Curriculum Vitae

MAURICIO GARNIER-VILLARREAL

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EDUCATION:

2016	**Ph.D. Quantitative Psychology.** University of Kansas. Dissertation: *Intra and Interindividual Variation Modeling: Bayesian Mixed-Effects Nonstationary Latent Differential Equation Model* Minor: Gerontology Advisors: Pascal R. Deboeck, and David K. Johnson
2013	**Master of Arts, Quantitative Psychology**, University of Kansas. Thesis: *Two-method planned missing designs for longitudinal research* Advisors: Todd D. Little, and David K. Johnson
2011	**Licentiate, Psychology.** University of Costa Rica. Thesis: Inhibitory Control, Working Memory and Emotional Regulation in Preschool Children. Advisors: Domingo Campos-Ramírez, and Mauricio Molina-Delgado
2010	**Bachelor in Psychology.** University of Costa Rica.

PERSONAL EXPERIENCE

Academic Positions:

2025-present	**Associate Professor (UHD2)**, Department of Sociology, **Vrije Universiteit Amsterdam.**
2022-2025	**Assistant Professor (UD1)**, Department of Sociology, **Vrije Universiteit Amsterdam.**
2020-2022	**Assistant Professor (UD2)**, Department of Sociology, **Vrije Universiteit Amsterdam.**
2016-2020	**Research Assistant Professor**, College of Nursing, **Marquette University.**
2015-2016	**Assistant Instructor**, Department of Psychology, **University of Kansas.**

| 2015 | **Graduate Teaching Assistant**, Department of Psychology, **University of Kansas.** |

| 2014 | **Graduate Teaching Assistant**, Department of Psychology, **University of Kansas.** |

| 2011-2014 | **Graduate Research Assistant**, Center for Research Methods and Data Analysis, **University of Kansas.** |

| 2008-2011 | **Research Assistant**, Psychological Research Institute. **University of Costa Rica.** |

| 2008-2009 | **Research Assistant**, Neurosciences Research Program. **University of Costa Rica.** |

| 2008 | **Teaching Assistant**, Department of Psychology, Research IV (descriptive statistics), Research V (inferential statistics), Psychology of Group Process, **University of Costa Rica.** |

Professional:

| 2011-2014 | **Statistical Consultant**. Center for Research Methods and Data Analysis, University of Kansas. |

| 2010 | **Research position**, Department of Psychology**,** University of Costa Rica. |

| 2008 | **Marketing Research Assistant** in the Research Department of Central Radio (www.cdr.cr). |

| 2008 | **Professional consultant** for the American Institute of Human Rights (IIHR). Developed the methodological guide, produced and edited the audio material for "Methodological Guide for the use of compact disc collection: 'Truth, justice and reparation', in book: 'Latin American Experience, meet victims'. ". |

| 2006-2007 | **Psychology Assistant** in the psycho pedagogic clinic of the Dra. Solange De Faria. Alajuela, Costa Rica |

Publications

Methodological

1. **Garnier-Villarreal, M.,** & Johnson, D. K. (2025). Bayesian multivariate longitudinal piecewise regression: Detecting early onset of cognitive decline. *Journal of Behavioral Medicine*. https://doi.org/10.1007/s10865-025-00616-4

2. Pankowska, P., Oberski, D., **Garnier-Villarreal, M.,** & Pavlopoulos, D. (2025). The effect of measurement error on clustering. *Quality & Quantity*. https://doi.org/10.1007/s11135-025-02177-9

3. Liang, X., Li, J., **Garnier-Villarreal, M.,** & Zhang, J. (2025). Comparing Frequentist and Bayesian Methods for Factorial Invariance with Latent Distribution Heterogeneity. *Behavioral Sciences*, 15(4), 1–21. https://doi.org/10.3390/bs15040482

4. **Garnier-Villarreal, M.,** & Jorgensen, T. D. (2025). Evaluating Local Model Misspecification with Modification Indices in Bayesian Structural Equation Modeling. *Structural Equation Modeling: A Multidisciplinary Journal*, 32(2), 304–318. https://doi.org/10.1080/10705511.2024.2413128

5. Van Lissa, C. J., **M. Garnier-Villarreal**, and D. Anadria. (2024). Recommended Practices in Latent Class Analysis Using the Open-Source R-Package tidySEM. *Structural Equation Modeling: A Multidisciplinary Journal* 31(3):526–34. https://doi.org/10.1080/10705511.2023.2250920

6. Merkle, E. C., Ariyo, O., Winter, S. D., & **Garnier-Villarreal, M.** (2023). Opaque prior distributions in Bayesian latent variable models. *Methodology*, 19(3), 228–255. https://doi.org/10.5964/meth.11167

7. Jorgensen, T.D., **Garnier-Villarreal, M.** (2023). Limited Utility of Small-Variance Priors to Detect Local Misspecification in Bayesian Structural Equation Models. In: Wiberg, M., Molenaar, D., González, J., Kim, JS., Hwang, H. (eds) *Quantitative Psychology*. IMPS 2022. Springer Proceedings in Mathematics & Statistics, vol 422. Springer, Cham. https://doi.org/10.1007/978-3-031-27781-8_8

8. **Garnier-Villarreal, M.** & Little, T. D. (2024). Bayesian Longitudinal Structural Equation Modeling (Chapter 13). In T. D. Little (author), *Longitudinal Structural Equation Modeling* (2nd Edition). New York, NY: Guildford press. ISBN: 9781462553143

9. **Garnier-Villarreal, M.;** Merkle, E.C.; Magnus, B.E. (2021) Between-Item Multidimensional IRT: How Far Can the Estimation Methods Go? *Psych*, 3, 404–421. https://doi.org/10.3390/psych3030029

10. Magnus, B. E., & **Garnier-Villarreal, M** . (2021). A multidimensional zero-inflated graded response model for ordinal symptom data. *Psychological Methods*. https://doi.org/10.1037/met0000395 *(https://osf.io/hvkfn/)*

11. Smits, N., Öğreden, O., **Garnier-Villarreal, M.,** Terwee, C. B., & Chalmers, R. P. (2020). A study of alternative approaches to non-normal latent trait distributions in item response theory models used for health outcome measurement. *Statistical Methods in Medical Research*. https://doi.org/10.1177/0962280220907625

12. **Garnier-Villarreal, M.,** & Jorgensen, T. D. (2020). Adapting Fit Indices for Bayesian Structural Equation Modeling: Comparison to Maximum Likelihood. *Psychological Methods*, *25*(1), 46–70. https://doi.org/dx.doi.org/10.1037/met0000224

13. Jorgensen T.D., **Garnier-Villarreal M.**, Pornprasermanit S., Lee J. (2019) Small-Variance Priors Can Prevent Detecting Important Misspecifications in Bayesian Confirmatory Factor Analysis. In: Wiberg M., Culpepper S., Janssen R., González J., Molenaar D. (eds) *Quantitative Psychology*. IMPS 2017. Springer Proceedings in Mathematics & Statistics, vol 265. Springer, Cham. https://doi.org/10.1007/978-3-030-01310-3_23

14. Chen, P.-Y., Wu, W., **Garnier-Villarreal, M**., Kite, B. A., & Jia, F. (2019). Testing Measurement Invariance with Ordinal Missing Data: A Comparison of Estimators and Missing Data Techniques. *Multivariate Behavioral Research*, 1–15. https://doi.org/10.1080/00273171.2019.1608799

15. **Garnier-Villarreal, M**., Rhemtulla, M., & Little, T. D. (2014). Two-method planned missing designs for longitudinal research. *International Journal of Behavioral Development*, 38(5), 411–

422. https://doi.org/10.1177/0165025414542711

Applied

1. Bouwhuis, S., Pauls, C., **Garnier-Villarreal, M.,** & Pavlopoulos, D. (2026). The interplay between job demands & resources and mental health: A novel approach using hidden Markov models. *Journal of Behavioral Medicine*. https://doi.org/10.1007/s10865-025-00626-2

