of Behavioral Nutrition and Physical Activity*, 16(1), 55. <https://doi.org/10.1186/s12966-019-0816-3> | Citations: 12; JIF: 6.5; CNCI: 1.5
- Vella, S. A., Swann, C., Boydell, K. M., Eckermann, S., Fogarty, A., Hurley, D., Liddle, S. K., Lonsdale, C., **Sanders, T.**, Schweickle, M. J., Telenta, J., & Deane, F. P. (2019). Sports-based mental health promotion in Australia: Formative evaluation. *Psychology of Sport and Exercise*, 45, 101560. <https://doi.org/10.1016/j.psychsport.2019.101560> | Citations: 6; JIF: 4.8; CNCI: 1
- Hartwig, T. B., del Pozo-Cruz, B., White, R. L., **Sanders, T.**, Kirwan, M., Parker, P. D., Vasconcellos, D., Lee, J., Owen, K. B., Antczak, D., Lubans, D. R., & Lonsdale, C. (2019). A monitoring system to provide feedback on student physical activity during physical education lessons. *Scandinavian Journal of Medicine & Science in Sports*, 29(9), 1305–1312. <https://doi.org/10.1111/sms.13438> | Citations: 7; JIF: 4.2; CNCI: 1.2

Costigan, S. A., Lubans, D. R., Lonsdale, C., **Sanders, T.**, & del Pozo Cruz, B. (2019). Associations between physical activity intensity and well-being in adolescents. *Preventive Medicine*, 125, 55–61. <https://doi.org/10.1016/j.ypmed.2019.05.009> | Citations: 28; JIF: 4; CNCI: 4.9

Sanders, T., Parker, P. D., del Pozo-Cruz, B., Noetel, M., & Lonsdale, C. (2019). Type of screen time moderates effects on outcomes in 4013 children: Evidence from the Longitudinal Study of Australian Children. *International Journal of Behavioral Nutrition and Physical Activity*, 16(1), 1–10. | Citations: 29; JIF: 6.5; CNCI: 3.7

Vella, S. A., Swann, C., Batterham, M., Boydell, K. M., Eckermann, S., Fogarty, A., Hurley, D., Liddle, S. K., Lonsdale, C., Miller, A., Noetel, M., Okely, A. D., **Sanders, T.**, Telenta, J., & Deane, F. P. (2018). Ahead of the game protocol: A multi-component, community sport-based program targeting prevention, promotion and early intervention for mental health among adolescent males. *BMC Public Health*, 18(1), 390. <https://doi.org/10.1186/s12889-018-5319-7> | Citations: 19; JIF: 3.3; CNCI: 2.2

Stanaway, J. D., Afshin, A., Gakidou, E., Lim, S. S., Abate, D., Abate, K. H., Abbafati, C., Abbasi, N., Abbastabar, H., Abd-Allah, F., Abdela, J., Abdelalim, A., Abdollahpour, I., Abdulkader, R. S., Abebe, M., Abebe, Z., Abera, S. F., Abil, O. Z., Abraha, H. N., ... Murray, C. J. L. (2018). Global, regional, and national comparative risk assessment of 84 behavioural, environmental and occupational, and metabolic risks or clusters of risks for 195 countries and territories, 1990: A systematic analysis for the Global Burden of Disease Study 2017. *The Lancet*, 392(10159), 1923–1994. [https://doi.org/10.1016/S0140-6736\(18\)32225-6](https://doi.org/10.1016/S0140-6736(18)32225-6)

Nooyen, C. F. J., Del Pozo-Cruz, B., Nyberg, G., **Sanders, T.**, Galanti, M. R., & Forsell, Y. (2018). Are changes in occupational physical activity level compensated by changes in exercise behavior? *European Journal of Public Health*, 28(5), 940–943. <https://doi.org/10.1093/eurpub/cky007> | Citations: 12; JIF: 3.4; CNCI: 1.4

MacMillan, F., George, E., Feng, X., Merom, D., Bennie, A., Cook, A., **Sanders, T.**, Dwyer, G., Pang, B., Guagliano, J., Kolt, G., & Astell-Burt, T. (2018). Do Natural Experiments of Changes in Neighborhood Built Environment Impact Physical Activity and Diet? A Systematic Review. *International Journal of Environmental Research and Public Health*, 15(2), 217. <https://doi.org/10.3390/ijerph15020217> | Citations: 28; JIF: 3.4; CNCI: 1

