Tolulope Timothy Sajobi, PhD

Department of Community Health Sciences, University of Calgary, 3280 Hospital Drive NW Calgary T2N 4Z6
Canada. Tel: +1(403)2108586; Email: ttsajobi@ucalgary.ca

Education

09/2008 – 03/2012   Doctor of Philosophy (Biostatistics)
University of Saskatchewan, Saskatoon, Canada

01/2007 – 04/2008   Master of Science (Mathematical Statistics)
University of Windsor, Windsor, Canada

01/1999 – 12/2004   Bachelor of Science (*First Class Honors*) Statistics
Obafemi Awolowo University, Ile-Ife, Nigeria

Research Interests

- Statistical methods for behavioural and patient-reported outcomes
- Design and analysis of clinical trials
- Methodologies for clinical decision support systems

Academic Appointments

2013 – Present   Professor of Biostatistics (Tenured), University of Calgary, Calgary, Canada
2018 – Present   Adjunct Professor, University of Manitoba, Winnipeg, Canada

Awards & Honors

2022   O'Brien Institute for Public Health Mid-Career Research Leader Award ($2,000)
2019   International Society for Quality of Life Research, Outstanding Article of the Year Award, Third Place (with Dr. Richard Sawatzky and others), The use of latent variable mixture models to identify invariant items in test construction
2018   Avenue Magazine's Calgary Top 40 under 40 award
2018   University of Calgary GREATsupervisor Award

Selected Research Funding

Total (Life time) Funding as PI: $6.7 million; Total (life time) funding as co-Investigator: $30 million

2023 – 2027   Characterizing patient preferences and personalizing risk information for optimal patient-centered management of coronary artery disease
<u>Funding Agencies:</u> Canadian Institutes of Health Research & Alberta Innovates
Amount: $1,019,725   Role: Principal Investigator
2020 – 2023   Unsupervised machine learning algorithms for patient-reported outcomes measures
<u>Funding Agency</u>: Canadian Institutes of Health Research
Amount: $367,000   Role: Principal Investigator
2020 – 2023   Unsupervised machine learning algorithms for patient-reported outcomes measures
<u>Funding Agency</u>: Canadian Institutes of Health Research
Amount: $367,000   Role: Principal Investigator
2020 – 2021   An electronic system for individualized monitoring of patient reported outcomes for value and effectiveness in cardiovascular care (IMPROVE CV Care)
<u>Funding Agency</u>: Canadian Institutes of Health Research
Amount: $100,000   Role: Principal Investigator
2018 – 2021   Towards precision cardiovascular medicine: integration of patient-reported outcomes in prognostic tools development for the management of acute coronary syndrome

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Selected Peer Reviewed Publications

Total peer-reviewed publications: 170 (125 in the last 6 years); H-index: 41; Trainee underlined

1. Sawatzky R, **Sajobi TT,** Russell L, Awosoga OA, Ademola A, Böhnke JR, Lawal O, Brobbey A, Lix LM, Anota A, Sebille V, Sprangers MAG, Verdam MGE; Response Shift – in Sync Working Group. Response shift results of quantitative research using patient-reported outcome measures: a descriptive systematic review. Quality of Life Research 2023; Epub ahead of print.
2. **Sajobi TT**, Ayilara OF, Dhuga K, Ferro MA. Response shift in parent-reported psychopathology in children with chronic physical illness. Quality of Life Research 2023; 32(11): 3099-3108.
3. Ademola A, Thabane L, Adekanye J, Okikiolu A, Babatunde S, Almekhlafi MA, Menon BK, Hill MD, Hildebrand KA, **Sajobi TT**. The credibility of subgroup analyses reported in stroke trials is low: A systematic review. Int J Stroke. 2023 May 2:17474930231168517.
4. Wang M, Chekouo T, Ismail Z, Forkert ND, Hogan DB, Ganesh A, Camicioli R, Seitz D, Borrie MJ, Hsiung GR, Masellis M, Moorhouse P, Tartaglia C, Smith EE, **Sajobi TT**; Alzheimer's Disease Neuroimaging Initiative. Elicited clinician knowledge did not improve dementia risk prediction in individuals with mild cognitive impairment. Journal of Clinical Epidemiology 2023;158:111-118.
5. Ayilara F, **Sajobi TT**, Barlcay R, Jozani MJ, Lix LM. Estimating longitudinal changes in latent variable means: a comparison of non-negative matrix factorization and other item non-response methods. Journal of Statistical Computation and Simulation 2022; 93(2): 211-230.
6. Brobbey A, Wiebe S, Nettel-Aguirre A, Josephson CB, Williamson T, Lix LM, **Sajobi TT**. Repeated measures discriminant analysis using multivariate generalized estimating equations. Statistical Methods in Medical Research 2022; 31(4): 646-657.
7. **Sajobi TT**, Lix LM, Russell L, Schulz D, Liu J, Zumbo BD, Sawatzky R. Accuracy of mixture item response theory models for identifying sample heterogeneity in patient-reported outcomes: a simulation study. Quality of Life Research 2022; 31(12): 3423-3432.
8. Lawal OA, Awosoga O, Santana M, James MT, Wilton SB, Norris CM, Lix LM, **Sajobi TT**. Measurement invariance of the Seattle Angina Questionnaire in coronary artery disease. Quality of Life Research 2021; 31(4): 1223-1236.
9. **Sajobi TT**, Josephson CB, Sawatzky R, Wang M, Lawal O, Patten SB, Lix LM, Wiebe S. Quality of Life in Epilepsy: Same questions, but different meaning to different people. Epilepsia 2021; 62(9): 2094-2102.
10. Josephson CB, Engbers JDT, Wang M, Perera K, Roach P, **Sajobi TT**, Wiebe S. Psychosocial profiles and their predictors in epilepsy using patient-reported outcomes and machine learning. Epilepsia 2020; 61(6): 1201-1210.
11. Sebille V, Lix LM, Ayilara OF, **Sajobi TT**, Janssens ACJW, Sawatzky R, Sprangers MAG, et al. Critical examination of current response shift methods and proposal for advancing new methods. Quality of Life Research 2021; [Epub ahead of print].
12. Yadegari I, Bohm E, Ayilara OF, Zhang L, Sawatzky R, **Sajobi TT**, Lix LM. Differential Item Functioning of the SF-12 in a Population-Based Regional Joint Replacement Registry. Health and Quality of Life Outcomes 2019; 17(114).
13. Ayilara OF, Zhang L, **Sajobi TT**, Sawatzky R, Bohm E., Lix LM. Impact of Missing Data on Bias and Precision when Estimating Change in Patient-Reported Outcomes from a Clinical Registry. Health and Quality of Life Outcomes, 17(106), 1-9.
14. **Sajobi TT**, Wang M, Awosoga O, Santana M, Southern D, Liang Z, Galbraith DP, Wilton S, Quan H, Graham M, James M, Ghali W, Knudtson M, Norris C. Trajectories of health-related quality of life in coronary artery disease. Circulation: Cardiovascular Quality and Outcomes. 2018 Mar;11(3): e003661.

