

Bethany C. Bray
Curriculum Vitae

Institute for Health Research and Policy
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Current Positions

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| Aug 2021-Present | Associate Director for Scientific and Infrastructure Development, Institute for Health Research and Policy, The University of Illinois at Chicago |
| Aug 2021-Present | Affiliated Scientist, Center for Dissemination and Implementation Science, Department of Medicine, The University of Illinois at Chicago |

Education

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| 2007 | Ph.D. | Human Development and Family Studies, Penn State |
| 2006 | M.A.S. | Applied Statistics, Penn State |
| 2005 | M.S. | Human Development and Family Studies, Penn State |
| 2000 | B.S. | Mathematics and Applied Statistics, The University of Michigan, Dearborn |

Honors and Awards

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| 2016 | National Center for Responsible Gaming 17 th Annual Conference Poster Session Honorable Mention |
| 2015 | University of Nebraska – Lincoln, Methodology, Analytics, & Psychometrics (MAP) Academy Emerging Scholar, Inaugural Recipient |
| 2012 | Virginia Tech AdvanceVT Mentoring Micro-Grant Award (\$1,500) |
| 2008-2010 | NIH Loan Repayment Program Award: <i>Drug use and comorbid problem behaviors</i> (L30-DA-025349) |
| 2008 | National Council on Problem Gambling Outstanding Dissertation Award |
| 2006-2007 | Society for Prevention Research Early Career Travel Awards |
| 2005-2007 | Prevention and Methodology Training Program Pre-Doctoral Research Fellowship (T32-DA-017629) |

Past Positions

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| 2019-2021 | Associate Director for Scientific Outreach, Center for Dissemination and Implementation Science, The University of Illinois at Chicago |
| 2019-2021 | Associate Professor, Department of Medicine, College of Medicine, The University of Illinois at Chicago |
| 2016-2019 | Associate Director & Associate Research Professor, The Methodology Center, College of Health and Human Development, Penn State |
| 2015-2019 | Associate Training Director, Prevention and Methodology Training Program (PAMT), The Methodology Center and Edna Bennett Pierce Prevention Research Center, College of Health and Human Development, Penn State |
| 2014-2016 | Outreach Director & Assistant Research Professor, The Methodology Center, College of Health and Human Development, Penn State |
| 2013-2014 | Research Associate, The Methodology Center, College of Health and Human Development, Penn State |
| 2012-2013 | Visiting Faculty, The Methodology Center, College of Health and Human Development, Penn State |
| 2009-2013 | Assistant Professor, Department of Psychology, College of Science, Virginia Tech |
| 2007-2009 | Assistant Director & Research Associate, The Methodology Center, College of Health and Human Development, Penn State |

Research Support

Active Support – National Institutes of Health

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|---|--------------|-----------|--------------------------|-----------------------|
| Characterization of vulvodynia and Ehlers-Danlos Syndrome (EDS) pain in women | F31 NR019529 | NIH/NINR | Glazer (PI) | 05/01/2021-12/31/2023 |
| Role: Co-Sponsor | | | | |
| Clinical and translational science award | UL1 TR002003 | NIH/NCATS | Mermelstein, Novak (PIs) | 01/08/2020-31/05/2025 |
| Role: Co-Investigator (Director of Evaluation and Tracking Core) | | | | |
| Predicting longitudinal patterns of change in adolescent polytobacco use: A socioecological framework | R21 DA051628 | NIH/NIDA | Blank (PI) | 01/08/2020-31/07/2022 |
| Role: Subcontract PI | | | | |
| Young men of color who have sex with men cohort study / Using longitudinal research to engage African American and Latinx sexual- and gender-minority youth in the HIV prevention and care continua and reduce HIV/AIDS-related disparities | U01 DA036926 | NIH/NIDA | Kipke (PI) | 01/11/2017-30/06/2025 |
| Role: Subcontract PI | | | | |
| Center for complex data to knowledge in drug abuse and HIV behavioral science | P50 DA039838 | NIH/NIDA | Collins (PI) | 01/09/2015-31/07/2022 |
| Role: Core Director, Scientific Project Co-Investigator | | | | |
| Drug abuse and HIV prevention research methodology conferences | R13 DA020334 | NIH/NIDA | Bray (PI) | 01/01/2013-31/05/2022 |
| Role: PI (01/10/2017-31/05/2021); Co-Investigator (01/01/2013-30/09/2017) | | | | |

Active Support – Other

None at this time

Past Support – National Institutes of Health

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|---|--------------|----------|--------------------------|-----------------------|
| Project POINT: Effectiveness and scalability of an overdose survivor intervention | R33 DA045850 | NIH/NIDA | McGuire, Watson (PIs) | 01/09/2020-31/08/2021 |
| Role: Subcontract PI | | | | |
| Understanding for whom family-based substance use prevention programs work best: A person-centered approach | F31 DA048522 | NIH/NIDA | LoBraico (PI) | 01/08/2019-31/07/2021 |
| Role: Co-Sponsor | | | | |
| Dynamic links between risk factors, substance use, and consequences: Ages 18-35 | R01 DA037902 | NIH/NIDA | Patrick (PI) | 01/04/2015-31/12/2019 |
| Role: Subcontract PI (01/09/2017-31/12/2019); Co-Investigator (01/04/2015-31/08/2017) | | | | |
| Identifying sources of neurocognitive heterogeneity in ADHD and anxiety | R56 MH084947 | NIH/NIMH | Huang-Pollock (PI) | 01/12/2017-01/04/2019 |
| Role: Co-Investigator | | | | |
| Prevention and methodology training (PAMT) | T32 DA017629 | NIH/NIDA | Collins, Greenberg (PIs) | 01/01/2015-01/04/2019 |
| Role: Co-Investigator | | | | |
| Center for prevention and treatment methodology | P50 DA10075 | NIH/NIDA | Collins (PI) | 01/08/2012-31/08/2016 |
| Role: Co-Investigator | | | | |
| Relating brain maturation to impulse control and substance use development | R01 DA033997 | NIH/NIDA | Acheson, Dougherty (PIs) | 15/06/2012-31/08/2014 |
| Role: Subcontract PI | | | | |
| Consequences of adolescent substance use on the development of impulse control | R01 DA026868 | NIH/NIDA | Dougherty (PI) | 15/05/2010-31/08/2014 |

Role: Subcontract PI

Past Support – Other

- 2015 Indiana SPF PFS (Strategic Prevention Framework Partnerships for Success)
 U79 SP020788 SAMHSA Watson (PI) 01/01/2020-30/06/2020
 Role: Co-Investigator
 Full list of funding sources: Indiana Family and Social Services Agency, Indiana Division of Mental Health and Addiction and the Center for Substance Abuse Prevention, Substance Abuse and Mental Health Services Administration
 Team drinking norms and student-athletes' alcohol use: A longitudinal investigation of the directionality and moderators on this association
 Graduate Student Research Grant Graupensperger (PI) 01/08/2018-31/07/2019
 North American Society for the Psychology of Sport and Physical Activity
 Role: Co-Sponsor
- Bolsa Estágio de Pesquisa no Exterior
 Scholarship FAPESP Higuchi (PI) 03/04/2017-02/10/2017
 Role: Training Sponsor
- Economic and Social Research Council overseas institutional visits scheme
 Training Award ESRC-UCL Mawditt (PI) 01/05/2016-31/07/2016
 Role: Training Sponsor
- Consequences of gambling and polysubstance use behavior patterns
 Seed Grant NCRG Bray (PI) 01/06/2015-31/12/2016
 Total Costs: \$30,000
- Alcohol use and gambling in college: Examining unique aspects, shared aspects, and event-level co-occurrence of behaviors
 Grant Program ABMRF Bray (PI) 01/06/2008-31/08/2012
 Total Costs: \$100,000
- Unique and shared aspects of alcohol use and gambling in college: A pilot study to inform behavior assessment
 Level 1 Funding CYFC/SSRI Bray (PI) 01/03/2008-31/08/2008
 Total Costs: \$1,500
- Understanding the comorbidity between gambling and substance use through the development and application of latent class methodologies
 The Methodology Center Bray (PI) 01/09/2007-31/08/2008
 Total Costs: \$17,610

Publications

** Denotes paper on which role was solely to provide latent class modeling expertise

* Denotes graduate student, or post-doctoral or other fellow

Peer-Reviewed Papers

78. Dönenberg, G. R., Fitts*, J., Ingabire, C., Nsanzimana, S., Fabri, M., Emerson, E., Remera, E., Manzi, O., **Bray, B. C.**, & Cohen, M. H. (2022). Results of the Kigali Imbereheza Project: A 2-arm individually randomized trial of TI-CBT enhanced to address ART adherence and mental health for Rwandan youth living with HIV. *Journal of Acquired Immune Deficiency Syndromes*, 90(1), 69-78. doi: 10.1097/qai.0000000000002911 PMID: **In process**
77. Layland*, E. K., Maggs, J. L., Kipke, M. D., & **Bray, B. C.** (2022). Intersecting racism and homonegativism among sexual minority men of color: Latent class analysis of multidimensional stigma with subgroup differences in health and sociostructural burdens. *Social Science and Medicine*, 293, 114602. doi: 10.1016/j.socscimed.2021.114602 PMID: **In process**
76. Romm*, K. F., Childers*, M., Douglas*, A. E., **Bray, B. C.**, Dino, G., & Blank, M. D. (2022). Transitions in tobacco use profiles among adolescents: Results from the Population Assessment of Tobacco and Health (PATH) study waves 3 and 4. *Drug and Alcohol*