2. Frenn, M., Salzman, N., Lam, V., Holtz, M., Moosreiner, A., **Garnier-Villarreal, M.,** & Singh, M. (2025). Childhood Obesity Body Mass Index and Gut Microbiome: A Cluster Randomized Controlled Pilot Feasibility Study. *Childhood Obesity*, 1–8. https://doi.org/10.1089/chi.2024.0344

3. Chowdhury, A., van der Horst, M., Pavlopoulos, D., & **Garnier-Villarreal, M.** (2025). Cliff-edge or atypical retirement? Exploring retirement trajectories of post-war baby boomers in The Netherlands. *Ageing and Society*, 1–24. https://doi.org/10.1017/S0144686X25000029

4. Matetovici, M., Spruit, A., Colonnesi, C., **Garnier-Villarreal, M.,** & Noom, M. (2025). Parent and child gender effects in the relationship between attachment and both internalizing and externalizing problems of children between 2 and 5 years old: A dyadic perspective. *Infant Mental Health Journal: Infancy and Early Childhood*, 46(4), 424–444. https://doi.org/10.1002/imhj.70002

5. Varriale, R., Filipponi, D., **Garnier-Villarreal, M.**, Pavlopoulos, D., & Stoel, R. D. (2024). New approaches for non-standard employment statistics using multi-source data. The Dutch and Italian experience. In Book of *Short Papers 2nd Italian Conference on Economic Statistics* (ICES 2024) : Statistical Analysis of Complex Economic Data: Recent Developments and Applications (pp. 166-169). Casa Editrice Bonechi.

6. Filipponi, D., **Garnier-Villarreal, M.,** Loriga, S., Pavlopoulos, D., Stoel, R. D., & Varriale, R. (2024). Measurement of contract type from multi-source data. Preliminary results from the Dutch and Italian experience. In *2nd Workshop on Methodologies for Official Statistics. Proceedings* (pp. 31-44). Italian National Institute of Statistics (Istat).

7. Bouwhuis, S., Pavlopoulos, D., **Garnier-Villarreal, M.**, & Eberlein, L. (2024). Mixture hidden markov modellen in sociaal-wetenschappelijk onderzoek. *Belgisch Tijdschrift Voor Sociale Zekerheid*, 65(3), 425-439.

8. Bouwhuis, S., Pavlopoulos, D., **Garnier-Villarreal, M.,** & Eberlein, L. (2024). Les mixture hidden markov models (modèles de markov cachés à effets mixtes) dans la recherche en sciences sociales. Revue belge de sècuritè sociale, 65(3), 429-443.

9. Johnson, N. L., Bekhet, A. K., Zint, E., Wang, J., Pena, S., Van Hecke, A., **Garnier-Villarreal, M.**, & Ng, A. (2024). Correlations of Physical and Psychological Health in Parents of Individuals With Autism Spectrum Disorder. *Western Journal of Nursing Research*, 46(7), 532–540. https://doi.org/10.1177/01939459241253221

10. Varriale, R., Filipponi, D., **Garnier-Villarreal, M.,** & Pavlopoulos, D. . (2024). How "real" is mobility from temporary to permanent employment in italy? A focus on measurement error. *Statistica Applicata - Italian Journal of Applied Statistics*. https://doi.org/10.26398/IJAS.272

11. Bouwhuis, S., Hellendoorn, M., Pavlopoulos, D., **Garnier-Villarreal, M.,** & Smits, W. (2024). Strategieën van Nederlandse werkgevers voor het gebruik van flexcontracten en de relatie met loopbanen van flexwerkers. *Tijdschrift voor Arbeidsvraagstukken*, 40(1), 65–90. https://doi.org/10.5117/TVA2024.1.005.BOUW

12. Eberlein, L., Pavlopoulos, D., & **Garnier-Villarreal, M.** (2024). Starting flexible, always flexible? The relation of early temporary employment and young workers employment trajectories in the Netherlands. *Research in Social Stratification and Mobility*, *89*, 100861. https://doi.org/10.1016/j.rssm.2023.100861

13. Pavlopoulos, D., **Garnier-Villarreal, M.**, & Varriale, R. (2023). Patterns of flexible employment careers. Does measurement error matter? In F. M. Chelli, M. Ciommi, S. Ingrassia, F. Mariani, & M. C. Recchioni (Eds.), *SIS 2023 (SEAS IN): Book of the short papers* (pp. 985-990). Pearson.

14. Bouwhuis, S., Pavlopoulos, D., **Garnier-Villarreal, M.,** & Smits, W. (2023). Ad hoc decisions as latent strategies: How do firms use nonstandard employment contracts? *Industrial Relations Journal*,1–19. https://doi.org/10.1111/irj.12416

15. Wahl, C. A., **Garnier-Villarreal, M.**, & Meyer, B. B. (2023). Development of the assessment of recovery activities for athletes. *International Journal of Sport and Exercise Psychology*, 22(4), 825–844. https://doi.org/10.1080/1612197X.2023.2168727

16. Hlebichuk, J. L., Gretebeck, R. J., **Garnier-Villarreal, M.,** Piacentine, L. B., Singh, M., & Gretebeck, K. A. (2023). Physical Activity, Inflammation, and Physical Function in Older Adults: Results From the Health & Retirement Study. *Biological Research For Nursing*, 25(1), 24–32. https://doi.org/10.1177/10998004221111217

17. Haglund, K., King, A. L., Bekhet, A. K., **Garnier-Villarreal, M.,** Olson, K., Atshan, R., Ortiz, A., Santos, J. de los, & Belknap, R. A. (2023). Learning a Healthy Rhythm: An Intervention to Increase Children's Resources for Stress Management. *Western Journal of Nursing Research*, 45(1), 46–54. https://doi.org/10.1177/01939459221099362

18. Valdez, C. E., Stevens, T., **Garnier-Villarreal, M.,** & Shumway, M. (2022). Using Bayesian methods to clarify the role of trauma-related cognitions on the course of posttraumatic stress in nonspecific trauma-focused therapy. *Psychological Trauma: Theory, Research, Practice, and Policy.* https://doi.org/10.1037/tra0001280

19. Lavoie, J.A., Schindler, C., **Garnier-Villarreal, M**., Bagli, SP, McCarthy, D.O., Goday, P.S. (2022) Nasogastric bridles are associated with improved tube-related outcomes in children. *J Parenter Enteral Nutr*; 1- 10. https://doi.org/10.1002/jpen.2409

20. Burns, J., Basken, A., Acosta, R., **Garnier-Villarreal, M.,** Kulkarni, A., & Hayes, D. (2022). Identification of research priorities in CHD: Empowering patients and families through participation in the development of formal research agendas. *Cardiology in the Young*, 1-6. https://doi.org/10.1017/S104795112200066X

21. Hanson, L., VandeVusse, L., Malloy, E., **Garnier-Villarreal, M.,** Watson, L., Fial, A., Forgie, M., Nardini, K., & Safdar, N. (2022). Probiotic interventions to reduce antepartum Group B streptococcus colonization: A systematic review and meta-analysis. *Midwifery*, 105, 103208. https://doi.org/10.1016/j.midw.2021.103208

22. Grau, P. P., Melchert, T. P., **Garnier-Villarreal, M.,** Knobloch-Fedders, L. M., & Wetterneck, C. T. (2021). Change in Self-compassion, Psychological Inflexibility, and Interpersonal Courage in Intensive PTSD Treatment: A Latent Growth Curve Analysis. *Mindfulness*. https://doi.org/10.1007/s12671-021-01759-6

23. **Garnier-Villarreal, M.,** Pinto, D., Mummidisetty, C. K., Jayaraman, A., Tefertiller, C., Charlifue, S., Taylor, H. B., Chang, S.-H., McCombs, N., Furbish, C. L., Field-Fote, E. C., & Heinemann, A. W. (2021). Predicting Duration of Outpatient Physical Therapy Episodes for Individuals with Spinal Cord Injury Based on Locomotor Training Strategy. *Archives of Physical Medicine and Rehabilitation*, 1–11**.** https://doi.org/10.1016/j.apmr.2021.07.815

24. Clayton-Jones, D., Ong. L.Z., **Garnier-Villarreal, M.,** Vick, L., Sawdy, R., George Dalmida, S. & Haglund, K. (2021). Complementary and alternative medicine mind-body approaches used among racially and ethnically diverse adolescents, *Journal of Pediatric Nursing*, 61, 254-259. https://doi.org/10.1016/j.pedn.2021.07.009

25. Haglund, K., Ortiz, A., Santos, J. D. L., **Garnier-Villarreal, M.**, & Belknap, R. A. (2021). An Engaged Community-Academic Partnership to Promote Positive Youth Development. *Journal of Community Engagement and Scholarship*, 13(2), 11. https://doi.org/10.54656/LNWP6978.

