

# Ivan Jacob Agaloos Pesigan

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## References

- Adolf, J. K., Loossens, T., Tuerlinckx, F., & Ceulemans, E. (2021). Optimal sampling rates for reliable continuous-time first-order autoregressive and vector autoregressive modeling. *Psychological Methods*, 26(6), 701–718. <https://doi.org/10.1037/met0000398>
- Ash, G. I., Gueorguieva, R., Barnett, N. P., Wang, W., Robledo, D. S., DeMartini, K. S., Pittman, B., Redeker, N. S., O'Malley, S. S., & Fucito, L. M. (2022). Sensitivity, specificity, and tolerability of the BACTrack Skyn compared to other alcohol monitoring approaches among young adults in a field-based setting. *Alcoholism: Clinical and Experimental Research*, 46(5), 783–796. <https://doi.org/10.1111/acer.14804>
- Baek, E., Luo, W., & Lam, K. H. (2023). Meta-analysis of single-case experimental design using multilevel modeling. *Behavior Modification*, 47(6), 1546–1573. <https://doi.org/10.1177/01454455221144034>
- Bakk, Z., & Kuha, J. (2020). Relating latent class membership to external variables: An overview. *British Journal of Mathematical and Statistical Psychology*, 74(2), 340–362. <https://doi.org/10.1111/bmsp.12227>
- Chen, M., & Pustejovsky, J. E. (2024). Multilevel meta-analysis of single-case experimental designs using robust variance estimation. *Psychological Methods*, 29(3), 537–560. <https://doi.org/10.1037/met0000510>
- Cheung, M. W.-L. (2021). Synthesizing indirect effects in mediation models with meta-analytic methods. *Alcohol and Alcoholism*, 57(1), 5–15. <https://doi.org/10.1093/alcalc/agab044>
- Cheung, S. F., Cheung, S.-H., Lau, E. Y. Y., Hui, C. H., & Vong, W. N. (2022). Improving an old way to measure moderation effect in standardized units. *Health Psychology*, 41(7), 502–505. <https://doi.org/10.1037/hea0001188>

- Cheung, S. F., & Pesigan, I. J. A. (2023a). FINDOUT: Using either SPSS commands or graphical user interface to identify influential cases in structural equation modeling in AMOS. *Multivariate Behavioral Research*, 58(5), 964–968. <https://doi.org/10.1080/00273171.2022.2148089>
- Cheung, S. F., & Pesigan, I. J. A. (2023b). semlbci: An R package for forming likelihood-based confidence intervals for parameter estimates, correlations, indirect effects, and other derived parameters. *Structural Equation Modeling: A Multidisciplinary Journal*, 30(6), 985–999. <https://doi.org/10.1080/10705511.2023.2183860>
- Cheung, S. F., Pesigan, I. J. A., & Vong, W. N. (2023). DIY bootstrapping: Getting the non-parametric bootstrap confidence interval in SPSS for any statistics or function of statistics (when this bootstrapping is appropriate). *Behavior Research Methods*, 55(2), 474–490. <https://doi.org/10.3758/s13428-022-01808-5>
- Courtney, J. B., & Russell, M. A. (2021). Testing affect regulation models of drinking prior to and after drinking initiation using ecological momentary assessment. *Psychology of Addictive Behaviors*, 35(5), 597–608. <https://doi.org/10.1037/adb0000763>
- Declercq, L., Jamshidi, L., Fernández Castilla, B., Moeyaert, M., Beretvas, S. N., Ferron, J. M., & Van den Noortgate, W. (2020). Multilevel meta-analysis of individual participant data of single-case experimental designs: One-stage versus two-stage methods. *Multivariate Behavioral Research*, 57(2-3), 298–317. <https://doi.org/10.1080/00273171.2020.1822148>
- DeMartini, K. S., Gueorguieva, R., Taylor, J. R., Krishnan-Sarin, S., Pearson, G., Krystal, J. H., & O'Malley, S. S. (2022). Dynamic structural equation modeling of the relationship between alcohol habit and drinking variability. *Drug and Alcohol Dependence*, 233, 109202. <https://doi.org/10.1016/j.drugalcdep.2021.109202>
- Didier, N. A., King, A. C., Polley, E. C., & Fridberg, D. J. (2023). Signal processing and machine learning with transdermal alcohol concentration to predict natural environment alcohol consumption. *Experimental and Clinical Psychopharmacology*, 32(2), 245–254. <https://doi.org/10.1037/pha0000683>