- Dependence*, 232, 109272. doi: 10.1016/j.drugalcdep.2022.109272 PMID: PMC8885853
75. Romm*, K. F., Wang, Y., Duan*, Z., Bennett*, B., Fuss*, C., Ma, Y., Blank, M. D., **Bray, B. C.**, Ahluwalia, J. S., & Berg, C. J. (2022). Psychosocial predictors of longitudinal changes in tobacco and cannabis use among young adults. *Addictive Behaviors*, 129, 107264. doi: 10.1016/j.addbeh.2022.107264 PMID: **In process**
 74. Soulliard*, Z. A., Layland*, E. K., Smith, J. C., Kipke, M. D., & **Bray, B.C.** (2022). Body image concerns, correlates, and community connection among Black and Latinx sexual minority cisgender men and transgender/gender nonconforming young adults. *LGBT Health*. **Advance online publication**. doi: 10.1089/lgbt.2021.0237 PMID: PMC8968849
 73. Taylor, S., **Bray, B. C.**, Chou, S., Burns, R., & Kowalkowski, M. (2022). Clinical subtypes of sepsis survivors predict readmission and mortality after hospital discharge. *Annals of the American Thoracic Society*. **Advance online publication**. doi: 10.1513/AnnalsATS.202109-1088OC PMID: **In process**
 72. Xia*, M., Fosco, G. M., **Bray, B. C.**, & Grych, J. H. (2022). Constellations of family closeness and adolescent friendship quality. *Journal of Family Psychology*, 71(2), 644-659. doi: 10.1111/fare.12606 PMID: **In process**
 71. **Bray, B. C.**, Berglund, P. A., Evans-Polce, R. J., & Patrick, M. E. (2021). A latent transition analysis of self-reported reasons for marijuana use during young adulthood. *Evaluation and the Health Professions*, 44(1), 9-24. doi: 10.1177/0163278720984514 PMID: PMC7923687
 70. Dir, A. L., Watson, D. P., Zhiss, M., Taylor, L., **Bray, B. C.**, & McGuire, A. (2021). Barriers impacting the POINT pragmatic trial: The unavoidable overlap between research and intervention procedures in “real-world” research. *Trials*, 22, 114. doi: 10.1186/s13063-021-05065-3 PMID: PMC7859893
 69. Donenberg, G. R., Merrill*, K. G., Atujuna, M., Emerson, E., **Bray, B. C.**, & Bekker, L. G. (2021). Mental health outcomes of a pilot 2-arm randomized controlled trial of a HIV-prevention program for South African adolescent girls and young women and their female caregivers. *BMC Public Health*, 21(1), 2189. doi: 10.1186/s12889-021-12010-1 PMID: PMC8630514
 68. Hsueh*, L., Layland*, E. K., Kipke, M. D., & **Bray, B. C.** (2021). Linking racism and homonegativity to healthcare system distrust among young men of color who have sex with men: Evidence from the Healthy Young Men’s (HYM) Study. *Social Science and Medicine*, 284, 114219. doi: 10.1016/j.socscimed.2021.114219 PMID: PMC8958666
 67. Kong*, J., Martire, L. M., Tate, A. M., **Bray, B. C.**, & Almeida, D. M. (2021). Different types of childhood experience with mothers and caregiving outcomes in adulthood. *Family Relations*, 70(4), 1090-1101. doi: 10.1111/fare.12511 PMID: PMC8514082
 66. Linden-Carmichael, A. N., Van Doren*, N., **Bray, B. C.**, Jackson, K., & Lanza, S. T. (2021). Stress and affect as daily risk factors for substance use patterns: An application of latent class analysis for daily diary data. *Prevention Science*. **Advance online publication**. doi: 10.1007/s11121-021-01305-9 PMID: **In process**
 65. LoBraico*, E. J., Fosco, G. M., Feinberg, M., Spoth, R. L., Redmond, C., & **Bray, B. C.** (2021). Predictors of attendance patterns in a universal family-based preventive intervention program. *Journal of Primary Prevention*, 42, 409-424. doi: 10.1007/s10935-021-00636-1 PMID: PMC8387364
 64. Perzow*, S. E. D., **Bray, B. C.**, Wadsworth, M. E., & Hankin, B. L. (2021). Individual differences in adolescent coping: Comparing a community sample and a low-SES sample to understand coping in context. *Journal of Youth and Adolescence*, 50(4), 693-710. doi: 10.1007/s10964-021-01398-z PMID: PMC8074358
 63. Stull*, S. W., Bertz*, J. W., Epstein, D. H., **Bray, B. C.**, & Lanza, S.T. (2021). Anhedonia and substance use disorders by type, severity, and with mental health disorders. *Journal of Addiction Medicine*. **Advance online publication**. doi: 10.1097/ADM.0000000000000891 PMID: PMC8761228

62. Xia*, M., **Bray, B. C.**, & Fosco, G. M. (2021). Triadic family structures and their day-to-day dynamics from an adolescent perspective: A multilevel latent profile analysis. *Family Process*. **Advance online publication**. doi: 10.1111/famp.12722 PMID: PMC8924019
61. Donenberg, G. R., Kendall, A. D., Emerson, E., **Bray, B. C.**, Fletcher, F., & McCabe, K. (2020). IMARA: A mother-daughter group randomized controlled trial to reduce sexually transmitted infections in Black/African-American adolescents. *PLOS One*, *15*(11), e0239650. doi: 10.1371/journal.pone.0239650 PMID: PMC7605636
60. Fitzpatrick, S. L., Brooks, N., **Bray, B. C.**, & Stevens, V. J. (2020). Adherence to behavioral recommendations for weight loss and associated psychosocial factors among African American adults. *Journal of Behavioral Medicine*, *43*(5), 859-864. doi: 10.1007/s10865-019-00108-2 PMID: PMC7909610
59. Guastaferro, K. M., & **Bray, B. C.** (2020). Substance use and mental health outcomes during emerging adulthood among individuals with different patterns of child maltreatment. *Emerging Adulthood*, *8*(6), 542-547. doi: 10.1177/2167696819830481 PMID: PMC7990388
58. Kendall*, A. D., Young, C. B., **Bray, B. C.**, Emerson, E. M., Freels, F., & Donenberg, G. (2020). Changes in externalizing and internalizing symptoms among African American female adolescents over 1 year following a mother-daughter sexual health intervention. *Journal of Consulting and Clinical Psychology*, *88*(6), 495-503. doi: 10.1037/ccp0000491 PMID: PMC8659135
57. Kipke, M. D., Kubicek, K., Akinyemi, I., Hawkins, W., Belzer, M., Bhandari, S., & **Bray, B. C.** (2020). The Healthy Young Men's Cohort: Health, stress and risk profile of Black and Latino young men who have sex with men (YMSM). *Journal of Urban Health*, *97*, 653-667. doi: 10.1007/s11524-019-00398-6 PMID: PMC7560671
56. LoBraico*, E. J., **Bray, B. C.**, Feinberg, M., & Fosco, G. M. (2020). Constellations of family risk and long-term adolescent antisocial behavior. *Journal of Family Psychology*, *34*(5), 587-597. doi: 10.1037/fam0000640 PMID: PMC7375013
55. Patrick, M. E., Berglund, P. A., Joshi*, S., & **Bray, B. C.** (2020). A latent class analysis of heavy substance use in young adulthood and impacts on physical, cognitive, and mental health outcomes in middle age. *Drug and Alcohol Dependence*, *212*, 108018. doi: 10.1016/j.drugalcdep.2020.108018 PMID: PMC7293917
54. Surachman*, A., Daw, J., **Bray B. C.**, Alexander, L. M., Coe, C. L., & Almeida D. M. (2020). Childhood socioeconomic status, comorbidity of chronic kidney disease risk factors, and kidney function among adults in the midlife in the United States (MIDUS) study. *BMC Nephrology*, *21*(188), 1-12. doi: 10.1186/s12882-020-01846-1 PMID: PMC7236129
53. Surachman*, A., Rice, C. E., **Bray B. C.**, Gruenewald, T. L., & Almeida D. M. (2020). Association between socioeconomic status mobility and inflammation markers among white and black adults in the United States: A latent class analysis. *Psychosomatic Medicine*, *82*(2), 224-233. doi: 10.1097/PSY.0000000000000752 PMID: PMC7007866
52. Xia*, M., Weymouth*, B. B., **Bray, B. C.**, Lippold, M. A., Feinberg, M. E., & Fosco, G. M. (2020). Exploring triadic family relationship profiles and their implications for adolescents' early substance initiation. *Prevention Science*, *21*(4), 519-529. doi: 10.1007/s11121-019-01081-7 PMID: PMC7166145
51. **Bray, B. C.**, Dziak, J. J., & Lanza, S. T. (2019). Age trends in alcohol use behavior patterns among U.S. adults ages 18-65. *Drug and Alcohol Dependence*, *205*, 107689. doi: 10.1016/j.drugalcdep.2019.107689 PMID: PMC6957076
50. **Bray, B. C.**, Dziak, J. J., Patrick, M. E., & Lanza, S. T. (2019). Inverse propensity score weighting with a latent class exposure: Estimating the causal effect of reported reasons for alcohol use on problem alcohol use 16 years later. *Prevention Science*, *20*(3), 394-406. doi: 10.1007/s11121-018-0883-8 PMID: PMC6139077
49. Graupensperger*, S., Benson, A. J., **Bray, B. C.**, & Evans, M. B. (2019). Social cohesion and peer acceptance predict student-athletes' attitudes toward health-risk behaviors: A within- and between-group investigation. *Journal of Science and Medicine in Sport*, *22*(12), 1280-1286. doi: 10.1016/j.jsams.2019.07.003 PMID: PMC6825540