26. Grau, P.P., Larsen, S.E., Lancaster, S.L., **Garnier-Villarreal, M**. & Wetterneck, C.T. (2021), Change in Event Centrality and Posttraumatic Stress Disorder Symptoms During Intensive Treatment. *Journal of Traumatic Stress*, 34, 116-123. https://doi.org/10.1002/jts.22541

27. Edwards, L.M., Le, H.M., & **Garnier-Villarreal, M.** (2021).A systematic review and meta-analysis of risk factors for postpartum depression among Latinas. *Maternal and Child Health Journal.* https://doi.org/10.1007/s10995-020-03104-0

28. Johnson, N. L., Bekhet, A. K., Karenke, T., & **Garnier-Villarreal, M.** (2021). Swim Program Pilot for Children with Autism: Impact on Behaviors and Health. *Western Journal of Nursing Research*, 43(4), 356–363. https://doi.org/10.1177/0193945920948867

29. Groom, K. K., Frenn, M., Breakwell, S., Melchert, T., & **Garnier-Villarreal, M.** (2021). Comparing Interprofessional Socialization in Mixed-Discipline and Nursing Student-Only Cohorts. Nurse educator, 46(6), 376–380. https://doi.org/10.1097/NNE.0000000000000985

30. Jerofke-Owen, T. A., & **Garnier-Villarreal, M**. (2020). Development and Psychometric Analysis of the Patient Preferences for Engagement Tool. Nursing research, 69(4), 289–298. https://doi.org/10.1097/NNR.0000000000000423

31. Frenn M, Kaugars A, Garcia J, **Garnier-Villarreal M.** (2020) Child Body Fat and Body Mass Index: Which Determinants are Most Important? *Western Journal of Nursing Research*. 42(8):593-602. https://doi:10.1177/0193945919879960

32. Jerofke-Owen, T., **Garnier-Villarreal, M.**, Fial, A., & Tobiano, G. (2020). Systematic review of psychometric properties of instruments measuring patient preferences for engagement in health care. *Journal of Advanced Nursing*, https://doi.org/10.1111/jan.14402

33. Johnson, N. L., Lerret, S., Klingbeil, C. G., Polfuss, M., Gibson, C., Gralton, K., **Garnier-Villarreal, M.**, Ahamed, S. I., Riddhiman, A., Unteutsch, R., Pawela, L., White-Traut, R., Sawin, K., & Weiss, M. (2020). Engaging parents in education for discharge (ePED): Evaluating the reach, adoption & implementation of an innovative discharge teaching method. *Journal of Pediatric Nursing*, *54*, 42–49. https://doi.org/10.1016/j.pedn.2020.05.022

34. Lerret, S. M., Johnson, N. L., Polfuss, M., Weiss, M., Gralton, K., Klingbeil, C. G., Gibson, C., **Garnier-Villarreal, M.**, Ahamed, S. I., Adib, R., Unteutsch, R., Pawela, L., White-Traut, R., & Sawin, K. (2020). Using the engaging parents in education for discharge (ePED) iPad application to improve parent discharge experience. *Journal of Pediatric Nursing*, *52*, 41–48. https://doi.org/10.1016/j.pedn.2020.02.041

35. Pinto, D., **Garnier-Villarreal, M.**, Barbas, J., Chang, S.-H., Charlifue, S., Field-Fote, E., Furbish, C., Tefertiller, C., Mummidisetty, C. K., Taylor, H., Jayaraman, A., & Heinemann, A. W. (2020). Budget impact analysis of robotic exoskeleton use for locomotor training following spinal cord injury in four SCI Model Systems. *Journal of NeuroEngineering and Rehabilitation, 17(1), 4.* https://doi.org/10.1186/s12984-019-0639-0

36. Tyacke, M., Guttormson, J. L., **Garnier-Villarreal, M.**, Schroeter, K., & Peltier, W. (2019) Advance Directives and Intensity of Care Delivered to Hospitalized Older Adults at the End-Of-Life. *Heart and Lung.* https://doi: 10.1016/j.hrtlng.2019.08.018.

37. Cleland, B. T., Papanek, P., Ingraham, B. A., Harkins, A., **Garnier-Villarreal, M.**, Woo, D., … V. Ng, A. (2019). Determinants of low bone mineral density in people with multiple sclerosis: Role of physical activity. *Multiple Sclerosis and Related Disorders*, 101864. https://doi.org/10.1016/j.msard.2019.101864

38. Grau, P., **Garnier-Villarreal, M.**, & Wettemeck, C. (2019). An Analysis of the Latent Factor Structure of the PCL-5 in a PTSD Partial Hospitalization Program. *Traumatology.* https://doi.org/10.1037/trm0000200

39. King, A. L., **Garnier-Villarreal, M.**, Simanek, A. M., & Johnson, N. L. (2019). Testing allostatic load factor structures among adolescents: A structural equation modeling approach. *American Journal of Human Biology*, 232–242. https://doi.org/10.1002/ajhb.23242

40. Woda, A., Dreifuerst, K., & **Garnier-Villarreal, M**. (2019). The Impact of Supplemented Simulation on Newly Licensed Registered Nurses. *Journal of Clinical Simulation in Nursing.* http://doi.org/10.1016/j.ecns.2018.12.002

41. Woda, A., Hansen, J., Dreifuerst, K. T., Anderson, P., Hardy, T., & **Garnier-Villarreal, M.** (2019). The Impact of Simulation on Knowledge and Performance Gain Regarding Diabetic Patient Care. *Clinical Simulation in Nursing*, *34*, 16–21. https://doi.org/10.1016/j.ecns.2019.05.001

42. Hardy, T. M., **Garnier-Villarreal, M.**, Ohlendorf, J. M., & McCarthy, D. O. (2019). Chronic

Stress and Ovarian Function in Female Childhood Cancer Survivors. *Oncology Nursing Forum*, *46*(3), 75–85. https://doi.org/10.1188/19.ONF.E75-E85

43. Ohlendorf, J. M., Robinson, K., & **Garnier-Villarreal, M.** (2019). The impact of maternal BMI, gestational weight gain, and breastfeeding on early childhood weight: Analysis of a statewide WIC dataset. *Preventive Medicine*, *118*, 210–215. https://doi.org/10.1016/j.ypmed.2018.11.001

44. Ruekert Kobiske, K., Bekhet, A. K., **Garnier-Villarreal, M.**, & Frenn, M. (2018). Predeath Grief, Resourcefulness, and Perceived Stress Among Caregivers of Partners With Young-Onset Dementia. *Western Journal of Nursing Research*, 1–17. https://doi.org/10.1177/0193945918806689