- Dora, J., Piccirillo, M., Foster, K. T., Arbeau, K., Armeli, S., Auriacombe, M., Bartholow, B., Beltz, A. M., Blumenstock, S. M., Bold, K., Bonar, E. E., Braitman, A., Carpenter, R. W., Creswell, K. G., De Hart, T., Dvorak, R. D., Emery, N., Enkema, M., Fairbairn, C. E., . . . King, K. M. (2023). The daily association between affect and alcohol use: A meta-analysis of individual participant data. *Psychological Bulletin*, *149*(1-2), 1–24. <https://doi.org/10.1037/bul0000387>
- Driver, C. C. (2025). Inference with cross-lagged effects—problems in time. *Psychological Methods*, *30*(1), 174–202. <https://doi.org/10.1037/met0000665>
- Fisher, Z. F., Chow, S.-M., Molenaar, P. C. M., Fredrickson, B. L., Pipiras, V., & Gates, K. M. (2020). A square-root second-order extended Kalman filtering approach for estimating smoothly time-varying parameters. *Multivariate Behavioral Research*, *57*(1), 134–152. <https://doi.org/10.1080/00273171.2020.1815513>
- Fridberg, D. J., Wang, Y., & Porges, E. (2022). Examining features of transdermal alcohol biosensor readings: A promising approach with implications for research and intervention. *Alcoholism: Clinical and Experimental Research*, *46*(4), 514–516. <https://doi.org/10.1111/acer.14794>
- Georgeson, A. R., Alvarez-Bartolo, D., & MacKinnon, D. P. (2025). A sensitivity analysis for temporal bias in cross-sectional mediation. *Psychological Methods*, *30*(6), 1326–1344. <https://doi.org/10.1037/met0000628>
- Gunn, R. L., Steingrimsson, J. A., Merrill, J. E., Souza, T., & Barnett, N. (2021). Characterising patterns of alcohol use among heavy drinkers: A cluster analysis utilising alcohol biosensor data. *Drug and Alcohol Review*, *40*(7), 1155–1164. <https://doi.org/10.1111/dar.13306>
- Hamaker, E. L., & Muthén, B. (2020). The fixed versus random effects debate and how it relates to centering in multilevel modeling. *Psychological Methods*, *25*(3), 365–379. <https://doi.org/10.1037/met0000239>
- Hecht, M., & Zitzmann, S. (2020a). A computationally more efficient Bayesian approach for estimating continuous-time models. *Structural Equation Modeling: A Multidisciplinary Journal*, *27*(6), 829–840. <https://doi.org/10.1080/10705511.2020.1719107>