48. Kipke, M. D., Kubicek, K., Wong, C., Robison, Y. A., Akinyemi, D., Beyer, W., ..., Belzer, M. (2019). A focus on the HIV care continuum through the Healthy Young Men's Cohort Study: Protocol for a mixed-methods study. *Journal of Medical Internet Research – Research Protocols*, 8(1), e10738. doi: 10.2196/10738 PMID: PMC6365874
47. Maas*, M. K., **Bray, B. C.**, & Noll, J. G. (2019). Online sexual experiences predict subsequent sexual health and victimization outcomes among female adolescents: A latent class analysis. *Journal of Youth and Adolescence*, 48(5), 837-849. doi: 10.1007/s10964-019-00995-3 PMID: PMC7135936
46. **Bray, B. C.**, & Dziak, J. J. (2018). Commentary on latent class, latent profile, and latent transition analysis for characterizing individual differences in learning. *Learning and Individual Differences*, 66, 105-110. doi: 10.1016/j.lindif.2018.06.001 PMC Exempt – Not Peer-Reviewed
45. Fitzpatrick, S. L., Appel, L. J., **Bray, B. C.**, Brooks, N., & Stevens, V. J. (2018). Predictors of long-term adherence to multiple health behavior recommendations for weight management. *Health Education and Behavior*, 45(6), 997-1007. doi: 10.1177/1090198118757823 PMID: PMC6133769
44. Jacka*, B., **Bray, B. C.**, Applegate, T. L., Marshall, B. D. L., Lima, V. D., Hayashi, K., ..., Grebely, J. (2018). Drug use and phylogenetic clustering of hepatitis C virus infection among people who use drugs in Vancouver, Canada: A latent class analysis approach. *Journal of Viral Hepatitis*, 25(1), 28-36. doi: 10.1111/jvh.12758 PMID: PMC5743579
43. Maas*, M. K., **Bray, B. C.**, & Noll, J. G. (2018). A latent class analysis of online sexual experiences and offline sexual behaviors among female adolescents. *Journal of Research on Adolescence*, 28(3), 731-747. doi: 10.1111/jora.12364 PMID: PMC5960611
42. Perzow*, S. E. D., **Bray, B. C.**, & Wadsworth, M. E. (2018). Financial stress response profiles and psychosocial functioning in low-income parents. *Journal of Family Psychology*, 32(4), 517-527. doi: 10.1037/fam0000403 PMID: PMC5995125
41. Rivera*, P. M., **Bray, B. C.**, Guastafarro, K. M., Kugler, K. C., & Noll, J. G. (2018). Linking patterns of substance use with sexual risk-taking among female adolescents with and without histories of maltreatment. *Journal of Adolescent Health*, 62(5), 556-562. doi: 10.1016/j.jadohealth.2017.11.293 PMID: PMC5930059
40. Rivera*, P. M., Fincham, F. D., & **Bray, B. C.** (2018). Latent classes of maltreatment: A systematic review and critique. *Child Maltreatment*, 23(1), 3-24. doi: 10.1177/1077559517728125 PMID: PMC5614894
39. **Wang*, D., Hagedorn*, A. D., McLaughlin, D. K., & **Bray, B. C.** (2018). Change and stability of emotional health of rural Pennsylvania youth during high school. *Journal of Rural Health*, 34(3), 322-332. doi: 10.1111/jrh.12296 PMID: PMC6021226
38. Kim*, B.-R., Chow, S.-M., **Bray, B. C.**, & Teti, D. M. (2017). Trajectories of mothers' emotional availability: Relations with infant temperament in predicting attachment security. *Attachment and Human Development*, 19(1), 38-57. doi: 10.1080/14616734.2016.1252780 PMID: PMC5598772
37. Linden-Carmichael, A. N., Lanza, S. T., Dziak, J. J., & **Bray, B. C.** (2017). Contemporary alcohol use patterns among a national sample of U.S. adult drinkers. *Journal of Addictive Diseases*, 36(4), 222-226. doi: 10.1080/10550887.2017.1338816 PMID: PMC565624
36. Longo*, G. S., **Bray, B. C.**, & Kim-Spoon, J. (2017). Profiles of adolescent religiousness using latent profile analysis: Implications for psychopathology. *British Journal of Developmental Psychology*, 35(1), 91-105. doi: 10.1111/bjdp.12183 PMID: PMC5531039
35. Patrick, M. E., Terry-McElrath, Y. M., Schulenberg, J. E., & **Bray, B. C.** (2017). Patterns of high-intensity drinking among young adults in the United States: A repeated measures latent class analysis. *Addictive Behaviors*, 74(11), 134-139. doi: 10.1016/j.addbeh.2017.06.004 PMID: PMC5550283
34. Terry-McElrath, Y. M., O'Malley, P. M., Johnston, L. D., **Bray, B. C.**, Patrick, M. E., & Schulenberg, J. E. (2017). Longitudinal patterns of marijuana use across ages 18-50 in a US national sample: A descriptive examination of predictors and health correlates of repeated measures latent class

- membership. *Drug and Alcohol Dependence*, 171, 70-83. doi: 10.1016/j.drugalcdep.2016.11.021 PMID: PMC5263048
33. Acheson, A., Lake*, S. L., **Bray, B. C.**, Liang, Y., Mathias, C. W., Ryan*, S. R., ... Dougherty, D. M. (2016). Early adolescent trajectories of impulsiveness and sensation seeking in children of fathers with histories of alcohol and other substance use disorders. *Alcoholism: Clinical and Experimental Research*, 40(12), 2622-2630. doi: 10.1111/acer.13235 PMID: PMC5133168
 32. **Bray, B. C.**, Smith, R. A., Piper, M. E., Roberts, L. J., & Baker, T. B. (2016). Transitions in smokers' social networks after quit attempts: A latent transition analysis. *Nicotine and Tobacco Research*, 18(12), 2243-2251. doi: 10.1093/ntr/ntw173 PMID: PMC5103938
 31. Charles*, N. E., Ryan*, S. R., **Bray, B. C.**, Mathias, C. W., Acheson, A., & Dougherty, D. M. (2016). Altered developmental trajectories for impulsivity and sensation seeking among adolescent substance users. *Addictive Behaviors*, 60, 235-241. doi: 10.1016/j.addbeh.2016.04.016 PMID: PMC4904737
 30. Dziak, J. J., **Bray, B. C.**, Zhang*, J.-T., Zhang, M., & Lanza, S. T. (2016). Comparing the performance of improved classify-analyze approaches for distal outcomes in latent profile analysis. *Methodology: European Journal of Research Methods for the Behavioral and Social Sciences*, 12(4), 107-116. doi: 10.1027/1614-2241/a000114 PMID: PMC5473653
 29. Fosco, G. M., & **Bray, B. C.** (2016). Profiles of cognitive appraisals and triangulation into interparental conflict: Implications for adolescent adjustment. *Journal of Family Psychology*, 30(5), 533-542. doi: 10.1037/fam0000192 PMID: PMC4980208
 28. Halliburton*, A. E., & **Bray, B. C.** (2016). Long-term prevalence and demographic trends in U.S. adolescent inhalant use: Implications for clinicians and prevention scientists. *Substance Use and Misuse*, 51(3), 343-356. doi: 10.3109/10826084.2015.1110169 PMC Exempt – Not NIH Funded
 27. Patrick, M. E., **Bray, B. C.**, & Berglund, P. A. (2016). Reasons for marijuana use among young adults and long-term associations with marijuana use and problems. *Journal of Studies on Alcohol and Drugs*, 77(6), 881-888. doi: 10.15288/jsad.2016.77.881 PMID: PMC5088171
 26. Willner*, C. J., Gatzke-Kopp, L. M., & **Bray, B. C.** (2016). The dynamics of internalizing and externalizing comorbidity across the early school years. *Development and Psychopathology*, 28(4pt1), 1033-1052. doi:10.1017/S0954579416000687 PMID: PMC5319409
 25. **Bray, B. C.**, Lanza, S. T., & Tan, X. (2015). Eliminating bias in classify-analyze approaches for latent class analysis. *Structural Equation Modeling: A Multidisciplinary Journal*, 22(1), 1-11. doi: 10.1080/10705511.2014.935265 PMID: PMC4299667
 24. Charles*, N. E., Mathias, C. W., Acheson, A., **Bray, B. C.**, Ryan*, S. R., Lake*, S. L., ... Dougherty, D. M. (2015). Increased pre- and early-adolescent stress in youth with a family history of substance use disorder and early substance use initiation. *Journal of Youth and Adolescence*, 44(10), 1954-1967. doi: 10.1007/s10964-015-0271-7 PMID: PMC4565755
 23. Dougherty, D. M., Lake*, S. L., Mathias, C. W., Ryan*, S. R., **Bray, B. C.**, Charles*, N. E., & Acheson, A. (2015). Behavioral impulsivity and risk-taking trajectories across early adolescence in youth with and without family histories of substance use disorder. *Alcoholism: Clinical and Experimental Research*, 39(8), 1501-1509. doi: 10.1111/acer.12787 PMID: PMC4630668
 22. Ridenour, T. A., Halliburton*, A., & **Bray, B. C.** (2015). Does DSM-5 nomenclature for inhalant use disorder improve upon DSM-IV? *Psychology of Addictive Behaviors*, 29(1), 211-217. doi: 10.1037/adb0000007 PMID: PMC4333138
 21. Zhang*, J.-T., **Bray, B. C.**, Zhang, M., & Lanza, S. T. (2015). Personality profiles and frequent heavy drinking in young adulthood. *Personality and Individual Differences*, 80, 18-21. doi: 10.1016/j.paid.2015.01.054 PMID: PMC4397499
 20. Acheson, A., Wijtenburg, S. A., Rowland, L. M., **Bray, B. C.**, Gaston, F., Mathias, C. W., ... Dougherty, D. M. (2014). Combining diffusion tensor imaging and magnetic resonance spectroscopy to study reduced frontal white matter integrity in youths with family histories of substance use disorders. *Human Brain Mapping*, 35(12), 5877-5887. doi: 10.1002/hbm.22591 PMID: PMC4219410