45. Bekhet, A. K., & **Garnier-Villarreal, M**. (2018). Factor Structure and Psychometric Properties of Cognitive-Behavioral Scales in Caregivers of Persons with Dementia. *International Journal of Psychology and Psychoanalysis*, *4*(2). https://doi.org/10.23937/2572-4037.1510035

46. Bekhet, A. K., & **Garnier-Villarreal, M.** (2018). Depression, positive thinking, personal and social resourcefulness among caregivers of persons with autism spectrum disorders. *Archives of Psychiatric Nursing*, *32*(6), 823–827. https://doi.org/10.1016/j.apnu.2018.06.006

47. Valdivieso-Mora, E., Ivanisevic, M., Shaw, L. A., **Garnier-Villarreal, M.**, Green, Z. D., Salazar-Villanea, M., … Johnson, D. K. (2018). Health-Related Quality of Life of Older Adults in Costa Rica as Measured by the Short-Form-36 Health Survey. *Gerontology and Geriatric Medicine*, *4*, 233372141878281. https://doi.org/10.1177/2333721418782812

48. Watts, A., **Garnier-Villarreal, M.**, & Gardiner, P. (2018). Measurement of Sitting Time in Older Adults With and Without Alzheimer's Disease. Journal for the Measurement of Physical Behaviour, 1(2), 70–78. https://doi.org/10.1123/jmpb.2018-0002

49. Woda, A., Schnable, T., Alt-Gehrman, P., Bratt, M., & **Garnier-Villarreal, M.** (2018). Innovation in clinical course delivery and impact on students' clinical decision making and competence. *Nursing Education Perspectives*. https://doi.org/10.1097/01.NEP.0000000000000406

50. Hardy, T. M., **Garnier-Villarreal, M.**, McCarthy, D. O., Anderson, R. A., & Reynolds, R. M. (2018). Exploring the Ovarian Reserve Within Health Parameters: A Latent Class Analysis. *Western Journal of Nursing Research*, 1–16. https://doi.org/10.1177/0193945918792303

51. Robinson, K., **Garnier-Villarreal, M.**, & Hanson, L. (2018). Effectiveness of CenteringPregnancy on Breast-Feeding Initiation Among African Americans: A Systematic Review and Meta-analysis. The Journal of Perinatal & Neonatal Nursing, 1. https://doi.org/10.1097/JPN.0000000000000307

52. Matel-Anderson, D. M., Bekhet, A. K., & **Garnier-Villarreal, M.** (2018). Mediating Effects of Positive Thinking and Social Supposrt on Suicide Resilience. *Western Journal of Nursing Research*. https://doi.org/10.1177/0193945918757988

53. Sebern, M. D., Sulemanjee, N., Sebern, M. J., **Garnier-Villarreal, M.**, & Whitlatch, C. J. (2017). Does an intervention designed to improve self-management, social support and awareness of palliative-care address needs of persons with heart failure, family caregivers and clinicians? *Journal of Clinical Nursing.* https://doi.org/10.1111/jocn.14115

54. Bekhet, A. K., & **Garnier-Villarreal, M.** (2017). The Positive Thinking Skills Scale: A screening measure for early identification of depressive thoughts. *Applied Nursing Research*, 38, 5–8. https://doi.org/10.1016/j.apnr.2017.08.004

55. Harris, M. A., Donnellan, M. B., Guo, J., McAdams, D. P., **Garnier-Villarreal, M.**, & Trzesniewski, K. H. (2017). Parental Co-Construction of 5- to 13-Year-Olds' Global Self-Esteem Through Reminiscing About Past Events. *Child Development*, 88(6), 1810–1822. https://doi.org/10.1111/cdev.12944

56. Shogren, K. A., **Garnier-Villarreal, M**., Lang, K., & Seo, H. (2017). Mediating Role of Self-Determination Constructs in Explaining the Relationship Between School Factors and Postschool Outcomes. *Exceptional Children*, *83*(2), 165–180. https://doi.org/10.1177/0014402916660089

57. Valdivieso-Mora, E., Peet, C. L., **Garnier-Villarreal, M.**, Salazar-Villanea, M., & Johnson, D. K. (2016). A Systematic Review of the Relationship between Familism and Mental Health Outcomes

in Latino Population. *Frontiers in Psychology, 7.* https://doi.org/10.3389/fpsyg.2016.01632

58. Salazar-Villanea, M., Liebmann, E., **Garnier-Villarreal, M**., Montenegro-Montenegro, E., & Johnson, D. K. (2015). Depressive Symptoms Affect Working Memory in Healthy Older Adult Hispanics. *Journal of Depression and Anxiety, 04(04).* http://doi.org/10.4172/2167-1044.1000204

59. Johnson, D. K., Langford, Z., **Garnier-Villarreal, M.**, Morris, J. C., & Galvin, J. E. (2016). Onset of Mild Cognitive Impairment in Parkinson Disease: *Alzheimer Disease & Associated Disorders*, *30*(2), 127–133. https://doi.org/10.1097/WAD.0000000000000088

60. Shogren, K. A., **Garnier-Villarreal, M**., Dowsett, C., & Little, T. D. (2014). Exploring Student, Family, and School Predictors of Self-Determination Using NLTS2 Data. *Career Development and Transition for Exceptional Individuals*. doi:10.1177/2165143414546685

61. Shogren, K. A., Kennedy, W., Dowsett, C**., Garnier-Villarreal, M**., & Little, T. D. (2014). Exploring Essential Characteristics of Self-Determination for Diverse Students Using Data From NLTS2. *Career Development and Transition for Exceptional Individuals*, 37(3), 168–176. http://doi.org/10.1177/2165143413486927

62. Shogren, K. A., & **Garnier-Villarreal, M**. (2015). Developing student, family, and school constructs from NTLS2 data. *The Journal of Special Education*, 49(2), 89–103. http://doi.org/10.1177/0022466913513336

63. **Garnier-Villarreal, M.**, & Conejo, L. D. (2014). Go/No-Go task. In T. Castelain & B. Marín (Eds.), *Experimental Psychology: Foundations and Experimental Protocols for studying cognitive processes* (pp. 87–99). San Jose, Costa Rica: Universidad de Costa Rica Press.

64. **Garnier-Villarreal, M**, Dinartes Bogantes, A. (2008) "Methodological Guide for the use of compact disc collection: 'Truth, justice and reparation', in the book: 'Latin American Experience, meeting victims'. " American Institute of Human Rights (IIHR). San José, Costa Rica

CONFERENCE PRESENTATIONS

Talks

1. **Garnier-Villarral, M.**. (July, 2025). Prior sensitivity analysis in Bayesian SEM and its application in R**.** Presentation at European Association of Methodology (EAM). Canary Islands, Spain.
2. **Garnier-Villarral, M.,** & Pavlopoulos, D. (July, 2025). Hidden Markov models: accuracy across structured missing data designs. Presentation at European Survey Research Association (ESRA). Utrecht, Netherlands.
3. **Garnier-Villarral, M.**. (June, 2025). BSEM with blavaan**.** Presentation at Dag van Sociologie, Amsterdam, Netherlands
4. **Garnier-Villarral, M.,** Jorgensen, T.D., & Merkle, E. (July, 2024). Bayesian SEM fit indices: now for categorical indicators**.** Presentation at International Meeting for Psychometric Society (IMPS), Prague, Czech Republic.
5. **Garnier-Villarral, M.,** & Pavlopoulos, D. (March, 2023). How many are too many? Methods to enumerate underlying trajectories with Mixture Hidden Markov Models and Sequence Analysis. Presentation at Advanced Techniques for Longitudinal Data Analysis in Social Science (ATLAS), Bielefeld, Germany.
6. Pavlopoulos, D**., & Garnier-Villarral, M.**. (March, 2023). Employment trajectories in the presence of measurement error. An application using Mixed Hidden Markov Models. Presentation at Advanced Techniques for Longitudinal Data Analysis in Social Science (ATLAS), Bielefeld, Germany.
7. **Garnier-Villarral, M.** (November, 2022). Introduction to Mixture Models. Bamberg University. Bamberg, Germany.
8. **Garnier-Villarral, M.,** Jorgensen, T.D. (July, 2022). BSEM modification indices: missed parameters and how to find them**.** Presentation at International Meeting for Psychometric Society (IMPS), Bologna, Italy.