- Hecht, M., & Zitzmann, S. (2020b). Sample size recommendations for continuous-time models: Compensating shorter time series with larger numbers of persons and vice versa. *Structural Equation Modeling: A Multidisciplinary Journal*, 28(2), 229–236. <https://doi.org/10.1080/10705511.2020.1779069>
- Hecht, M., & Zitzmann, S. (2021). Exploring the unfolding of dynamic effects with continuous-time models: Recommendations concerning statistical power to detect peak cross-lagged effects. *Structural Equation Modeling: A Multidisciplinary Journal*, 28(6), 894–902. <https://doi.org/10.1080/10705511.2021.1914627>
- Kuiper, R. M., & Ryan, O. (2020). Meta-analysis of lagged regression models: A continuous-time approach. *Structural Equation Modeling: A Multidisciplinary Journal*, 27(3), 396–413. <https://doi.org/10.1080/10705511.2019.1652613>
- Lee, S. A. W., & Gates, K. M. (2023). From the individual to the group: Using idiographic analyses and two-stage random effects meta-analysis to obtain population level inferences for within-person processes. *Multivariate Behavioral Research*, 59(6), 1220–1239. <https://doi.org/10.1080/00273171.2023.2229310>
- Li, Y., Oravecz, Z., Ji, L., & Chow, S.-M. (2024). Multiple imputation with factor scores: A practical approach for handling simultaneous missingness across items in longitudinal designs. *Multivariate Behavioral Research*, 60(1), 61–89. <https://doi.org/10.1080/00273171.2024.2371816>
- Li, Y., Oravecz, Z., Zhou, S., Bodovski, Y., Barnett, I. J., Chi, G., Zhou, Y., Friedman, N. P., Vrieze, S. I., & Chow, S.-M. (2022). Bayesian forecasting with a regime-switching zero-inflated multilevel poisson regression model: An application to adolescent alcohol use with spatial covariates. *Psychometrika*, 87(2), 376–402. <https://doi.org/10.1007/s11336-021-09831-9>
- Li, Y., Wood, J., Ji, L., Chow, S.-M., & Oravecz, Z. (2021). Fitting multilevel vector autoregressive models in Stan, JAGS, and Mplus. *Structural Equation Modeling: A Multidisciplinary Journal*, 29(3), 452–475. <https://doi.org/10.1080/10705511.2021.1911657>
- Lohmann, J. F., Zitzmann, S., Voelkle, M. C., & Hecht, M. (2022). A primer on continuous-time modeling in educational research: An exemplary application of a continuous-time latent

- curve model with structured residuals (CT-LCM-SR) to PISA data. *Large-scale Assessments in Education*, 10(1). <https://doi.org/10.1186/s40536-022-00126-8>
- Loossens, T., Mestdagh, M., Dejonckheere, E., Kuppens, P., Tuerlinckx, F., & Verdonck, S. (2020). The Affective Ising Model: A computational account of human affect dynamics (J. Grilli, Ed.). *PLOS Computational Biology*, 16(5), e1007860. <https://doi.org/10.1371/journal.pcbi.1007860>
- Loossens, T., Tuerlinckx, F., & Verdonck, S. (2021). A comparison of continuous and discrete time modeling of affective processes in terms of predictive accuracy. *Scientific Reports*, 11(1). <https://doi.org/10.1038/s41598-021-85320-4>
- Manthey, J., Hassan, S. A., Carr, S., Kilian, C., Kuitunen-Paul, S., & Rehm, J. (2021). What are the economic costs to society attributable to alcohol use? a systematic review and modelling study. *Pharmacoeconomics*, 39(7), 809–822. <https://doi.org/10.1007/s40273-021-01031-8>
- McKendrick, G., & Graziane, N. M. (2020). Drug-induced conditioned place preference and its practical use in substance use disorder research. *Frontiers in Behavioral Neuroscience*, 14. <https://doi.org/10.3389/fnbeh.2020.582147>
- McNeish, D., & Hamaker, E. L. (2020). A primer on two-level dynamic structural equation models for intensive longitudinal data in Mplus. *Psychological Methods*, 25(5), 610–635. <https://doi.org/10.1037/met0000250>
- McNeish, D., & MacKinnon, D. P. (2025). Intensive longitudinal mediation in Mplus. *Psychological Methods*, 30(2), 393–415. <https://doi.org/10.1037/met0000536>
- Mulder, J. D. (2022). Power analysis for the random intercept cross-lagged panel model using the powRICLPM R-package. *Structural Equation Modeling: A Multidisciplinary Journal*, 30(4), 645–658. <https://doi.org/10.1080/10705511.2022.2122467>
- Mulder, J. D., & Hamaker, E. L. (2020). Three extensions of the random intercept cross-lagged panel model. *Structural Equation Modeling: A Multidisciplinary Journal*, 28(4), 638–648. <https://doi.org/10.1080/10705511.2020.1784738>
- Muthén, B. O., & Asparouhov, T. (2022). Latent transition analysis with random intercepts (RI-LTA). *Psychological Methods*, 27(1), 1–16. <https://doi.org/10.1037/met0000370>