19. **Bray, B. C.**, Foti, R. J., Thompson*, N. J., & Wills*, S. F. (2014). Disentangling the effects of self leader perceptions and ideal leader prototypes on leader judgments using loglinear modeling with latent variables. *Human Performance*, 27(5), 393-415. doi: 10.1080/08959285.2014.956176 PMC Exempt – Not NIH Funded
18. **Bray, B. C.**, Lee*, G. P., Liu, W., Storr, C. L., Ialongo, N. S., & Martins, S. S. (2014). Transitions in gambling participation during late adolescence and young adulthood. *Journal of Adolescent Health*, 55(2), 188-194. doi: 10.1016/j.jadohealth.2014.02.001 PMID: PMC4108554
17. Lanza, S. T., Cooper, B. R., & **Bray, B. C.** (2014). Population heterogeneity in the salience of multiple risk factors for adolescent delinquency. *Journal of Adolescent Health*, 54(3), 319-325. doi: 10.1016/j.jadohealth.2013.09.007 PMID: PMC3943167
16. James, L. M., Mathias, C. W., **Bray, B. C.**, Cates, S. E., Farris, S. J., Dawes, M. A., ... Dougherty, D. M. (2013). Acquisition of rater agreement for the Stressful Life Events Schedule. *Journal of Alcoholism and Drug Dependence*, 1(5), 1-5. doi: 10.4172/2329-6488.10000124 PMC Exempt – Open Access (PMCID: PMC8513774)
15. Lanza, S. T., Tan, X., & **Bray, B. C.** (2013). Latent class analysis with distal outcomes: A flexible model-based approach. *Structural Equation Modeling: A Multidisciplinary Journal*, 20(1), 1-26. doi: 10.1080/10705511.2013.742377 PMID: PMC4240499
14. Smith*, R. C., Coyle*, P. T., Baldner*, C., **Bray, B. C.**, & Geller, E. S. (2013). A field investigation of perceived behavioral control and blood alcohol content: A pattern-oriented approach. *Addictive Behaviors*, 38(4), 2080-2083. doi: 10.1016/j.addbeh.2013.01.003 PMC Exempt – Not NIH Funded
13. Foti, R. J., **Bray, B. C.**, Thompson*, N. J., & Allgood*, S. F. (2012). Know thy self, know thy leader: Contributions of a pattern-oriented approach to examining leader perceptions. *The Leadership Quarterly*, 23(4), 702-717. doi: 10.1016/j.leaqua.2012.03.007 PMC Exempt – Not NIH Funded
12. Tisminetzky*, M., **Bray, B. C.**, Miozzo, R., Aupont, O., & McLaughlin, T. J. (2012). Classes of depression, anxiety and functioning in acute coronary syndrome patients. *American Journal of Health Behavior*, 36(1), 20-30. doi: 10.5993/AJHB.36.1.3 PMID: PMC3704170
11. White, S. W., **Bray, B. C.**, & Ollendick, T. H. (2012). Examining shared and unique aspects of social anxiety disorder and autism spectrum disorder using factor analysis. *Journal of Autism and Developmental Disorders*, 42(5), 874-884. doi: 10.1007/s10803-011-1325-7 PMC Exempt – Not NIH Funded
10. Mathias, C. W., Blumenthal, T. D., Dawes, M. A., Liguori, A., Richard, D. M., **Bray, B. C.**, ... Dougherty, D. M. (2011). Failure to sustain prepulse inhibition in adolescent marijuana users. *Drug and Alcohol Dependence*, 116(1-3), 110-116. doi: 10.1016/j.drugalcdep.2010.11.020 PMID: PMC3091950
9. Tisminetzky*, M., **Bray, B. C.**, Miozzo, R., Aupont, O., & McLaughlin, T. J. (2011). Identifying symptom profiles of depression and anxiety in patients with an acute coronary syndrome using latent class and latent transition analysis. *The International Journal of Psychiatry in Medicine*, 42(2), 195-210. doi: 10.2190/PM.42.2.g PMID: PMC3712857
8. White, S. W., Ollendick, T. H., & **Bray, B. C.** (2011). College students on the autism spectrum: Prevalence and associated problems. *Autism*, 15(6), 683-701. doi: 10.1177/1362361310393363 PMC Exempt – Not NIH Funded
7. **Bray, B. C.**, Lanza, S. T., & Collins, L. M. (2010). Modeling relations among discrete developmental processes: A general approach to associative latent transition analysis. *Structural Equation Modeling: A Multidisciplinary Journal*, 17(4), 541-569. doi: 10.1080/10705511.2010.510043 PMID: PMC3094019
6. **Davidson, J. E., Irizarry, M. C., **Bray, B. C.**, Wetten, S., Galwey, N., Gibson, R., ... Monsch, A. U. (2010). An exploration of cognitive subgroups in Alzheimer's Disease. *Journal of the International Neuropsychological Society*, 16(2), 233-243. doi: 10.1017/S1355617709991160 PMID: PMC2903844
5. Lanza, S. T., & **Bray, B. C.** (2010). Transitions in drug use among high-risk women: An application of latent class and latent transition analysis. *Advances and Applications in Statistical Sciences*, 3(2), 203-236. PMID: PMC3171700

4. **Koukounari, A., Webster, J. P., Donnelly, C. A., **Bray, B. C.**, Naples, J., Bosompem, K., ... Shiff, C. (2009). Sensitivities and specificities of diagnostic tests and infection prevalence of *Schistosoma haematobium* estimated from data on adults in villages northwest of Accra, Ghana. *American Journal of Tropical Medicine and Hygiene*, 80(3), 435-441. PMID: PMC2726788
3. White, H. R., **Bray, B. C.**, Fleming, C. B., & Catalano, R. F. (2009). Transitions into and out of light and intermittent smoking from adolescence into emerging adulthood. *Nicotine and Tobacco Research*, 11(2), 211-219. doi: 10.1093/ntr/ntn017 PMID: PMC2658905
2. Ridenour, T. A., **Bray, B. C.**, & Cottler, L. B. (2007). Reliability of use, abuse, and dependence of four types of inhalants in adolescents and young adults. *Drug and Alcohol Dependence*, 91(1), 40-49. doi:10.1016/j.drugalcdep.2007.05.004 PMID: PMC2040516
1. **Bray, B. C.**, Almirall, D., Zimmerman, R. S., Lynam, D., & Murphy, S. A. (2006). Assessing the total effect of time-varying predictors in prevention research. *Prevention Science*, 7(1), 1-17. doi: 10.1007/s11121-005-0023-0 PMID: PMC1479302

Under Review

- Blank, M. D., Romm*, K. F., Childers*, M. G., Douglas*, A. E., Dino, G., & **Bray, B. C.** (2022). Longitudinal transitions in adolescent polytobacco use across waves 1-4 of the Population Assessment of Tobacco and Health (PATH) study. Manuscript submitted for publication. [*Addiction*]
- Bray, B. C.**, Layland*, E. K., Stull*, S. W., Vasilenko, S. A., & Lanza, S. T. (2022). Estimating the effects of a complex, multidimensional moderator: An example of latent class moderation to examine differential intervention effects of substance use services. Manuscript resubmitted for publication. [*Prevention Science*]
- Layland*, E. K., **Bray, B. C.**, Kipke, M. D., & Maggs, J. L. (2022). Intersectional stigma subgroups differ in unhealthy drinking and disordered marijuana use among Black and Latino cisgender sexual minority men. Manuscript resubmitted for publication. [*Drug and Alcohol Dependence*]
- Parra, L. A., Spahr*, C. M., Goldbach, J. T., **Bray, B. C.**, Kipke, M. D., & Slavich, G. M. (2022). Lifetime stress exposure and mental health among sexual minority people of color. Manuscript resubmitted for publication. [*Journal of Clinical Psychology*]
- Romm*, K. F., Turiano, N. A., Milstred*, A. R., **Bray, B. C.**, Dino, G., Doogan, N., & Blank, M. D. (2022). Socioecological predictors of change in adolescent tobacco use across waves 1-4 of the Population Assessment of Tobacco and Health study. Manuscript submitted for publication. [*Preventive Medicine*]
- Rusow*, J. A., Hidalgo, M. A., Calvetti, S., Quint, M., Wu, S., **Bray, B. C.**, & Kipke, M. D. (2022). Health and service utilization among a sample of gender-diverse youth of color: The TRUTH Study. Manuscript submitted for publication. [*BMC Public Health*]

Under Revision

- Higuchi*, C. H., Fonseca, L., **Bray, B. C.**, Cogo-Moreira, H., Okuda, P., Ortiz, B. B., ... Gadelha, A. (2019). The positive and negative syndrome scale (PANSS) as a group profile generator in Schizophrenia. Manuscript submitted for publication. [rejected, new journal TBD]
- Shapiro*, Z. R., **Bray, B. C.**, & Huang-Pollock, C. L. (2021). Mechanism-based groups of children with ADHD are associated with distinct domains of impairment. Manuscript submitted for publication. [rejected, new journal TBD]
- Van Doren*, N., Layland*, E. K., Mahlobo*, C. T., & **Bray, B. C.** (2020). Person-centered coping profiles moderate the links between racial discrimination and mental health in Black Americans. Manuscript submitted for publication. [rejected, new journal TBD]

Book Chapters

3. Lanza, S. T., Schuler*, M. S., & **Bray, B. C.** (2016). Latent class analysis with causal inference: The effect of adolescent depression on young adult substance use profile (Chp. 16, pp. 385-404). In W. Wiedermann & A. von Eye (Eds.), *Causality and Statistics*. Hoboken, NJ: Wiley.

2. Lanza, S. T., **Bray, B. C.**, & Collins, L. M. (2013). An introduction to latent class and latent transition analysis. In J. A. Schinka, W. F. Velicer, & I. B. Weiner (Eds.), *Handbook of psychology* (2nd ed., Vol. 2, pp. 691-716). Hoboken, NJ: Wiley.
1. Ridenour, T. A., **Bray, B. C.**, Scott, H. S., & Cottler, L. B. (2008). Classification and assessment of substance use disorders in adolescents. In C. A. Essau (Ed.), *Adolescent addiction: Epidemiology, assessment, and treatment (Practical resources for the mental health professional)* (pp. 17-57). Burlington, MA: Academic Press.

Other Publications

- Van Doren*, N., Layland*, E. K., Mahlobo*, C. T., & **Bray, B. C.** (2021). Person-centered coping profiles moderate the links between racial discrimination and mental health in Black Americans. Online publication from *PsyArXiv Preprints*. doi: psyarxiv.com/8rt73
- Lydon-Staley*, D. M., LoBraico*, E. J., **Bray, B. C.**, & Fosco, G. M. (2019). Conceptualizations of the family context: New insights gained by capturing daily variability in cohesion and conflict. Online publication from *PsyArXiv Preprints*. doi: 10.31234/osf.io/zq35f
- Bray, B. C.**, Lanza, S. T., & Tan, X. (2012). *An introduction to eliminating bias in classify-analyze approaches for latent class analysis* (Tech. Rep. No. 12-118). University Park, PA: The Methodology Center, The Pennsylvania State University.
- Lanza, S. T., Tan, X., & **Bray, B. C.** (2011). A technical introduction: A model-based approach to latent class analysis with distal outcomes (Tech. Rep. No. 11-116). University Park, PA: The Methodology Center, The Pennsylvania State University.
- Bray, B. C.** (2008). *Dissertation executive summary for "Examining gambling and substance use: Applications of advanced latent class modeling techniques for cross-sectional and longitudinal data"* (Tech. Rep. No. 08-88). University Park, PA: The Methodology Center, The Pennsylvania State University.
- Bray, B. C.** (2005). *Modeling the development of substance use and delinquency simultaneously: An associative latent transition analysis example* (Tech. Rep. No. 05-72). University Park, PA: The Methodology Center, The Pennsylvania State University.
- Bray, B. C.**, Zimmerman, R. S., Lynam, D., & Murphy, S. A. (2003). *Assessing the total effect of time-varying predictors in prevention research* (Tech. Rep. No. 03-59). University Park, PA: The Methodology Center, The Pennsylvania State University.
- Wong, P., McAuslan, P., & **Bray, B. C.** (2000). *Survey of problem gambling in the Metropolitan Detroit Area, 2000*. Conducted under contract for the United Way Community Services.