9. **Garnier-Villarral, M.**, van Lissa C., & Pavlopoulos, D. (May, 2022). Mixture Modeling: best practices when the latent variable is categorical. Presentation at Advanced Techniques for Longitudinal Data Analysis in Social Science. Presentation at Association of Psychological Sciences conference (APS), Chicago, USA.

10. **Garnier-Villarral, M.,** Pavlopoulos, D., & Obreski, D. (July, 2021). Unknown Trajectory Classification: from cluster analysis to mixture models. Presentation at European Association of Methodology conference (EAM), Valencia, Spain.

11. **Garnier-Villarral, M.,** Merkle, E., & Magnus, B.. (July, 2019). Bayesian Multidimensional IRT: How far can it go?. Presentation at International Meeting for Psychometric Society (IMPS), Santiago, Chile.

12. **Garnier-Villarral, M.,** & Jorgensen, T.D. (July, 2018). Adapting Fit Indices for Bayesian SEM: Comparison to Maximum Likelihood. Presentation at International Meeting for Psychometric Society (IMPS), Columbia University, New York.

13. **Garnier-Villarreal, M.**, Deboeck, P.R., Johnson, D.K., & Watts, A. (May, 2017). Intra and Interindividual Variation Modeling: Bayesian Mixed-Effects Nonstationary Latent Differential Equation Model. Presentation at the Modern Modeling Methods (M3) Conference, University of Connecticut.

14. **Garnier-Villarreal, M.**, & Watts, A. (May, 2017). Bayesian MixedEffects Nonstationary Latent Differential Equation Model (BMNLDE): An Application to Accelerometer Data. Presentation at the Association for Psychological Science Conference. Boston, MA, USA.

15. **Garnier-Villarreal, M.**, Harpole, J., Skorupski, W., & Johnson, D.K. (May, 2015). Multivariate Longitudinal Piecewise Regression. Presentation at the Association for Psychological Science Conference. New York, NY, USA.

16. **Garnier-Villarreal, M.**, Schoemann, A.M., & Little, T.D (May, 2014). You shall combine, but how? A comparison of the methods to combine the χ^2 suing Multiple Imputation. Presentation at the Modern Modeling Methods (M3) Conference, University of Connecticut.

17. **Garnier-Villarreal, M.**, Rhemtulla, M., & Little, T.D (May, 2013). Two-method planned missing designs for longitudinal research. Presentation at the Modern Modeling Methods (M3) Conference, University of Connecticut.

Posters

1. Valdivieso, E., Ivanisevic, M., Green, Z., **Garnier-Villarreal, M**. & Johnson, D.K. (2016). Lifetime cognitive activity and cognitive functioning in Costa Rican older adults of EDAD study. Poster presented at the 2016 Gerontological Society of America Annual Scientific Meeting in New Orleans, LA.

2. Conejo, L.D., Pierotti, S.L., Campos, D., **Garnier-Villarreal, M**., Raventós, H., Contreras, J., & Glahn, D. (July, 2015). Invariance model of the State and Trait Anxiety Inventory's factorial structure and effects of anxiety on quality of life. Poster presented at the European Congress of Psychology, Milan, Italy.

3. Salazar, M., **Garnier-Villarreal, M**., Liebmann, E., Montenegro, E., Vidoni, E., Johnson, D. (July, 2015). Fitness Predicts Cognitive Performance in Urban Latin Americans. Alzheimer's Association International Conference, Washington, D.C.

4. Conejo, L.D., **Garnier-Villarreal, M**. & Carlo, G. (March, 2015). The importance of order and type of stimuli on inhibitory control and short-term memory in preschoolers. Poster presented at the biennial meeting of the Society for Research in Child Development, Philadelphia, PA.

5. **Garnier-Villarreal, M.**, Johnson, D.K., & Salazar Villanea, M. (September, 2014). The effects of emotional constructs on cognitive constructs in a sample of older adults from Costa Rica. Poster presented at The International Conference on Aging in the Americas. University of Colorado Boulder.

6. **Garnier-Villarreal, M.**, Johnson, D.K., Woods, C., & Salazar Villanea, M. (September, 2013).The

factor structure and item properties of the Geriatric Depression Scale (GDS) in a Costa Rican Sample. Poster presented at The International Conference on Aging in the Americas. University of Texas at Austin.

7. **Garnier-Villarreal, M**., Salazar Villanea, M., Johnson, D.K., &. Montenegro Montenegro, E. (September, 2013). Autobiographical memory relates to emotion and cognition in a sample of Costa Rican older adults. Poster presented at The International Conference on Aging in the Americas. University of Texas at Austin.

8. **Garnier-Villarreal, M**., Johnson, D.K., & Salazar Villanea, M. (September, 2012). Differences in BADL, IADL and cognitive status in a Costa Rican sample of older adults. Poster presented at The International Conference on Aging in the Americas. University of Southern California.

9. Salazar Villanea, M, **Garnier-Villarreal, M**., Montenegro Montenegro, E., & Johnson, D.K. (September, 2012). Profiles of Cognitive Performance and Physical Activity in old age: characterization by gender and age in an urban simple from Costa Rica. Poster presented at The International Conference on Aging in the Americas. University of Southern California.

10. **Garnier-Villarreal, M**., Johnson, D.K., & Salazar Villanea, M. (September, 2012). Differences in BADL, IADL and cognitive status in a Costa Rican sample of older adults. Poster presented at The International Conference on Aging in the Americas. Washington University in St. Louis.

PROFESSIONAL PRESENTATIONS AND WORKSHOPS

1. **Garnier-Villarreal, M**. (June, 2025). Bayesian Statistics. Research Master, Social Sciences. Universiteit van Amsterdam. Invited talk.

2. **Garnier-Villarreal, M.** & Pavlopoulos, D. (April, 2024). Mixture Hidden Markov Models (MHMM): a modelling alternative. Sequence Analysis Association. Invited talk.

3. **Garnier-Villarreal, M**. (April, 2024). Ecuaciones Estructurales Bayesian en R (BSEM). Universidad Autonoma de Madrid, Departamento de Psicologia. Invited talk.

4. **Garnier-Villarreal, M.** (January , 2024) Introduccion a Equaciones Estructurales Bayesianas en R. Instituto de Estudios Interdisciplinarios de la Niñez y la Adolescencia (INEINA). Universidad Nacional, Costa Rica. Invited talk.

5. **Garnier-Villarreal, M**. (November, 2023). Mixtures: ideas, extensions, and applications. Tilburg University, Methodology department. Invited talk.

6. **Garnier-Villarreal, M.** & Pavlopoulos, D. (October, 2023). Hidden Markov Models in producing Error-Corrected Official Statistics. Sapienza University, Rome. Invited talk.

7. **Garnier-Villarreal, M.** & Pavlopoulos, D. (October, 2023). Introduction to Mixture models in R. Instituto Nazionle di Satistica (Istat). Invited workshop.

8. **Garnier-Villarreal, M.** (May, 2023). Introduction to Bayesian SEM, Association of Psychological Sciences (APS) conference workshop.

9. **Garnier-Villarreal, M.** (May, 2023). Measurement Models for official statistics, Statistics Netherlands (CBS), Invited talk.

10. **Garnier-Villarreal, M.** (November, 2022). Introduction to Mixture Models, Bamberg University.

11. **Garnier-Villarreal, M.** (February, 2022). Mixture Hidden Markov Models: how to apply it and what is next. Methods & Statistics at RICDE invited talk, University van Amsterdam.