- Norman, T., Peacock, A., Ferguson, S. G., Kuntsche, E., & Bruno, R. (2020). Combining transdermal and breath alcohol assessments, real-time drink logs and retrospective self-reports to measure alcohol consumption and intoxication across a multi-day music festival. *Drug and Alcohol Review*, 40(7), 1112–1121. <https://doi.org/10.1111/dar.13215>
- Nüst, D., Eddelbuettel, D., Bennett, D., Cannoodt, R., Clark, D., Daróczy, G., Edmondson, M., Fay, C., Hughes, E., Kjeldgaard, L., Lopp, S., Marwick, B., Nolis, H., Nolis, J., Ooi, H., Ram, K., Ross, N., Shepherd, L., Sólymos, P., . . . Xiao, N. (2020). The Rockerverse: Packages and applications for containerisation with R. *The R Journal*, 12(1), 437. <https://doi.org/10.32614/rj-2020-007>
- Oh, H., Hunter, M. D., & Chow, S.-M. (2025). Measurement model misspecification in dynamic structural equation models: Power, reliability, and other considerations. *Structural Equation Modeling: A Multidisciplinary Journal*, 32(3), 511–528. <https://doi.org/10.1080/10705511.2025.2452884>
- Orth, U., Clark, D. A., Donnellan, M. B., & Robins, R. W. (2021). Testing prospective effects in longitudinal research: Comparing seven competing cross-lagged models. *Journal of Personality and Social Psychology*, 120(4), 1013–1034. <https://doi.org/10.1037/pspp0000358>
- Orzek, J. H., & Voelkle, M. C. (2023). Regularized continuous time structural equation models: A network perspective. *Psychological Methods*, 28(6), 1286–1320. <https://doi.org/10.1037/met0000550>
- Ou, L., Hunter, M. D., Lu, Z., Stifter, C. A., & Chow, S. (2023). Estimation of nonlinear mixed-effects continuous-time models using the continuous-discrete extended Kalman filter. *British Journal of Mathematical and Statistical Psychology*, 76(3), 462–490. <https://doi.org/10.1111/bmsp.12318>
- Park, J. J., Chow, S.-M., Epskamp, S., & Molenaar, P. C. M. (2024). Subgrouping with chain graphical VAR models. *Multivariate Behavioral Research*, 59(3), 543–565. <https://doi.org/10.1080/00273171.2023.2289058>

- Park, J. J., Chow, S.-M., Fisher, Z. F., & Molenaar, P. C. M. (2020). Affect and personality: Ramifications of modeling (non-)directionality in dynamic network models. *European Journal of Psychological Assessment*, 36(6), 1009–1023. <https://doi.org/10.1027/1015-5759/a000612>
- Park, J. J., Fisher, Z., Chow, S.-M., & Molenaar, P. C. M. (2023). On subgrouping continuous processes in discrete time. *Multivariate Behavioral Research*, 58(1), 154–155. <https://doi.org/10.1080/00273171.2022.2160957>
- Park, J. J., Fisher, Z. F., Chow, S.-M., & Molenaar, P. C. M. (2023). Evaluating discrete time methods for subgrouping continuous processes. *Multivariate Behavioral Research*, 59(6), 1240–1252. <https://doi.org/10.1080/00273171.2023.2235685>
- Park, J. J., Fisher, Z. F., Hunter, M. D., Shenk, C., Russell, M., Molenaar, P. C. M., & Chow, S.-M. (2025). Unsupervised model construction in continuous-time. *Structural Equation Modeling: A Multidisciplinary Journal*, 32(3), 377–399. <https://doi.org/10.1080/10705511.2024.2429544>
- Pesigan, I. J. A., & Cheung, S. F. (2020). SEM-based methods to form confidence intervals for indirect effect: Still applicable given nonnormality, under certain conditions. *Frontiers in Psychology*, 11. <https://doi.org/10.3389/fpsyg.2020.571928>
- Pesigan, I. J. A., & Cheung, S. F. (2024). Monte Carlo confidence intervals for the indirect effect with missing data. *Behavior Research Methods*, 56(3), 1678–1696. <https://doi.org/10.3758/s13428-023-02114-4>
- Pesigan, I. J. A., Cheung, S. F., Wu, H., Chang, F., & Leung, S. O. (2025). How plausible is my model? Assessing model plausibility of structural equation models using Bayesian posterior probabilities (BPP). *Behavior Research Methods*.
- Pesigan, I. J. A., Russell, M. A., & Chow, S.-M. (2025a). Common and unique latent transition analysis (CULTA) as a way to examine the trait-state dynamics of alcohol intoxication. *Psychology of Addictive Behaviors*, 39(8), 743–762. <https://doi.org/10.1037/adb0001106>
- Pesigan, I. J. A., Russell, M. A., & Chow, S.-M. (2025b). Inferences and effect sizes for direct, indirect, and total effects in continuous-time mediation models. *Psychological Methods*. <https://doi.org/10.1037/met0000779>