Software

- Dziak, J. J., **Bray, B. C.**, & Wagner, A. T. (2020). *LCA_Covariates_3Step SAS macro users' guide* (Version 1.0). University Park, PA: The Methodology Center, Penn State. Retrieved from <http://methodology.psu.edu>
- Dziak, J. J., **Bray, B. C.**, & Wagner, A. T. (2017). *LCA_Distal_BCH SAS macro users' guide* (Version 1.1). University Park: The Methodology Center, Penn State. Retrieved from <http://methodology.psu.edu>
- Dziak, J. J., Yang, J., Tan, X., **Bray, B. C.**, Wagner, A. T., & Lanza, S. T. (2017). *LCA_Distal_LTB SAS macro users' guide* (Version 1.1). University Park: The Methodology Center, Penn State. Retrieved from <http://methodology.psu.edu>
- Huang, L., Dziak, J. J., **Bray, B. C.**, & Wagner, A. T. (2017). *LCA_Distal_BCH Stata function users' guide* (Version 1.1). University Park: The Methodology Center, Penn State. Retrieved from <http://methodology.psu.edu>
- Huang, L., Dziak, J. J., **Bray, B. C.**, Wagner, A. T., & Lanza, S. T. (2017). *LCA_Distal_LTB Stata function users' guide* (Version 1.0). University Park: The Methodology Center, Penn State. Retrieved from <http://methodology.psu.edu>
- Dziak, J. D., Yang, J., Tan, X., **Bray, B. C.**, Wagner, A. T., & Lanza, S. T. (2015). *LCA distal SAS macro users' guide* (Version 3.0). University Park, PA: The Methodology Center, Penn State. Retrieved from <http://methodology.psu.edu/downloads/distal> [retired software product]

Presentations

- *** Denotes invited presentation
- ** Denotes organized symposium
- * Denotes graduate student, or post-doctoral or other fellow

Presented Internationally

- Parra, L. A., Roos*, L. G., Spahr*, C., Goldbach, J. T., **Bray, B. C.**, Kipke, M. D., & Slavich, G. M. (2022, June). *Optimism mitigates the effects of financial stressors on mental health among sexual minority people-of-color*. Poster presented at the 3rd International Conference on LGBT+ Psychology and Related Fields, Lisbon, Portugal.
- Donenberg, G., Merrill*, K. G., Atujuna, M., Emerson, E., Blachman-Demner, D., **Bray, B. C.**, & Bekker, L.-G. (2021, July). *Mental health outcomes of an HIV-prevention program for South African adolescent girls and young women and their female caregivers*. Poster presented at the International Workshop on HIV Pediatrics 2021, Virtual.
- Merrill*, K. G., Atujuna, M., Emerson, E., Blachman-Demner, D., **Bray, B. C.**, Bekker, L.-G., & Donenberg, G. (2021, July). *IMARA SA: Piloting a family-based HIV/STI prevention package for South African adolescent girls and young women*. Poster presented at the International Workshop on HIV Pediatrics 2021, Virtual.
- Kubicek, K., Bolton, A., **Bray, B. C.**, Wu, S., & Kipke, M. D. (2020, November). Consistent and inconsistent use of PrEP among young men who have sex with men: A mixed methods study. Poster presented at the 15th International Conference on HIV Treatment and Prevention Adherence, Orlando, FL.
- Kubicek, K., Bolton, A., **Bray, B. C.**, Wu, S., & Kipke, M. D. (2020, July). A mixed methods study to examine discontinuation of PrEP among young men of color who have sex with men (YMSM). Poster presented at the 23rd International AIDS Conference, virtual: www.aids2020.org.
- Surachman*, A., **Bray, B. C.**, Alexander, L. M., Coe, C. L., & Almeida, D. M. (2019, April). *Latent classes of chronic kidney disease risk factors among adults in the Midlife in the United States (MIDUS) study: Socioeconomic covariates and association with eGFR*. Poster presented at the International Society of Nephrology World Congress of Nephrology, Melbourne, Australia.
- Higuchi*, C. H., Cogo-Moreira, H., Ortiz, B., Correll, C., Noto, C., Okuda, P., ..., Gadelha, A. (2019, April). *Exploring new approaches to parse the clinical heterogeneity in schizophrenia by structure equation modeling*. Paper presented at the 2019 Congress of the Schizophrenia International Research Society, Orlando, FL.
- Koutoumanou, E. Batterham, M., & **Bray, B. C.** (2018, July). *Statistics education in the workplace*. Panel discussion presented at the 10th International Conference on Teaching Statistics, Kyoto, Japan.
- Hung*, Y. W., **Bray, B. C.**, & Maggs, J. L. (2018, March). *Understanding childhood risk factors for patterns of distress, alcohol use, and smoking in adulthood*. Paper presented at the NCDS 60 Years of Our Lives Conference, Centre for Longitudinal Studies, London, England.
- *****Bray, B. C.** (2017, November). *The Methodology Center at Penn State & our ongoing mixture modeling research*. Brown bag seminar presented at the Methodology & Statistics Unit, Institute of Psychology, Leiden University, Leiden, Netherlands.
- Fitzpatrick, S. L., Brooks, N., **Bray, B. C.**, Stevens, V. J. (2017, June). *Non-adherence to behavioral recommendations is associated with suboptimal psychological well-being among African Americans*. Poster presented at the 8th International Conference on Health Psychology, Havana, Cuba.
- Bray, B. C.** (2016, October). *An introduction to latent class analysis for prevention research: Identifying high-risk subgroups in the population*. Workshop presented at the European Society for Prevention Research 7th Annual Conference and Members' Meeting, Berlin, Germany.
- *****Bray, B. C.** (2016, May). *My experience as a woman in mathematics and statistics*. Discussion presented at the Women in Mathematics Day: Ireland at the Mathematics Applications Consortium for Science and Industry, University of Limerick, Limerick, Ireland.

- *****Bray, B. C.** (2016, May). *Cutting-edge advances in latent class analysis for today's behavioral scientists*. Keynote paper presented at the Irish Statistical Association's 36th Conference on Applied Statistics in Ireland at the Department of Mathematics and Statistics, University of Limerick, Limerick, Ireland.
- *****Bray, B. C.** (2016, May). *Latent class analysis for uncovering hidden population subgroups*. Workshop presented at the Irish Statistical Association's 36th Conference on Applied Statistics in Ireland at the Department of Mathematics and Statistics, University of Limerick, Limerick, Ireland.
- *****Bray, B. C.** (2014, November). *Latent profile analysis: A step-by-step primer*. Workshop presented for the Leadership Seminar Series at the Business School of Durham University, Durham, England.
- *****Bray, B. C., & Foti, R. J.** (2014, November). *A brief introduction to latent profile analysis in leadership research*. Paper presented for the Leadership Seminar Series at the Business School of Durham University, Durham, England.
- *****Bray, B. C.** (2014, July). *A practical guide to causal inference with propensity scores*. Workshop presented at the School of Public Health, Xi'an Jiaotong University, Xi'an, China.
- *****Bray, B. C.** (2014, July). *An introduction to latent class analysis*. Workshop presented at the School of Public Health, Xi'an Jiaotong University, Xi'an, China.
- *****Bray, B. C.** (2014, July). *A practical guide to causal inference with propensity scores*. Workshop presented at the School of Psychology, South China Normal University, Guangzhou, China.
- *****Bray, B. C.** (2014, July). *An introduction to latent class analysis*. Workshop presented at the School of Psychology, South China Normal University, Guangzhou, China.
- *****Bray, B. C.** (2014, June). *An introduction to latent class and latent transition analysis*. Workshop presented at the Guanghua School of Management, Center for Statistical Science and School of Mathematical Sciences, Peking University, Beijing, China.
- ***Lanza, S. T., & **Bray, B. C.** (2014, May). *Integrating propensity scores with latent class analysis to identify determinants of class membership*. Paper presented at the Statistics and Causality Conference, Vienna, Austria.
- ***Collins, L. M., Lanza, S. T., & **Bray, B. C.** (2008, September). *Masterclass: Latent class analysis for cross-sectional and longitudinal data*. Department of Mathematics and Statistics Postgraduate Statistics Centre of Lancaster University and the Economic and Social Research Council National Centre for Research Methods: Lancaster, England.
- ***Collins, L. M., Lanza, S. T., & **Bray, B. C.** (2007, February). *ZA spring seminar, topics in advanced categorical data analysis (CDA): Latent class analysis for cross-sectional and longitudinal data*. The University of Cologne: Cologne, Germany.
- Bray, B. C.** (2004, June). *Spatial distribution of poverty in Michigan counties, 1990 Census data*. Poster presented at the 7th International Summer Institute on Developmental Science, Jyväskylä, Finland.

Presented Nationally

- Layland*, E. K., Berglund, P. A., Diaz*, J. E., Kipke, M. D., & **Bray, B. C.** (July, 2022). *Patterns of racist and heterosexist stigma drive differences in mental health trajectories of Black and Latino sexual minority young men: A person-centered approach to quantitative intersectional research*. Paper presented at the National LGBTQ Health Conference, Chicago, IL.
- Rusow*, J. A., Srivastava*, A., **Bray, B. C.**, Goldbach, J. T., & Kipke, M. D. (2022, July). *Intimate partner violence victimization and perpetration experiences are associated with differential substance use patterns among young sexual minority men of color*. Paper presented at the National LGBTQ Health Conference, Chicago, IL.
- Linden-Carmichael, A. N., Van Doren*, N., **Bray, B. C.**, Jackson, K. M., & Lanza, S. T. (2022, June). *Daily substance use patterns and implications for substance-related consequences: An application of latent class analysis for daily diary data*. Poster presented at the Research Society on Alcoholism Annual Meeting, Orlando, FL.