12. **Garnier-Villarreal, M.** (April, 2022). Local model evaluation: modification indices in BSEM. Webinar "Selection of Priors in Bayesian Structural Equation Modelling" as part of the YoungStatS project of the Young Statisticians Europe initiative (FENStatS) supported by the Bernoulli Society for Mathematical Statistics and Probability and the Institute of Mathematical Statistics (IMS).

13. **Garnier-Villarreal, M.** (February, 2022). Bayesian SEM: catching up on decades of frequentist research. Methods and Statistics Colloquium, Utrecht University.

14. **Garnier-Villarreal, M.** (2020 to 2023). Bayesian Data Analysis. Stats Camp Statistical Training Institute.

15. **Garnier-Villarreal, M.** (2016 to 2023). Bayesian SEM. Stats Camp Statistical Training Institute.
16. **Garnier-Villarreal, M.** (September, 2017). Bayesian Data Analysis. Stats Camp Statistical Training Institute.
17. **Garnier-Villarreal, M.** (June, 2014). Bayesian SEM. Presentation at the Longitudinal Structural Equation Modeling course. Stats Camp Statistical Training Institute.
18. **Garnier-Villarreal**, M., & Little, T.D (February, 2014). Longitudinal and Missing Data Analysis with Structural Equation modeling. Summer School workshop organized by the Psychologccal Research Institute, University of Costa Rica.
19. **Garnier-Villarreal, M.** (June, 2013). Multiple Group CFA. Presentation at the Statistical Literacy course. University of Kansas Summer Institute in Advanced Quantitative Analysis.
20. **Garnier-Villarreal, M**. (June, 2012). Structural Equation Modeling in R (lavaan) for psychology, Workshop organized by the Psychological Research Institute, University of Costa Rica.

GRANTS

NWO-Open Science NL, Open Science Infrastructure. Jorgensen, T.D. (Grant Agreement No XXXX). Infra-Structural Equation Modelling: Advancing Open Software, Education, and Application of an Indispensable Theory-Testing Framework. April 2026 – March 2030. Budget: €1.500.000 (**Co-applicant,** 10% of my time)

NWO-Open Science NL, Open Science Infrastructure. **Garnier-Villarreal, M. (PI)** & Jiménez Henríquez, MJ (Grant Agreement No 500.040.2469). Fast estimation of classical and new latent variable models in R. March 2026 – February 2028. Budget: €249.873 (**Main applicant,** 35% of my time)

Marie Skłodowska-Curie Actions (MSCA) Postdoctoral Fellowship (Grant Agreement No. 101147263), Mijail Figueroa Gonzalez. High Gains, high Risks, for whom? A holistic approach to the Inequalities Of Working While Studying Trajectories (GROW). Duration 1/9/2025 - 31/8/2027. Budget: €215,534 (**Advisory board member**).

ERC PoC (Proof of Concept) grant. Pavlopoulos, D., Garnier-Villarreal, M. Combine Measures of Social Assistance Benefit Indicators to correct for measurement Error (COMBINE). Duration 1/9/2024 - 28/2/2026. Budget: €150,000. Co-PI (**Co-applicant**, 10% of my time)

Institute of Education Sciences (IES), Statistical and Research Methodology in Education. Merkle, E. C (PI), Bonifay, W., Garnier-Villarreal, M., & Rosseel, Y. Scaling Bayesian Latent Variable Models to Big Education Data. August 2021 – August 2024. $897,984. Role: Co-PI (**Co-applicant**, 11% of my time)

European Research Council (ERC) grant. Pavlopoulos, D (PI). Righting the Wrongs. A Life Course Dynamics Approach for Non-Standard Employment (DYNANSE). September 2020-August 2025. € 1,996,377. Role: project member working on model development, data analysis, and paper writing (60% of my time)

National Institute of Health (NIH)/ Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD) R21: 1R21HD095320-01. Hanson, L. (PI), VandeVusse, L, Safdar, N., & Garnier-Villarreal, M. The efficacy of Probiotics to Reduce Antepartum Group B Streptococcus Colonization. July 2018-June 2020. $426,248 total award. Role: Co-Investigator, data analyst, statistical and methodological consultant (**Co-applicant**, 10% of my time)

National League for Nursing, Education Grants. Young-Brice, A. (PI), Garnier-Villarreal, M., & Dreifuerst, K. Grit as a predictor of academic success among associate degree nursing students. July 2018 – July 2020. $21,247 total award. Role: Co-Investigator, data analyst, statistical and methodological consultant (**Co-applicant**, 5% of my time)

CTSI, Marquette University. Johnson, N. (PI), Lerret, S., Garnier-Villarreal, M., Ahamed, S., Dobrozsi, S., & Gibson, C. Peds THINk (Transition to Home INtervention): Nursing Interventions to Improve Discharge Outcomes. April 2018 – May 2019. $50,000 total award. Role: Co-Investigator, data analyst, statistical and methodological consultant. (**Co-applicant**, 10% of my time)

Sigma Theta Tau International/Chamberlain College. Woda, A. (PI), Hansen, J., Dreifuerst, K., Anderson, P., & Garnier-Villarreal, M. Exploring the Impact of Simulation on Knowledge Gain Regarding the Care of the Patient with Diabetes. November 2017 – October 2018, $9,998 total award. Role: Co-Investigator, data analyst, statistical and methodological consultant (**Co-applicant**).

Sigma Theta Tau, Delta Gamma At-Large Chapter. King, A (PI). Understanding Relationships Between Early Life Toxic Stress, Childhood Socioeconomic Disadvantage, and Allostatic Load in Adolescence. January 2018 – June 2018. $5,000 Total award. Role: data analyst, statistical and methodological consultant.

National Association of Pediatric Nurse Practitioners, Wisconsin Cgapter. King, A (PI). Understanding Relationships Between Early Life Toxic Stress, Childhood Socioeconomic Disadvantage, and Allostatic Load in Adolescence. January 2018 – June 2018. $1,500 Total award. Role: data analyst, statistical and methodological consultant.

Center for Gender and Sexualities Studies Women and Girls of Color Research Initiative Grant, Marquette University. Haglund, K., Belknap, R. A., Edwards, L., Garcia, J. T., Garnier-Villarreal, M., "Changing responses to dating violence precursor behaviors: An action research project for girls of color and their partners". $34,460.00. (April 2017 - June 2019). Role: Co-Investigator, data analyst, statistical and methodological consultant (**Co-applicant**, 1.4% of my time)

Regner Grant, Marquette University College of Nursing. Sebern, M (Principal). iPad Enhanced Shared Care Intervention for Partners Pilot test. 7/1/16-6/30/17. $5,000.00 Total Award. Role: data analyst, statistical and methodological consultant.

Regular Research Grant, Marquette University Office of Research and Sponsored Programs. Sebern, M (Principal). iPad Enhanced Shared Care Partners Intervention. Optimization and Usability Test. 1/8/15-12/31/2015. $5,820.00 Total Award. Role: data analyst, statistical and methodological consultant.

Fogarty International Center, R21TW009665 - Johnson, J. K., PhD (Principal). & Garnier-Villareal, M. (GRA) June 1, 2013 - May 31, 2016. Epidemiology and Development of Alzheimer's Disease in Healthy Aging Costa Ricans. Low and middle income nations will experience an unprecedented growth of the elderly population and subsequent increase in age related neurological disorders. This grant tests low cost strategies for promoting healthy brain aging and prevention of Alzheimer's disease in rural and urban Costa Rica. Roles: Project leader, data analyst, statistical and methodological consultant.

Planned Missing Research Designs: Power and Validity of Planned Missing Data Designs in Longitudinal Research. Co-PIs: Wei Wu, Todd D. Little. Funded by: National Science Foundation (1053160). Roles: Project leader, data analyst.