- Pesigan, I. J. A., Sun, R. W., & Cheung, S. F. (2023). betaDelta and betaSandwich: Confidence intervals for standardized regression coefficients in R. *Multivariate Behavioral Research*, 58(6), 1183–1186. <https://doi.org/10.1080/00273171.2023.2201277>
- Ray, L. A., Du, H., Grodin, E., Bujarski, S., Meredith, L., Ho, D., Nieto, S., & Wassum, K. (2020). Capturing habitualness of drinking and smoking behavior in humans. *Drug and Alcohol Dependence*, 207, 107738. <https://doi.org/10.1016/j.drugalcdep.2019.107738>
- Rhemtulla, M., van Bork, R., & Borsboom, D. (2020). Worse than measurement error: Consequences of inappropriate latent variable measurement models. *Psychological Methods*, 25(1), 30–45. <https://doi.org/10.1037/met0000220>
- Richards, V. L., Barnett, N. P., Cook, R. L., Leeman, R. F., Souza, T., Case, S., Prins, C., Cook, C., & Wang, Y. (2022). Correspondence between alcohol use measured by a wrist-worn alcohol biosensor and self-report via ecological momentary assessment over a 2-week period. *Alcohol: Clinical and Experimental Research*, 47(2), 308–318. <https://doi.org/10.1111/acer.14995>
- Richards, V. L., Glenn, S. D., Turrisi, R. J., Mallett, K. A., Ackerman, S., & Russell, M. A. (2024). Transdermal alcohol concentration features predict alcohol-induced blackouts in college students. *Alcohol, Clinical and Experimental Research*, 48(5), 880–888. <https://doi.org/10.1111/acer.15290>
- Richards, V. L., Mallett, K. A., Turrisi, R. J., Glenn, S. D., & Russell, M. A. (2025). Profiles of transdermal alcohol concentration and their prediction of negative and positive alcohol-related consequences in young adults' natural settings. *Psychology of Addictive Behaviors*, 48(5), 880–888. <https://doi.org/10.1037/adb0001054>
- Richards, V. L., Turrisi, R. J., & Russell, M. A. (2024). Subjective intoxication predicts alcohol-related consequences at equivalent alcohol concentrations in young adults using ecological momentary assessment and alcohol sensors. *Psychology of Addictive Behaviors*, 38(3), 334–346. <https://doi.org/10.1037/adb0000993>