- Lanza, S. T., Stull*, S. W., Linden-Carmichael, A. N., & **Bray, B. C.** (2022, June). *Daily latent class membership and associations with acute consequences*. Paper presented to the Society for Ambulatory Assessments Meeting, Virtual.
- Mohan*, L., Parra, L. A., Spahr*, C. M., Goldbach, J. T., **Bray, B. C.**, Kipke, M. D., & Slavich, G. M. (2022, April). *Ethnic/racial and sexual minority group differences in lifetime stressor exposure and mental health*. Poster presented at the Western Psychological Association Convention, Portland, OR.
- Mohan*, L., Parra, L. A., Spahr*, C. M., Goldbach, J. T., **Bray, B. C.**, Kipke, M. D., & Slavich, G. M. (2022, April). *Lifetime stressor exposure and mental health among sexual minority people of color*. Poster presented at the Western Psychological Association Convention, Portland, OR.
- Blank, M. D., Romm*, K. F., **Bray, B. C.**, Milstred*, A. R., Douglas*, A. E., Childers*, M. G., Dino, G., & Turiano, N. A. (2022, March). *Predictors of change in youth tobacco product use across waves 1-4 of the Population Assessment of Tobacco & Health (PATH) Study*. Poster presented at the 28th Annual Meeting of the Society for Research on Nicotine and Tobacco, Baltimore, MD.
- Childers*, M. G., Romm*, K. F., Douglas*, A. E., **Bray, B. C.**, Dino, G., Blank, M. D., (2022, March). *Longitudinal transitions in youth tobacco use: Findings from waves 1-4 of the PATH Study*. Poster presented at the 28th Annual Meeting of the Society for Research on Nicotine and Tobacco, Baltimore, MD.
- Romm*, K. F., Childers*, M., Douglas*, A. E., **Bray, B. C.**, Dino, G., & Blank, M. D. (2022, March). *Sociodemographic correlates of transitions in tobacco use profiles among adolescents: Results from the Population Assessment of Tobacco and Health (PATH) study waves 3 and 4*. Paper presented at the 28th Annual Meeting of the Society for Research on Nicotine and Tobacco, Baltimore, MD.
- Taylor, S. P., **Bray, B. C.**, Chou, S. H., & Kowalkowski, M. A. (2022, February). *Clinical subtypes of sepsis survivors predict readmission and mortality after hospital discharge*. Paper presented at the Society of Critical Care Annual Conference, San Juan, Puerto Rico.
- ***Lanza, S. T., & **Bray, B. C.** (2022, February). *Latent class analysis*. Workshop presented for Statistical Horizons, Virtual.
- Layland*, E. K., Smith, J. C., Soulliard*, Z. A., Kipke, M. D., & **Bray, B. C.** (2021, November). *Body image concerns, correlates, and community connectedness among Black and Latino sexual minority men and trans/gender non-conforming people*. Paper presented at the Association for Behavioral and Cognitive Therapies Annual Convention, New Orleans, LA.
- *****Bray, B. C.** (2021, November). *Introduction to latent class and latent profile analysis*. Workshop presented at the Indiana University Workshop in Methods Series, Social Science Research Commons, Indiana University Bloomington, Bloomington, IN.
- Childers*, M., Romm*, K. F., Douglas*, A. E., **Bray, B. C.**, Dino, G., & Blank, M. D. (2021, October). *Longitudinal transitions in youth tobacco use: Findings from waves 1-4 of the PATH study*. Paper presented at the National Institutes of Health Tobacco Regulatory Science Meeting, Bethesda, MD.
- *****Bray, B. C.**, & Lanza, S. T. (2021, July). *Latent class, latent profile, and latent transition analysis*. Workshop presented for the Inter-University Consortium for Political and Social Research (ICPSR) Summer Program in Quantitative Methods of Social Research, Virtual.
- Merrill*, K. G., Atujuna, M., Emerson, E., Blachman-Demner, D., Fynn, L., **Bray, B. C.**, Bekker, L., & Donenberg, G. (2021, June). *Cross-continental and community collaboration to adapt and pilot an HIV/STI prevention program for South African adolescent girls and young women*. Paper presented at the Biennial Meeting of the Society for Community Research and Action, Virtual.
- *****Bray, B. C.**, Dziak, J. J., & Lanza, S. T. (2021, June). *Latent class analysis with time-varying covariate effects: A simulation study and empirical example of LCA-TVEM*. Paper presented at the Western North American Region of the International Biometric Society Annual Meeting, Virtual.
- ***Lanza, S. T., & **Bray, B. C.** (2021, June). *Latent class analysis*. Workshop presented for Statistical Horizons, Virtual.

- **Herman, K. C., & **Bray, B. C.** (2021, June). *Advances in analyzing categorical data*. Paper symposium presented at the Society for Prevention Research 29th Annual Meeting: "Addressing Racism and Disparities when Considering Biology and Context," Virtual.
- Vasilenko, S. A., Smith*, C. S., Joseph*, T. M., & **Bray, B. C.** (2021, June). *Profiles of adolescent social-ecological factors and young adult sexual behavior: Differences by race/ethnicity*. Paper presented at the Society for Prevention Research 29th Annual Meeting: "Addressing Racism and Disparities when Considering Biology and Context," Virtual.
- Layland*, E. K., Maggs, J. L., Kipke, M. D., & **Bray, B. C.** (2021, May). *A quantitative approach to intersectional health research: Structural inequalities and health disparities among latent subgroups of Black and Latino sexual minority men*. Poster presented at the National LGBTQ Health Conference: "Bridging Research & Practice," Virtual.
- Vasilenko, S. A., Smith*, C. S., & **Bray, B. C.** (2021, April). *Multidimensional profiles of adolescent social-ecological risk and protective factors and young adult sexual behavior*. Paper presented at the 2021 Biennial Meeting of the Society for Research in Child Development, Virtual.
- Douglas*, A. E., Romm*, K. F., Childers*, M., **Bray, B. C.**, Dino, G., & Blank, M. (2021, February). *Positive tobacco use motives predict transitions in polytobacco use: Results from Waves 3 and 4 of the PATH Study*. Poster presented at the Society for Research on Nicotine and Tobacco 27th Annual Meeting, Virtual.
- ***Lanza, S. T., & **Bray, B. C.** (2020, December). *Latent class analysis*. Workshop presented for Statistical Horizons, Virtual.
- Layland*, E. K., **Bray, B. C.**, & Kipke, M. D. (2020, October). *Sexual racism and body image concerns over time among Black and Latino sexual minority men*. Poster waitlisted at the American Public Health Association Annual Meeting, San Francisco, CA.
- Van Doren*, N., Linden-Carmichael, A. N., **Bray, B. C.**, Lanza, S. T. (2020, June). *Examining daily patterns of substance use in young adults and their relation to daily stress and negative affect: An application of latent class analysis to daily diary data*. Poster presented at the Modern Modeling Methods (M3) Conference, Storrs, CT. [conference cancelled due to COVID-19]
- ****Bray, B. C.**, & Marsiglia, F. F. (2020, May). *Increasing health equity for diverse populations: Place-based etiology, intervention, and implementation*. Paper symposium presented at the Society for Prevention Research 28th Annual Meeting: "Why Context Matters: Towards a Place-Based Prevention Science," Washington, DC. [parts of conference cancelled due to COVID-19]
- LoBraico*, E. J., Fosco, G. M., **Bray, B. C.**, & Feinberg, M. (2020, May). *Patterns of engagement in the Strengthening Families Program: For Parents and Youth Ages 10-14*. Paper presented at the Society for Prevention Research 28th Annual Meeting: "Why Context Matters: Towards a Place-Based Prevention Science," Washington, DC. [parts of conference cancelled due to COVID-19]
- Layland*, E. K., **Bray, B. C.**, & Kipke, M. D. (2020, April). *Experiences and health correlates of discrimination are not universal: Stress, racism, and homonegativity as determinants of drug use among diverse sexual minority men*. Paper presentation at the Society for Behavioral Medicine Annual Meeting, San Francisco, CA. [conference cancelled due to COVID-19]
- Perzow*, S. E. D., **Bray, B. C.**, Wadsworth, M. E., & Hankin, B. L. (2020, March). *Individual differences in adolescent coping across contexts*. Paper presentation at the Society for Research on Adolescence Annual Meeting, San Diego, CA. [conference cancelled due to COVID-19]
- Xia*, M., Fosco, G. M., & **Bray, B. C.** (2020, March). *Triadic family relationship dynamics and adolescent well-being*. Paper presentation at the Society for Research on Adolescence Annual Meeting, San Diego, CA. [conference cancelled due to COVID-19]
- ***Lanza, S. T., & **Bray, B. C.** (2019, December). *Latent class analysis*. Workshop presented for Statistical Horizons, Philadelphia, PA.
- *****Bray, B. C.** (2019, November). *Latent class analysis*. Workshop presented at the Institute for Translational Research in Children's Mental Health, University of Minnesota, Minneapolis, MN.
- *****Bray, B. C.** (2019, November). *Advancing intervention science and promoting health equity using innovative quantitative methods*. Paper presented at the Institute for Translational Research in Children's Mental Health, University of Minnesota, Minneapolis, MN.

- *****Bray, B. C.** (2019, November). *Innovative design and analysis tools for optimizing behavioral interventions: Understanding heterogeneity to achieve health equity*. Paper presented at the American Heart Association Scientific Sessions 2019, Philadelphia, PA.
- Layland*, E. K., Kipke, M. D., **Bray, B. C.**, & Kubicek, K. (2019, May). *Unpacking the effects of stress and discrimination on substance use: Similarities and differences among Latino, Black, and Multi-Racial/Ethnic young men who have sex with men*. Poster presented at the 2019 National LGBTQ Health Conference: "Bridging Research and Practice," Atlanta, GA.
- Bray, B. C.**, Dziak, J. J., & Lanza, S. T. (2019, May). *Combining latent class analysis with time-varying effect modeling: Understanding the epidemiology of alcohol use*. Paper presented at the Society for Prevention Research 27th Annual Meeting: "Prevention Science in a Big Data World," San Francisco, CA.
- ****Bray, B. C.**, & Witkiewitz, K. (2019, May). *Applying latent class models in prevention science: Practical solutions to everyday problems*. Organized paper symposium presented at the Society for Prevention Research 27th Annual Meeting: "Prevention Science in a Big Data World," San Francisco, CA.
- Dziak, J. J., & **Bray, B. C.** (2019, May). *Multiple imputation of missing covariate information in latent class analysis: Evaluation of a step-by-step approach*. Paper presented at the Society for Prevention Research 27th Annual Meeting: "Prevention Science in a Big Data World," San Francisco, CA.
- Layland*, E. K., **Bray, B. C.**, Kubicek, K., Bhandari, S., & Kipke, M. D. (2019, May). *Drug use patterns among young men of color who have sex with men*. Poster presented at the Society for Prevention Research 27th Annual Meeting: "Prevention Science in a Big Data World," San Francisco, CA.
- LoBraico*, E. J., **Bray, B. C.**, Fosco, G. M., & Feinberg, M. (2019, May). *Constellations of family risk and long-term adolescent antisocial behavior: A latent profile analysis*. Paper presented at the Society for Prevention Research 27th Annual Meeting: "Prevention Science in a Big Data World," San Francisco, CA.
- Xia*, M., **Bray, B. C.**, & Fosco, G. M. (2019, May). *Using multilevel latent profile analysis for daily diary data: Understanding the dynamics of mother-father-adolescent triadic relationships*. Paper presented at the Society for Prevention Research 27th Annual Meeting: "Prevention Science in a Big Data World," San Francisco, CA.
- Van Doren*, N., Layland*, E. K., & **Bray, B. C.** (2019, May). *Coping with racial discrimination: Person-centered coping profiles moderate the association between daily discrimination and depressive and anxious symptoms in African Americans*. Poster presented at the Association for Psychological Science 31st Annual Convention, Washington, DC.
- Weymouth*, B. B., Fosco, G. M., **Bray, B. C.**, & Feinberg, M. E. (2019, March). *Sequence of co-occurring social anxiety and antisocial behavior during early adolescence: A latent transition analysis*. Poster presented at the 2019 Biennial Meeting of the Society for Research in Child Development, Baltimore, MD.
- Xia*, M., Fosco, G. M., & **Bray, B. C.** (2019, March). *Profiles of family relationship dynamics: Associations with adolescent flourishing*. Paper presented at the 2019 Biennial Meeting of the Society for Research in Child Development, Baltimore, MD.
- Surachman*, A., **Bray, B. C.**, Gruenewald, T. L., & Almeida, D. M. (2018, November). *Rags to rags, riches to riches: Socioeconomic mobility and psychobiological mediators of SES-health association*. Paper presented at the Gerontological Society of America Annual Scientific Meeting, Boston, MA.
- Rivera*, P. M., **Bray, B. C.**, Kugler, K. C., Guastaferrero, K., & Noll, J. G. (2018, November). *Linking patterns of substance use with sexual risk-taking among female adolescents with and without histories of maltreatment*. Poster presented at the annual meeting of the American Association for Marriage and Family Therapy, Louisville, KY.
- *****Bray, B. C.** (2018, September). *An introduction to latent class and latent profile analysis*. Workshop presented at the Department of Family Studies and Human Development, The University of Arizona, Tucson, AZ.