Shogren, K. A. (2010). Exploring the predictors and outcomes of self-determination for secondary students with disabilities by analyzing NLTS2 data (U.S. Dept. of Education, Institute of Education Sciences, Special Education Research Grants, Secondary and Transition Services, CFDA# 84.324A). August 2011 to July 2015, $381,153 awarded to the University of Illinois/University of Kansas. Role: Data analyst, statistical and methodological consultant.

MJFox Foundation Clinical Translation Award - Johnson, D. K. (Consulting Neuropsychologist), & Galvin, J. (Principal). 08/15/2011 – 06/30/2016. Defining Cognitive Phenotypes of Parkinson's Disease: Translational research in Parkinson's disease targeting early diagnostic signs of the disease and identify specific biomarkers of cognitive decline. Role: Data analyst, statistical and methodological consultant.

A Secondary Analysis of the National Longitudinal Transition Study 2: Examining Relationships Between Expectations, Opportunities, and Postsecondary Life Engagement. PI: Mary Morningstar. Funded by: U.S. Department of Education, Institute of Education Sciences (R324A100275). Role: Data analyst, statistical and methodological consultant.

Awards

2018   Way-Klingler Teaching Enhancement Award. Knobloch-Fedders, L., Garnier-Villarreal, M., & Magnus, B., "Development of an Interdisciplinary Curriculum to Advance Graduate-Level Research Training". Sponsored by the Office of the Provost, Marquette University, $20,000 (July 2018 – June 2019).

PHD SUPERVISION

	Name	Title of project	Defense date	Role
1	Laura Eberlein Department of Sociology, Vrije Universiteit Amsterdam	Righting the Wrongs. A Life Course Dynamics Approach for Non-Standard Employment for young employees	2026 (expected)	Co-promotor
2	Anika Chowdhury Department of Sociology, Vrije Universiteit Amsterdam	Righting the Wrongs. A Life Course Dynamics Approach for Non-Standard Employment for older employees	2026 (expected)	Co-promotor
3	Adrian Garcia Molla PhD candidate in Psychology, University of Valencia	Successful Aging in Europe: Trajectories and processes for acting on psychological, social and physical frailty (PID2021-124418OB-I00)	2026 (expected)	Research stay supervisor
4	Carly A. Wahl College of Health Sciences, Sport Psychology, University of Wisconsin, Milwaukee	Development of the assessment of recovery activities for athletes	2022	Co-promotor
5	Jay Gottschalk College of Nursing, Marquette University	Examining the Mediating Effects of Positive Thinking on the Relationship Between Professional Quality of Life and Resilience in Nurse Leaders	2022	Co-promotor
6	Julie Lavoei College of Nursing, Marquette University	Securing nasogastric tubes in children	2021	Co-promotor
7	Margaret Salinas College of Nursing, Marquette University	Factors affecting activation for self-management for older adults living alone	2021	Co-promotor
8	Kara Groom College of Nursing, Marquette University	Comparing Interprofessional Socialization in Mixed-Discipline and Nursing Student-Only Cohorts	2021	Co-promotor

9	Peter Grau Department of Counseling Education and Counseling Psychology, Marquette University	The Impact of Change in Self-Compassion, Psychological Flexibility, and Interpersonal Courage in a PTSD Treatment Program	2020	Co-promotor
10	Esteban Montenegro-Montenegro Department of Educational Psychology, Texas Tech University	Improving the guidelines to conduct multigroup invariance test in Bayesian SEM	2020	Co-promotor
11	Kelly Jones College of Nursing, Marquette University	Measuring polyvictimization among children in fragile families: a secondary data analysis	2018	Co-promotor
12	Theresa Hardy College of Nursing, Marquette University	Chronic Stress and Reproductive Function in Female Childhood Cancer Survivors	2018	Co-promotor
13	Marsha Tyacke College of Nursing, Marquette University	The impact of advance directives on the intensity of care received in the acute care setting in older adults	2018	Co-promotor
14	Amanda King College of Nursing, Marquette University	Understanding relationships between early life toxic stress, childhood socioeconomic disadvantage, and allostatic load in adolescence	2018	Co-promotor
15	Karie Ruekert-Kobiske College of Nursing, Marquette University	Pre-Death Grief, Resourcefulness and Perceived Stress among Partners of Young Onset Dementia	2018	Co-promotor
16	Ketan Tailor Department of Counseling Education and Counseling Psychology, Marquette University	Men who Abuse Women: Testing a Narrative-Feminist Approach to Group Psychotherapy	2018	Co-promotor
17	Denise Matel-Anderson College of Nursing, Marquette University	The Mediating Effects of Positive Thinking and Social Support on Suicide Resilience among Undergraduate Students	2017	Co-promotor

EDUCATION

Teaching

Year	Course Title	Course level	Role
Vrije Universiteit Amsterdam			
2020-2025	S_DIS: Descriptive and Inferential Statistics	Bachelor and Pre-master	Co-Developer, lecturer
2025	TD: Typologies in data with Mixture models	PhD	Developer, coordinator, lecturer
2023-2024	SQNM: Selected quantitative methods	PhD	Developer, coordinator, lecturer
2020-2024	S_QDA: Quantitative data analysis	Research master	Developer, coordinator, lecturer
2023	S_ICSP: Inequality and Conflict in Societal Participation	Sociology Master	Lecturer
2021	S_OL: Research lab: Introduction to R	Sociology Master	Developer, coordinator, lecturer
2021-2025	S_OL: Research lab: Logistic regression	Sociology Master	Developer, coordinator, lecturer
2021	S_OL: Research lab: Scale development	Sociology Master	Developer, coordinator, lecturer
Universiteit van Amsterdam			
2024	Statistical Models in the Social Sciences	Research master	Co-Developer, lecturer
Marquette University			
2016-2020	HEAL 8016 Advance Applied Statistics	PhD	Developer, coordinator, lecturer
2016-2020	HEAL 8015 Applied Statistics For Health Sciences	PhD	Developer, coordinator, lecturer
University of Kansas			
2015-2016	PSYC 210 Statistics in Psychological Research	Bachelor	lecturer
2015	PSYC 991 Longitudinal Data Analysis	PhD	teaching assistant
2014	PSYC 679/879 Applied Nonparametric Statistical Methods	PhD	teaching assistant

Supervision and mentoring

I have supervised/mentored in the following forms

1. Master Students
   a. One master student from the Department of Statistics, University of Costa Rica.
   b. One research master student from the Social Sciences faculty, Vrije Universiteit Amsterdam
   c. Three master students from the Sociology master, Vrije Universiteit Amsterdam

d. One research master student in Psychology at the University van Amsterdam.

2. PhDs
   a. One completed PhD from Department of Educational Psychology, Texas Tech University (as co-promotor)
   b. 10 completed PhDs from the College of Nursing, Marquette University (as co-promotor)
   c. Two completed PhDs from Department of Counseling Education and Counseling Psychology, Marquette University (as co-promotor)
   d. One completed PhD from College of Health Sciences, Sport Psychology, University of Wisconsin, Milwaukee (as co-promotor)
   e. Two PhD candidates from the Department of Sociology, Vrije Universiteit Amsterdam (as co-promotor)
   f. Three PhD candidates from the Department of Sociology, Vrije Universiteit Amsterdam (not as co-promotor)
   g. 10 completed PhDs from the College of Nursing, Marquette University (not as co-promotor)
   h. One PhD from the Department of Psychology, University of Valencia. As a supervisor of his international research stay
   i. Was invited to be the international member for a PhD defense at the Universidad Autonoma de Madrid

3. Others
   a. Supervise a post-doctoral researcher in the development of the R package *latent*
   b. Supervised two PhD candidates in the development of R tutorials to help the transition from SPSS to R
   c. I am frequently invited to give talks/workshops by other academic institutions
   d. Online forums: active member answering questions/issues related to open-source software and methodological issues in the online forums for the R packages lavaan, blavaan and Stan
   e. After my the courses from the Stats Camp, I have supervised one master student and one PhD candidate with their research, that lead to co-authored publications.