Lonsdale, C., **Sanders, T.**, Cohen, K. E., Parker, P., Noetel, M., Hartwig, T., Vasconcellos, D., Kirwan, M., Morgan, P., Salmon, J., Moodie, M., McKay, H., Bennie, A., Plotnikoff, R., Cinelli, R. L., Greene, D., Peralta, L. R., Cliff, D. P., Kolt, G. S., ... Lubans, D. R. (2016). Scaling-up an efficacious school-based physical activity intervention: Study protocol for the “Internet-based Professional Learning to help teachers support Activity in Youth” (iPLAY) cluster randomized controlled trial and scale-up implementation evaluation. *BMC Public Health*, 16(1), 873. <https://doi.org/10.1186/s12889-016-3243-2> | Citations: 16; JIF: 3.3; CNCI: 1.2

Sanders, T., Feng, X., Fahey, P. P., Lonsdale, C., & Astell-Burt, T. (2015). The influence of neighbourhood green space on children’s physical activity and screen time: Findings from the longitudinal study of Australian children. *International Journal of Behavioral Nutrition and Physical Activity*, 12(1), 126. <https://doi.org/10.1186/s12966-015-0288-z> | Citations: 42; JIF: 6.5; CNCI: 2.2

Sanders, T., Feng, X., Fahey, P. P., Lonsdale, C., & Astell-Burt, T. (2015). Greener neighbourhoods, slimmer children? Evidence from 4423 participants aged 6 to 13 years in the Longitudinal Study of Australian children. *International Journal of Obesity*, 39(8), 1224–1229. <https://doi.org/10.1038/ijo.2015.69> | Citations: 37; JIF: 5.1; CNCI: 1.7

Sanders, T., Feng, X., Fahey, P. P., Lonsdale, C., & Astell-Burt, T. (2015). Green Space and Child Weight Status: Does Outcome Measurement Matter? Evidence from an Australian Longitudinal Study. *Journal of Obesity*, 2015, 1–8. <https://doi.org/10.1155/2015/194838>

Sanders, T., Cliff, D. P., & Lonsdale, C. (2014). Measuring Adolescent Boys’ Physical Activity: Bout Length and the Influence of Accelerometer Epoch Length. *PLoS ONE*, 9(3). <https://doi.org/10.1371/journal.pone.0092040> | Citations: 114; JIF: 3.2; CNCI: 6

Lonsdale, C., Rosenkranz, R. R., **Sanders, T.**, Peralta, L. R., Bennie, A., Jackson, B., Taylor, I. M., & Lubans, D. R. (2013). A cluster randomized controlled trial of strategies to increase adolescents’ physical activity and motivation in physical education: Results of the Motivating Active Learning in Physical Education (MALP) trial. *Preventive Medicine*, 57(5), 696–702. <https://doi.org/10.1016/j.ypmed.2013.09.003> | Citations: 52; JIF: 4; CNCI: 2.7

Rosenkranz, R. R., Lubans, D. R., Peralta, L. R., Bennie, A., **Sanders, T.**, & Lonsdale, C. (2012). A cluster-randomized controlled trial of strategies to increase adolescents’ physical activity and motivation during physical education

lessons: The Motivating Active Learning in Physical Education (MALP) trial. *BMC Public Health*, 12(1), 834. <https://doi.org/10.1186/1471-2458-12-834> | Citations: 22; JIF: 3.3; CNCI: 1

BOOK CHAPTERS

Parker, P., Guo, J., & **Sanders, T.** (2019). Socioeconomic Inequality and Student Outcomes in Australia. In L. Volante, S. V. Schnepf, J. Jerrim, & D. A. Klinger (Eds.), *Socioeconomic Inequality and Student Outcomes: Cross-National Trends, Policies, and Practices* (pp. 189–204). Springer Singapore. https://doi.org/10.1007/978-981-13-9863-6_11

Students

DOCTOR OF PHILOSOPHY

2016–2020 Jane Lee

Assistant Supervisor

2016–2021 Devan Antcazk

Assistant Supervisor

2019– Katrina Wilhite

Principal Supervisor

2020– Bridget Booker

Principal Supervisor

2021– Ella Tremaine

Co-supervisor

HONOURS

2019–2019 Bridget Booker

Principal Supervisor

Conference Presentations

(Presenting author presentations listed only)

Lonsdale, C., Lubans, D., Noetel, M., & **Sanders, T.** (2019). Scaling-up an Efficacious Comprehensive School-based Physical Activity Intervention: Development, Evaluation and Dissemination of the iPLAY Program. *Sports Medicine Australia*.