- *****Bray, B. C.** (2018, September). *Increasing health equity using innovative design and analysis tools from The Methodology Center at Penn State*. Paper presented at the Minority Affairs Workshop, American College of Epidemiology, Cincinnati, OH.
- Bray, B. C.**, Dziak, J. J., Patrick, M. E., & Lanza, S. T. (2018, June). *Causal analysis with latent class exposures using inverse propensity scores and BCH adjustment*. Poster presented at the 7th Annual Thomas R. Ten Have Symposium on Statistics in Mental Health, Chicago, IL.
- Bray, B. C.**, & Liu, M. (2018, June). *Discussion of "mediation analysis with censored time-to-event mediator"*. Paper presented at the 7th Annual Thomas R. Ten Have Symposium on Statistics in Mental Health, Chicago, IL.
- Chilenski, S. M., Prado, G., Etz, K., **Bray, B. C.**, Knapp, A. A. (2018, May). *Hot off the press! SPR training needs assessment findings: Dissemination and discussion around the reported training needs of SPR members*. Roundtable panel discussion presented at the Society for Prevention Research 26th Annual Meeting: "Optimizing the Relevance of Prevention Science to Systems," Washington, DC.
- LoBraico*, E. J., **Bray, B. C.**, Fosco, G. M., Feinberg, M., Spoth, R., & Redmond, C. (2018, May). *Profiles of risk among enrollees in the Strengthening Families Program: For Parents and Youth Ages 10-14*. Poster presented at the Society for Prevention Research 26th Annual Meeting: "Optimizing the Relevance of Prevention Science to Systems," Washington, DC.
- Xia*, M., Weymouth*, B. B., **Bray, B. C.**, Lippod, M. A., Feinberg, M. E., & Fosco, G. M. (2018, May). *Exploring influence of triadic family relationship profiles on adolescents' early substance initiation*. Poster presented at the Society for Prevention Research 26th Annual Meeting: "Optimizing the Relevance of Prevention Science to Systems," Washington, DC.
- Xia*, M., Fosco, G. M., & **Bray, B. C.** (2018, April). *Triadic dance on a daily basis: Profiles of mother-father-adolescent triadic relationship forms and dynamics*. Poster presentation at the Society for Research on Adolescence Biennial Meeting, Minneapolis, MN.
- Weymouth*, B. B., Fosco, G.M., **Bray, B. C.**, & Feinberg, M. E. (2018, April). *A latent profile analysis of co-occurring social anxiety and antisocial behavior: Implications for youth substance use initiation*. Poster presentation at the Society for Research on Adolescence Biennial Meeting, Minneapolis, MN.
- Surachman*, A., Gruenewald, T. L., **Bray, B. C.**, & Almeida, D. M. (2018, March). *Life course socioeconomic status and markers of inflammation in adulthood: A latent class analysis approach*. Paper presented at the American Psychosomatic Society 76th Annual Scientific Meeting, Louisville, KY.
- *****Bray, B. C.** (2018, February). *An introduction to latent class, latent profile, and latent transition analysis*. Workshop presented at the Educational Psychology, Measurement, and Evaluation Program, University of Louisville, Louisville, KY.
- Jacka*, B., **Bray, B. C.**, Applegate, T. L., Marshall, B. D. L., Lima, V. D., Hayashi, K., ..., Grebely, J. (2017, September). *Hepatitis C virus phylogenetic clustering and latent class analysis of drug use among people who use drugs in Vancouver, Canada*. Paper presented at the 6th International Symposium on Hepatitis Care in Substance Users, Jersey City, NJ.
- Terry-McElrath, Y. M., Patrick, M. E., Schulenberg, J. E., & **Bray, B. C.** (2017, June). *Patterns of high-intensity drinking from ages 18 to 25/26: A U.S. national young adult sample*. Poster presented at the Research Society on Alcoholism 40th Annual Scientific Meeting, Denver, CO.
- ****Bray, B. C.**, & White, H. R. (2017, May). *Understanding alcohol, marijuana and e-cigarette use during emerging adulthood: New contributions of person-centered approaches*. Organized paper symposium presented at the Society for Prevention Research 25th Annual Meeting: "Prevention and Public Systems of Care: Research, Policy and Practice," Washington, DC.
- Bray, B. C.**, Berglund, P. A., & Patrick, M. E. (2017, May). *Transitions in marijuana use and patterns of reasons for use during young adulthood*. Paper presented at the Society for Prevention Research 25th Annual Meeting: "Prevention and Public Systems of Care: Research, Policy and Practice," Washington, DC.
- Guastaferrero*, K. M., & **Bray, B. C.** (2017, May). *Examining patterns of childhood maltreatment history and adulthood mental health and substance use outcomes*. Poster presented at the Society for

- Prevention Research 25th Annual Meeting: "Prevention and Public Systems of Care: Research, Policy and Practice," Washington, DC.
- Maldonado-Molina, M. M., **Bray, B. C.**, Estrada, Y., & Prado, G. (2017, May). *Profiles of parental acculturation and stress and effects on family cohesion, communication and positive parenting among Hispanics*. Poster presented at the Society for Prevention Research 25th Annual Meeting: "Prevention and Public Systems of Care: Research, Policy and Practice," Washington, DC.
- Perzow*, S. E., **Bray, B. C.**, & Wadsworth, M. E. (2017, May). *Stress response profiles and behavioral functioning among low-income parents*. Paper presented at the Society for Prevention Research 25th Annual Meeting: "Prevention and Public Systems of Care: Research, Policy and Practice," Washington, DC.
- Rivera*, P. M., **Bray, B. C.**, Guastaferrero*, K. M., & Fincham, F. D. (2017, May). *Linking childhood maltreatment to patterns of adolescent substance use*. Poster presented at the Society for Prevention Research 25th Annual Meeting: "Prevention and Public Systems of Care: Research, Policy and Practice," Washington, DC.
- *****Bray, B. C.** (2017, April). *An introduction to latent class, latent profile, and latent transition analysis*. Workshop presented at the College of Public Health and Human Sciences, Oregon State University, Corvallis, OR.
- *****Bray, B. C.** (2016, November). *Transitions in smokers' social networks after quit attempts and implications for cessation intervention: Results from a center-to-center collaboration*. Paper presented at the Division of Epidemiology, Prevention, and Services Research Seminar, National Institute on Drug Abuse, National Institutes of Health, Bethesda, MD.
- Tucker-Seeley, R. D., McKay*, A. S., Boulanger, V., & **Bray, B. C.** (2016, October). *Expanding our notion of neighborhood socioeconomic status: Mix of neighborhood retail/service types as an indicator of neighborhood socioeconomic context*. Paper presented at the Annual Meeting and Exposition of the American Public Health Association: "Creating the Healthiest Nation: Ensuring the Right to Health," Denver, CO.
- Bray, B. C.** (2016, September). *Gambling and polysubstance use behavior patterns: Using latent class analysis to examine the syndromal model of addiction*. Poster presented at the National Center for Responsible Gaming 17th Annual Conference on Gambling and Addiction, Las Vegas, NV. [Honorable Mention]
- **Baraldi, A. N., & **Bray, B. C.** (2016, June). *Three m's in prevention research: Mediation, multilevel modeling, and missing data*. Organized paper symposium presented at the Society for Prevention Research 24th Annual Meeting: "Using Prevention Science to Promote Health Equity and Improve Well-Being," San Francisco, CA.
- Bray, B. C.** (2016, June). *Gambling and polysubstance use behavior patterns: Using latent class analysis to examine the syndromal model of addiction*. Poster presented at the Society for Prevention Research 24th Annual Meeting: "Using Prevention Science to Promote Health Equity and Improve Well-Being," San Francisco, CA.
- Bray, B. C.**, Berglund, P. A., & Patrick, M. E. (2016, June). *Motivations for marijuana use among young adults in the U.S*. Poster presented at the Society for Prevention Research 24th Annual Meeting: "Using Prevention Science to Promote Health Equity and Improve Well-Being," San Francisco, CA.
- Willner*, C. J., Gatzke-Kopp, L. M., & **Bray, B. C.** (2016, March). *Electrophysiological indices of social threat processing biases in children with internalizing, externalizing, and comorbid symptoms*. Poster presented at the 2016 annual conference of the Society for Affective Science, Chicago, IL.
- ***Lanza, S. T., & **Bray, B. C.** (2016, January). *Latent class, latent profile, and latent transition analysis*. Workshop presented at the Latino Resilience Enterprise, T. Denny Sanford School of Social and Family Dynamics, Arizona State University, Tempe, AZ.
- Willner*, C. J., Gatzke-Kopp, L. M., & **Bray, B. C.** (2015, October). *Do automatic or controlled social threat processing biases predict children's internalizing and externalizing symptom profiles?*