PARTICIPANTON TO COMMITTES, BOARDS, AND PROFESSIONAL ORGANIZATION

2025–present	Representative of the VU in the IOPS board.
2024–2025	Guest Editor, *Journal of Behavioral Medicine: Special Issue on Data Analysis for Behavioral Medicine.*
2023–present	Member of the Works Council (ODC) for the Faculty of Social Sciences, VU.
2023–present	Member of the Examination Committee of the Research Master, at the Faculty of Social Sciences, VU
2020 spring	Committee on Diversity and Equity Meeting, Marquette University
2017	Program and Curriculum development. Master Health Care Data Analytics. Marquette University.
2017-2020	Hispanic/Latinx Faculty and Staff Association member Marquette Univerity
2016- 2020	Statistical consultation as Research Assistant Professor at the College of Nursing (CON), Marquette University. Number of consulted projects are presented in the following table

Semester	Grant applications	Research CON	PhD students	Marquette outside CON	Outside Marquette
Fall 2016	4	1	1	0	1

Spring 2017	4	6	10	3	1
Summer 2017	2	4	6	1	1
Fall 2017	2	4	4	0	2
Spring 2018	1	6	8	2	3
Fall 2018	3	5	4	2	2
Spring 2019	2	6	5	2	2
Summer 2019	1	4	2	1	1
Fall 2019	3	6	3	2	1
Spring 2020	1	5	4	2	3

2016 – 2020	Gastroschisis Outcomes of Delivery (GOOD) Study Data and Safety Monitoring Board: Statistician
2014–present	Ad-hoc reviewer to several scientific journals in English and Spanish (*International Journal of Behavioral Development, Actualidades en Psicología, Revista Costarricense de Psicología, Nursing Research, Current Psychology, Statistics and Computing, Structural Equation Modeling, Assessment, AStA Advances in Statistical Analysis, Multivariate Behavioral Research, Evolutionary Applications, AERA Open, Quality of Life Research, Psych, Psychological Methods, Educational and Psychological Measurement, Healthcare, British Journal of Mathematical and Statistical Psychology, Behavior Research Methods, International Journal of Environmental Research and Public Health, Journal of the Royal Statistical Society, Journal of Behavioral Medicine*)
2011–2014	Statistical and Methodological Consultation, Center for Research Methods and Data Analysis, University of Kansas. Number of consulted projects are presented in the following table

Client Type	*N*	
KU Master's Thesis	7	
KU Dissertation	5	
Misc. KU Student or Post doc Research	10	
KU Faculty Research	8	
Non-KU Dissertation	1	TOTAL
Private Sector Research	1	32

2011–2016	"Counselor" (consultant), Summer Institutes in Statistics ("Stats Camp"). Consulted for workshops on structural equation modeling, multilevel modeling, longitudinal analysis, R, M*plus*, modeling of intra-individual observations, Bayesian data analysis, mediation and moderation, and missing data analysis.

OTHER PERSONAL ACTIVITIES

Seminars and Conferences

2025	Participated in the Conference *Dag Van Sociologie,* Amsterdam, Netherlands.
2025	Participated in the Conference *Psychoco: International Workshop on*

	Psychometric Computing, Ghent, Belgium.
2024	Participated in the Conference *International Meeting for Psychometric Society (IMPS),* Prague, Czech Republic.
2023	Participated in the Conference *European Association of Methodology,* Ghent, Belgium.
2023	Participated in the Conference *Association for Psychological Science (APS) Conference*. Washington DC, USA.
2023	Participated in the Conference *Advances Techniques for Longitudinal Data Analysis in Social Science (ATLAS)*. Bielefeld, Germany.
2022	Participated in the Conference *International Meeting for Psychometric Society (IMPS),* Bologna, Italy.
2022	Participated in the Conference *Association for Psychological Science (APS) Conference*. Chicago, IL, USA.
2021	Participated in the Conference *Royal Statistical Society of Belgium annual meeting,* Liege, Belgium.
2021	Participated in the Conference *European Association of Methodology,* Valencia, Spain.
2019	Participated in the Conference *International Meeting for Psychometric Society (IMPS),* Santiago, Chile.
2018	Participated in the Conference *International Meeting for Psychometric Society (IMPS),* New York, NY, USA.
2018	Participated in the Workshop *Continuous and Discrete Time Dynamic Modeling in R* as part of *International Meeting for Psychometric Society (IMPS),* New York, NY, USA.
2017	Participated in the Conference *Modern Modeling Methods (M3),* University of Connecticut.
2017	Participated in the Conference *Association for Psychological Science (APS) Conference*. Boston, MA, USA.
2016	Participated in the Conference *Gerontological Society of Americe (GSA)*. New Orleans, LA, USA.
2015	Participated in the Conference *Association for Psychological Science (APS) Conference*. New York, NY, USA.
2014	Participated in the Conference *International Conference on Aging in the Americas*, University of Colorado Boulder.
2014	Participated in the Conference *Modern Modeling Methods (M3),* University of Connecticut.
2013	Participated in the Conference *International Conference on Aging in the Americas*, University of Texas at Austin.
2013	Participated in the *Conference Modern Modeling Methods (M3),* University of Connecticut.
2012	Participated in the Symposium *8th Leonard Berg Symposium: Prevention of Alzheimer's Disease*, Washington University in St. Louis
2012	Participated in the Conference *International Conference on Aging in the Americas,* University of Southern California.
2009	Participated in the workshop *Validation of psychometric instruments*, University of Costa Rica.
2008	Participated in the workshop *Introductory Course Atlas Ti tool for the management of qualitative information*, University of Costa Rica.
2007	Participated in the workshop *Training in psychological support to victims of gross violations of human rights in the litigation*, Interamerican Institute of Human Rights.

2007	Participated in the Summer Seminar *Foundations for Understanding the Social World III*, University of Costa Rica.
2005	Participated in the Congress *VII Congress of Social Psychology of Liberation*, University of Costa Rica.

Translations

2011   Translation from English to Spanish of the KUant Guides,
Center for Research Methods and Data Analysis,
University of Kansas. crmda.ku.edu

- LISREL (8.80) Syntax Reference
- Reading Data Into LISREL
- Interpreting LISREL Output
- Starting Values in LISREL
- What to Report: Information to report for a Confirmatory Factor Analysis based on Brown (2006)
- The Satorra-Bentler χ^2
- Bootstrapping
- Multiple Imputation
- LISREL's RP option
- Alternative Parameters
- Missing Data in Large Data Projects
- Monte Carlo Simulation in Mplus
- Mplus (5.0) Syntax Reference
- Converting Data to/from SAS
- Latent Variable Moderation
- Using PROC CALIS ins SAS 9.22 to Evaluate Between-Group Differences in Latent Variable Means
- Path Diagram in Microsoft Word 2007

LANGUAGES

Native:	Spanish
Other:	English: proficient in reading, comprehension, and writing

SOFTWARE PROFICIENCY

Contributor or author to the R packages: blavaan, semTools, tidySEM, nonnest2, latent
General statistical packages: R, SPSS
Structural Equation Modeling: blavaan, lavaan, M*plus*, OpenMx, Amos
Bayesian modeling languages: Stan, JAGS, OpenBUGS/WinBUGS

SOCIETIES
- IOPS: Interuniversity Graduate School of Psychometrics and Sociometrics
- European Association of Methodology
- Foundation for Open Access Statistics
- Psychometric Society
- Association for Psychological Science
- Gerontological Society of America
- Open Science Community Amsterdam

- Dutch Sociological Association

VOLUNTEERING

2006-2008   Volunteer work permanently in the NGO "Un Techo Para Mi País – Costa Rica."
                   For more information https://costarica.techo.org/

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