Sanders, T., Parker, P. D., Del Pozo-Cruz, B., Noetel, M., & Lonsdale, C. (2019). Content of Screen Time Moderates the Effects of Exposure on Physical Health, Psychological and Educational Outcomes in a Longitudinal Study of 4,013 Children. *International Society for Behavioral Nutrition and Physical Activity*.

Sanders, T., Lonsdale, C., & Del Pozo-Cruz, B. (2018). Sleep quality mediates the relationship between screen time and depression in adults: A cross-sectional study of the NHANES 2005–2006 cycle. *International Society for Behavioral Nutrition and Physical Activity*.

Sanders, T., Feng, X., Fahey, P. P., Lonsdale, C., & Astell-Burt, T. (2017). Neighbourhood Green Space and Children's Enjoyment of Physical Activity: Evidence from the Longitudinal Study of Australian Children. *SELF Conference*.

Sanders, T., Feng, X., Fahey, P. P., Lonsdale, C., & Astell-Burt, T. (2016). Does Physical Activity Explain the Relationship Between Green Space and Children's BMI? Mediation Analyses from the Longitudinal Study of Australian Children. *International Society for Physical Activity and Health*.

Sanders, T., Feng, X., Fahey, P. P., Lonsdale, C., & Astell-Burt, T. (2015). The Longitudinal Influence of Neighbourhood Green Space on Children's Physical Activity, Screen Time, and Body Mass Index. *International Society for Behavioral Nutrition and Physical Activity*.

Invited Talks

2018 **Australian Council for Health, Physical Education and Recreation.** Keynote Lecture. K-6 Physical Activity and Health Conference

2021 **ResBaz Sydney.** Keystory.

Selected Software

For a complete list of the software I have developed or contributed to, please see my Github page.

R PACKAGES

cloudstoR

[CRAN Link](#)

PROVIDES PROGRAMMATIC ACCESS TO AARNET'S CLOUDSTOR CLOUD STORAGE SERVICE

- Author and Maintainer.
- Available on CRAN - approx 400 downloads per month.

sleepIPD

[GitHub Link](#)

A STANDARDISED METHOD FOR REPROCESSING ACCELEROMETRY DATA FOR A VERY LARGE SLEEP AND PHYSICAL ACTIVITY

POOLED ANALYSIS

- Author and Maintainer.
- Used by teams all over the world to reprocess data exactly as required for our study.

gt3x2csv

[GitHub Link](#)

CONVERT ACTIGRAPH GT3X FILES TO CSV, IN A FRACTION OF THE TIME

- Author and Maintainer.
- Approximately 7x faster than using the proprietary software.

PYTHON PACKAGES

faceblurring

[GitHub Link](#)

AN IMPLEMENTATION OF A FACE DETECTION MODEL USED TO PROTECT PRIVACY IN AN ARC PROJECT

- Author and Maintainer.
- Working version available, still in development.

Service

University Service

INSTITUTIONAL SERVICE

- Faculty of Health Sciences Research Methods Consultancy
- IPPE Publications Committee

Guest Journal Reviewer

PROVIDING PEER-REVIEW SUPPORT FOR JOURNALS

- BMC Public Health
- BMJ Open
- Computers in Human Behavior
- Health Education Journal
- International Journal of Environmental Research and Public Health
- Journal of Adolescent Health
- Journal of Applied Sport Psychology
- Journal of Science and Medicine in Sport
- Journal of Sport Sciences
- Learning and Individual Differences
- Pediatric Obesity
- PLoS One
- Psychology of Sport & Exercise
- Scientific Reviews

Invited Grant Reviewer

PROVIDING PEER-REVIEW SUPPORT FOR GRANT AGENCIES

- Australian Research Council (ARC)
- National Health and Medical Research Council (NHMRC)
- The Netherlands Organisation for Scientific Research (NWO)

Self-Development

- 2012 **Multilevel Modeling Master Class.** University of Western Sydney
- 2013 **Social Epidemiology Short Course.** University of Otago, New Zealand
- 2016 **Physical Activity and Public Health Postdoctoral Research Course.** University of South Carolina, USA
- 2016 **Clinical Trials Master Class.** NHMRC Trials Center, University of Sydney
- 2022 **Masters of Data Science (Applied).** University of Adelaide