- Rousselet, G. A., Pernet, C. R., & Wilcox, R. R. (2021). The percentile bootstrap: A primer with step-by-step instructions in R. *Advances in Methods and Practices in Psychological Science*, 4(1), 1–10. <https://doi.org/10.1177/2515245920911881>
- Rowland, Z., & Wenzel, M. (2020). Mindfulness and affect-network density: Does mindfulness facilitate disengagement from affective experiences in daily life? *Mindfulness*, 11(5), 1253–1266. <https://doi.org/10.1007/s12671-020-01335-4>
- Russell, M. A., Linden-Carmichael, A. N., Lanza, S. T., Fair, E. V., Sher, K. J., & Piasecki, T. M. (2020). Affect relative to day-level drinking initiation: Analyzing ecological momentary assessment data with multilevel spline modeling. *Psychology of Addictive Behaviors*, 34(3), 434–446. <https://doi.org/10.1037/adb0000550>
- Russell, M. A., Richards, V. L., Turrissi, R. J., Exten, C. L., Pesigan, I. J. A., & Rodriguez, G. C. (2025). Profiles of alcohol intoxication and their associated risks in young adults’ natural settings: A multilevel latent profile analysis applied to daily transdermal alcohol concentration data. *Psychology of Addictive Behaviors*, 39(2), 173–185. <https://doi.org/10.1037/adb0001022>
- Russell, M. A., Smyth, J. M., Turrissi, R., & Rodriguez, G. C. (2023). Baseline protective behavioral strategy use predicts more moderate transdermal alcohol concentration dynamics and fewer negative consequences of drinking in young adults’ natural settings. *Psychology of Addictive Behaviors*, 38(3), 347–359. <https://doi.org/10.1037/adb0000941>
- Russell, M. A., Turrissi, R. J., & Smyth, J. M. (2022). Transdermal sensor features correlate with ecological momentary assessment drinking reports and predict alcohol-related consequences in young adults’ natural settings. *Alcoholism: Clinical and Experimental Research*, 46(1), 100–113. <https://doi.org/10.1111/acer.14739>
- Ryan, O., & Hamaker, E. L. (2021). Time to intervene: A continuous-time approach to network analysis and centrality. *Psychometrika*, 87(1), 214–252. <https://doi.org/10.1007/s11336-021-09767-0>

- Savalei, V., & Rosseel, Y. (2021). Computational options for standard errors and test statistics with incomplete normal and nonnormal data in SEM. *Structural Equation Modeling: A Multidisciplinary Journal*, 29(2), 163–181. <https://doi.org/10.1080/10705511.2021.1877548>
- Shaygan, M., & Karami, Z. (2020). Chronic pain in adolescents: Predicting role of emotional intelligence, self-esteem and parenting style. *International Journal of Community Based Nursing & Midwifery*, 8. <https://doi.org/10.30476/ijcbnm.2020.83153.1129>
- Tofighi, D., & Kelley, K. (2020). Improved inference in mediation analysis: Introducing the model-based constrained optimization procedure. *Psychological Methods*, 25, 496–515. <https://doi.org/10.1037/met0000259>
- Usami, S. (2020). On the differences between general cross-lagged panel model and random-intercept cross-lagged panel model: Interpretation of cross-lagged parameters and model choice. *Structural Equation Modeling: A Multidisciplinary Journal*, 28(3), 331–344. <https://doi.org/10.1080/10705511.2020.1821690>
- Usami, S. (2022). Within-person variability score-based causal inference: A two-step estimation for joint effects of time-varying treatments. *Psychometrika*, 88(4), 1466–1494. <https://doi.org/10.1007/s11336-022-09879-1>
- van Egmond, K., Wright, C. J. C., Livingston, M., & Kuntsche, E. (2020). Wearable transdermal alcohol monitors: A systematic review of detection validity, and relationship between transdermal and breath alcohol concentration and influencing factors. *Alcoholism: Clinical and Experimental Research*, 44(10), 1918–1932. <https://doi.org/10.1111/acer.14432>
- Wang, L., Fang, Y., & Bergeman, C. S. (2026). Dynamic modeling with intensive longitudinal data: One-step and two-step DSEM approaches. *Structural Equation Modeling: A Multidisciplinary Journal*, 1–17. <https://doi.org/10.1080/10705511.2025.2597284>
- Wang, L., & Zhang, Q. (2020). Investigating the impact of the time interval selection on autoregressive mediation modeling: Result interpretations, effect reporting, and temporal designs. *Psychological Methods*, 25(3), 271–291. <https://doi.org/10.1037/met0000235>

- Zeileis, A., Köll, S., & Graham, N. (2020). Various versatile variances: An object-oriented implementation of clustered covariances in R. *Journal of Statistical Software*, 95(1). <https://doi.org/10.18637/jss.v095.i01>
- Zhang, G., Lee, D., Li, Y., & Ong, A. (2025). Dynamic factor analysis with multivariate time series of multiple individuals: An error-corrected estimation method. *Psychological Methods*. <https://doi.org/10.1037/met0000722>