

Handling missing data, selection bias, and measurement error in observational studies Choi, J.

Citation

Choi, J. (2023, June 22). *Handling missing data, selection bias, and measurement error in observational studies*. Retrieved from https://hdl.handle.net/1887/3626684

Version: Publisher's Version

Licence agreement concerning inclusion of doctoral

License: thesis in the Institutional Repository of the University

of Leiden

Downloaded from: https://hdl.handle.net/1887/3626684

Note: To cite this publication please use the final published version (if applicable).

Publications

Liu, L. Choi, J., Musoro, J.Z., Sauerbrei, W., Amdal, C.D., Alanya, A., Barbachano, Y., Cappelleri, J.C., Falk, R.S., Fiero, M.H., Regnault, Reijneveld, J.C., Sandin, R., Thomassen, Roychoudhury, S., Goetghebeur, E., le Cessie, S.; on behalf of work package 3 of the Setting International Standards in Analyzing Patient-Reported Outcomes and Quality of Life Endpoints Data Consortium (SISAQOL). Single-arm studies involving patient-reported outcome data in oncology: a literature review on current practice. *Lancet Oncology.* (2023). 24(5). doi:10.1016/S1470-2045(23)00110-9

Choi, J., Dekkers, O.M., le Cessie, S. Tying research question and analytical strategy when variables are affected by medication use. *Pharmacoepidemiol Drug Saf.* (2023). 32(6): 661-670. doi:10.1002/pds.5599

Choi, J., Dekkers, O.M., le Cessie, S. How measurements affected by medication use are reported and handled in observational research: A literature review. *Pharmacoepidemiol Drug Saf.* (2022). 31(7): 739-748. doi:10.1002/pds.5437

Choi, J., Dekkers, O.M. & le Cessie, S. Authors' Reply: A comparison of different methods to handle missing data in the context of propensity score analysis. *Eur J Epidemiol*. (2020). 35, 89–91. doi: 0.1007/s10654-019-00553-y

van der Spoel, E., Choi, J., Roelfsema, F., le Cessie, S., van Heemst, D., Dekkers, O.M. Comparing Methods for Measurement Error Detection in Serial 24-h Hormonal Data. *Journal of Biological Rhythms*. (2019). 34(4): 347-363. doi:10.1177/0748730419850917

Choi, J., Dekkers, O.M. & le Cessie, S. A comparison of different methods to handle missing data in the context of propensity score analysis. *Eur J Epidemiol.* (2019). 34, 23–36. doi:10.1007/s10654-018-0447-z

To be submitted

Choi, J., de Mutsert, R., van der Velde, J.H.P.M., van Eekelen, E., Dekkers, O.M., le Cessie, S. Estimating medication effects using routinely collected electronic health records: changes in blood glucose and HbA1c levels after glucose-lowering medication prescription in the Netherlands Epidemiology of Obesity study participants

Choi, J., Dekkers, O.M., le Cessie, S. A comparison of different methods for handling measurements affected by medication use

A

Curriculum Vitae

Jungyeon Choi was born in Seoul, South Korea, on the 14th of September 1990. She obtained a bachelor in Economics and Psychology from Sungkyunkwan University in 2014. During her bachelor's program, she did a semester at Leiden University as an exchange student. She pursued a master's degree in Methodology and Statistics in Psychology at Leiden University. She worked on her master's thesis at the Nederlands Forensisch Instituut. After obtaining her master's degree, she started a Ph.D. under the supervision of Prof. dr. S. le Cessie and Prof. dr. O.M. Dekkers, at the department of Clinical Epidemiology, LUMC. Her research addressed commonly encountered biases in observational studies and compared available statistical methods. While finalizing her Ph.D., she worked as a researcher for a consortium, 'Setting International Standards for Analyzing Quality of Life (SISAQOL)'. Afterward, she worked as a data scientist at Julius Clinical, Zeist, contributing to a VAC4EU project. From May 2023, Jungyeon Choi started as a biostatistician in the department of Biostatistics and Data Science of the Julius Center, UMC Utrecht.

Acknowledgment

Finalizing this thesis would not have been possible without the countless help and support from colleagues, friends, and family. With this page, I would like to take the opportunity to express my gratitude.

Prof. le Cessie and Prof. Dekkers, Saskia and Olaf, thank you for giving me an opportunity to pursue a PhD under your guidance. You were patient and understanding, and I could learn both statistical and clinical perspectives in every meeting. It was incredibly fortunate to have you both as my supervisors.

Colleagues from the department of Clinical Epidemiology at the LUMC, thank you for all the chats, lunches, borrels, uitjes, and coffee & cookies hours. I felt comfortable and included in the department.

Mona Shahab and Amir Zamanipoor, my time at the department could not have been as fun without you two. I cherish all our past and future hangouts, dramas, and hugs. You are my biggest findings.

Ruifang Li, I admire your passion for research, but what amazes me even more is your humor and genuineness. Thank you for always being kind and caring.

Ajda Bedene and Vid Prijatelj, thank you for feeding and pampering me beyond count. I am excited to see us growing together in our friendship and professional life.

Linda Nab and Kim Luijken, thank you for all our fun times at the conferences. I am looking forward to our reunion in the near future.

Sebastiaan Bonne, thank you for making hard times lighter with gossip, jokes, sarcasm, and animal videos.

Tahani Alsheri, you always welcomed me whenever I knocked on your office door. Thank you for all our relaxing conversations and an endless supply of chocolate.

Denise Ginkel-Zielinski, thank you for your cupcakes and laughter - and especially for your love and care for those whom the Netherlands is not yet home.

Bunga Pratiwi, how lucky I was to be your classmate eight years ago! Coming back from talking to you always makes me feel warm and understood. Thank you very much.

Limin Liu, it was so natural and easy to be friends with you. You made working from home during the pandemic bearable_for me. Thank you so much.

A

Colleagues at Julius Clinical Data Science team, working with such a smart, fun, kind, and supportive team was a privilege. You raised the bar for future colleagues very high.

Yujin Cho, Sunyoung Hwang, Jinah Kim, and Doyoun Lee, despite being in the Netherlands, you never made me feel distant from you. Thank you for allowing me to be myself around you guys for the last 14 years.

All my small friends, thank you for giving me chances to see life from different perspectives and never judging me on who I am.

Family van Wijk, thank you for making the Netherlands home for me. Knowing that I have family here is extremely special.

My beloved Choi & Woo family, knowing that I forever have a place to go back encourages me to step out to the unknown. Mom and Dad, I never once doubted your trust in me, which has been and will be the biggest gift in my life. Thank you for your unwavering support, curiosity, and enthusiasm in every step I made.

Willem van Wijk, my partner in crime, best friend, and biggest fan, thank you for all the singing and dancing in every moment we shared. I cannot think of the counterfactual of my life without you.