Selected Invited Presentations

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1. It takes two to tango: Opportunities, challenges, and strategies for managing academic-industry collaboration. Invited panel discussion at the Joint Statistical Meeting of the American Statistical Association, Toronto, August 2023.
2. Statistical challenges in analyzing patient-reported outcomes. Invited Discussant at the Patient-Reported Outcomes Academic Research Consortium (ARC) Virtual Workshop, by the Heart Valve Collaboratory, United States. November 2022.
3. Tree-based structural equation modeling for evaluating measurement invariance in patient-reported outcomes measures. Invited plenary at the annual conference of the International Society for Quality of Life, Prague, Czech. October 2022.
4. A meta-analysis of response shift in patient-reported outcomes. Invited plenary at the annual conference of the International Society for Quality of Life. October 2020.
5. Registry-based trials: A pragmatic paradigm for testing real-world effectiveness of interventions. Statistics-Biostatistics Seminar Series, University of Saskatchewan, Saskatoon. January 2020.
6. Latent class item response theory models: A promising approach for characterizing heterogeneity in patient-reported outcomes. Research Institute for Primary Care and Health Sciences, Keele University, United Kingdom. July 2019.

Professional Workshops Delivered

2023   Psychometric evaluation of patient-reported outcome measures
            Workshop delivered for The Economist Group, United Kingdom, June 2023
            # Participants: 10

2022   Unsupervised latent variable models for patient-reported outcomes
            Conference Workshop for the International Society for Quality of Life
            Co-instructor with Lisa Lix (University of Manitoba) & Yuelin Li (Memorial Sloane Keterring Center)
            # Participants: 15

2019   Theoretical and methodological foundations of latent variable measurement invariance.
            Conference Workshop of the International Society for Quality of Life
            Co-instructor with L. Lix, B.D. Zumbo, R. Sawatzky)
            # Participants: 20

2017   Introductory Biostatistics Workshop
            Postgraduate Medical Education, Cumming School of Medicine
            Duration: 4 sessions with 3 contact hours per session
            Participants: 24 Resident physicians

2016   Response shift: a review of the literature
            Webinar (1.5 hours) delivered for the International Society for Quality of Life Research
            Co-instructor with Rick Sawatzky (Trinity Western University) & Ronak Brahmbatt (University of Toronto)
            Participants: 37 participants mostly from academia and industry

2013   Skewed data distributions: the issues, the options, and the solutions.
            Workshop delivered for the Institute of Public Health Methodology Club, University of Calgary, Calgary
            # Participants: 12 research analysts and graduate students
            Instructor/Coordinator (10 sessions, 1 hour per week)

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2013   Latent variable models for patient-reported outcomes.
Half-day workshop delivered at the 2013 Canadian Society for Epidemiology and Biostatistics Biennial Conference, St Johns Newfoundland
Participants: 22 - mostly graduate students, postdoctoral fellows, and academics
Co-instructor with Lisa Lix (University of Manitoba)

Trainee Supervision
Total # HQPs supervised till date: 45
- Gabriel Afriye (PhD Biostatistics, 2021 – Present)
- Ayoola Ademola (PhD Biostatistics, 2018 – Present)
- Joel Adekanye (PhD Epidemiology, 2019 – Present)
- Mili Roy (PhD Biostatistics, 2022 – Present)

Administrative Leadership
2022 –   Academic Director (EDI Data Strategy & Research), Vice President Research Office, University of Calgary
2022 –   Member, Board of Directors, Canadian Society for Epidemiology & Biostatistics
2021 –   Member, Board of Directors, International Society for Quality of Life
2016 – 2019   Co-chair, Response Shift Special Interest Group of the International Society for Quality of Life
2013 – 2021   Graduate Program Chair, Biostatistics Specialization, Department of Community Health Sciences, University of Calgary