- Poster presented at the 2015 Developmental Affective Neuroscience Symposium, Department of Psychiatry, University of Pittsburgh, Pittsburgh, PA.
- ****Bray, B. C.**, & Hill, L. G. (2015, May). *State-of-the-art approaches to latent class analysis with distal outcomes: Recommendations for today's prevention scientists*. Organized paper symposium presented at the Society for Prevention Research 23rd Annual Meeting: "Integrating Prevention Science and Public Policy," Washington, DC.
- Lanza, S. T., **Bray, B. C.**, & Dziak, J. J. (2015, May). *Comparing three approaches to latent class analysis with distal outcomes: A scientific summary*. Paper presented at the Society for Prevention Research 23rd Annual Meeting: "Integrating Prevention Science and Public Policy," Washington, DC.
- Zhang*, J., Dziak, J. J., **Bray, B. C.**, Lanza, S. T., & Zhang, M. (2015, May). *Extending latent class analysis with distal outcomes: Recommendations for adding control variables and moderators*. Paper presented at the Society for Prevention Research 23rd Annual Meeting: "Integrating Prevention Science and Public Policy," Washington, DC.
- Bray, B. C.**, Lanza, S. T., & Coffman, D. L. (2015, May). *Estimating causal effects with latent class variables: Exposures and outcomes*. Paper presented at the Society for Prevention Research 23rd Annual Meeting: "Integrating Prevention Science and Public Policy," Washington, DC.
- Fosco, G. M., **Bray, B. C.**, & Grych, J. H. (2015, May). *A latent profile analysis of adolescents' appraisals and triangulation into parental conflicts: Different outcomes for different profiles*. Poster presented at the Association for Psychological Science 27th Annual Convention, New York, NY.
- *****Bray, B. C.** (2015, April). *The good, the bad, and the ugly: What we know today about latent class analysis with distal outcomes*. Paper presented at the Methodology, Analytics, & Psychometrics (MAP) Academy Emerging Scholar Series, University of Nebraska – Lincoln, Lincoln, NE.
- *****Bray, B. C.** (2015, April). *An introduction to latent class and latent profile analysis: A statistics tutorial in two parts*. Workshop presented at the Methodology, Analytics, & Psychometrics (MAP) Academy Emerging Scholar Series, University of Nebraska – Lincoln, Lincoln, NE.
- *****Bray, B. C.** (2014, August). *An introduction to latent class and latent transition analysis*. Workshop presented at the Center for Behavioral Research and Services, California State University Long Beach, Long Beach, CA.
- *****Bray, B. C.** (2014, May). *Introduction to latent class and latent profile analysis*. Workshop presented at the Learning and Performance Research Center, Department of Educational Leadership, Sports Studies, Educational and Counseling Psychology, Washington State University, Pullman, WA.
- Foti, R. J., Coyle*, P. T., & **Bray, B. C.** (2014, May). *Differentiating perceptions of leaders and followers using ILTs and IFTs*. Poster presented at the Society for Industrial/Organizational Psychology 29th Annual Conference, Honolulu, HI.
- Halliburton*, A., & **Bray, B. C.** (2013, November). *Long-term trends in U.S. adolescent inhalant use: Prevalence rates, influences of drug policy, and comparisons to other substances*. Poster presented at the Association for Cognitive and Behavioral Therapies 47th Annual Convention: "Harnessing Synergy among Multidisciplinary Sciences," Nashville, TN.
- *****Bray, B. C.**, Lanza, S. T., & Coffman, D. L. (2013, October). *The causal effect of substance use latent class membership on a distal outcome*. Paper presented at the 10th International Conference on Health Policy Statistics, Chicago, IL.
- ***Coffman, D. L., **Bray, B. C.**, & Lanza, S. T. (2013, October). *Estimating the causal effect of a latent class treatment on binary and count outcomes*. Paper presented at the 10th International Conference on Health Policy Statistics, Chicago, IL.
- *****Bray, B. C.**, & Neighbors, C. N. (2013, September). *Trends in research methodology: A workshop for early-stage investigators*. Pre-conference workshop presented at the 14th Annual National Center for Responsible Gaming Conference on Gambling and Addiction, Las Vegas, NV.
- ***Lanza, S. T., & **Bray, B. C.** (2013, June). *Summer Institute on Innovative Methods: An introduction to latent class and latent transition analysis*. Workshop presented at Penn State, University Park, PA.

- *****Bray, B. C.** (2013, June). *An introduction to latent class and latent transition analysis*. Workshop presented at Brigham Young University, Provo, UT.
- ****Bray, B. C., & MacKinnon, D. P.** (2013, May). *Estimating the causal effect of a latent class treatment on distal behavioral and health outcomes*. Organized paper symposium presented at the Society for Prevention Research 21st Annual Meeting: "The Science of Prevention: Building a Comprehensive National Strategy for Well-Being," San Francisco, CA.
- Lanza, S. T., **Bray, B. C., & Coffman, D. L.** (2013, May). *The causal effect of substance use latent class membership on a distal outcome*. Paper presented at the Society for Prevention Research 21st Annual Meeting: "The Science of Prevention: Building a Comprehensive National Strategy for Well-Being," San Francisco, CA.
- Coffman, D. L., **Bray, B. C.,** Lanza, S. T., & Dierker, L. C. (2013, May). *Estimating the causal effect of a latent class treatment on binary and count outcomes*. Paper presented at the Society for Prevention Research 21st Annual Meeting: "The Science of Prevention: Building a Comprehensive National Strategy for Well-Being," San Francisco, CA.
- ****Bray, B. C., & Novak, S. P.** (2013, May). *Inhalant use as a critical, understudied substance from late childhood to adulthood: Implications and opportunities for prevention scientists*. Organized paper symposium presented at the Society for Prevention Research 21st Annual Meeting: "The Science of Prevention: Building a Comprehensive National Strategy for Well-Being," San Francisco, CA.
- Halliburton*, A., **Bray, B. C., & Ridenour, T. A.** (2013, May). *Testing the validity of the anticipated DSM-5 inhalant use disorder diagnosis: An item response theory analysis*. Paper presented at the Society for Prevention Research 21st Annual Meeting: "The Science of Prevention: Building a Comprehensive National Strategy for Well-Being," San Francisco, CA.
- Butera*, N. M., **Bray, B. C., & Lanza, S. T.** (2013, May). *Consequences of adolescent substance use latent class membership: Associations with young adult distal outcomes*. Poster presented at the Society for Prevention Research 21st Annual Meeting: "The Science of Prevention: Building a Comprehensive National Strategy for Well-Being," San Francisco, CA.
- *****Bray, B. C.** (2013, May). *An introduction to latent profile analysis*. Workshop presented for the Department of Human Development and Family Studies, The Pennsylvania State University, University Park, PA.
- Schry*, A. R., Lorenzi, J.*, Maddox*, B. B., Neal*, A., & **Bray, B. C.** (2012, November). *Predictors of rape acknowledgment in college women*. Poster presented at the 46th Annual Convention of the Association for Behavioral and Cognitive Therapies, National Harbor, MD.
- ***Lanza, S. T., & **Bray, B. C.** (2012, October). *Latent class analysis*. Workshop presented for Methods Work, Silver Spring, MD.
- Sheftall*, A. H., Crum, P., Mathias, C. W., **Bray, B. C., & Dougherty, D. M.** (2012, June). *Adolescent substance use, stressful life events, and impulsivity*. Poster presented at the 35th Annual Meeting of the Research Society on Alcoholism, San Francisco, CA. Abstract published in *Alcoholism: Clinical and experimental research*, 36(Supplement s1), 397a.
- Sheftall*, A. H., Mathias, C. W., **Bray, B. C.,** Farris, S. J., Crum, P. M., Kuckertz, J. M., ... Dougherty, D. M. (2012, February). *Adolescent substance use, stressful life events, and impulsivity*. Poster presented at the 22nd Annual Meeting of the Texas Research Society on Alcoholism, College Station, TX.
- Wiersma, J. D., Fischer, J. L., **Bray, B. C., & Clifton, J. P.** (November, 2011). *Young adult drinking partnerships: Where are couples 6 years later?* Poster presented at the 73rd Annual Conference of the National Council on Family Relations: "Families and the Shifting Economy," Orlando, FL.
- McGinley*, J. J., **Bray, B. C.,** Morgan, N. R., Small, M. L., & Maggs, J. L. (2011, August). *Examining the relation between card playing and personality*. Poster presented at the 119th Annual Convention of the American Psychological Association, Washington, DC.
- ****Bray, B. C.** (2011, June). *Communicating prevention research to non-academic audiences: Working effectively with the government and media*. Organized paper symposium presented at the 19th

- Annual Conference of the Society for Prevention Research: "Prevention Scientists Promoting Global Health: Emerging Visions for Today and Tomorrow," Washington, DC.
- **Bray, B. C.** (2011, June). *Innovations in latent class analysis: New approaches to address classic questions*. Organized paper symposium presented at the 19th Annual Conference of the Society for Prevention Research: "Prevention Scientists Promoting Global Health: Emerging Visions for Today and Tomorrow," Washington, DC.
- Bray, B. C.,** Lanza, S. T., & Tan, X. (2011, June). *Classify-analyze approaches in latent class analysis: The importance of inclusive modeling*. Paper presented at the 19th Annual Conference of the Society for Prevention Research: "Prevention Scientists Promoting Global Health: Emerging Visions for Today and Tomorrow," Washington, DC.
- Tan, X., Lanza, S. T., & **Bray, B. C.** (2011, June). *Latent class analysis with distal outcomes: A model-based approach*. Paper presented at the 19th Annual Conference of the Society for Prevention Research: "Prevention Scientists Promoting Global Health: Emerging Visions for Today and Tomorrow," Washington, DC.
- **Bray, B. C.,** & Lanza, S. T. (2011, May). *Advances in finite mixture modeling, causal mediation, and functional data analysis: Recent developments from The Methodology Center at Penn State*. Organized paper symposium presented at the annual meeting of the Modern Modeling Methods Conference, Storrs, CT.
- Bray, B. C.,** Lanza, S. T., & Tan, X. (2011, May). *A new approach for expanded latent class models*. Paper presented at the Modern Modeling Methods Conference, Storrs, CT.
- Etz, K., & Moser, R. (2010, June). *Everything you ever wanted to know about secondary data analysis, but were afraid to ask*. Preconference workshop presented at the 18th Annual Conference of the Society for Prevention Research: "Cells to Society: Prevention at All Levels," Denver, CO. Presenters: Augustson, E., **Bray, B. C.,** Gelernter, J., Keyes, K., LeClere, F. B., Ridenour, T. A., Rutten, L. F., & Yaroch, A.
- **Bray, B. C.** (2010, June). *Understanding adolescent risk behaviors: The contribution of person-centered approaches*. Organized paper symposium presented at the 18th Annual Meeting of the Society for Prevention Research: "Cells to Society: Prevention at All Levels," Denver, CO.
- **Bray, B. C.** (2010, June). *Promoting positive program outcomes through the application of latent variable methods*. Organized paper symposium presented at the 18th Annual Meeting of the Society for Prevention Research: "Cells to Society: Prevention at All Levels," Denver, CO.
- Bray, B. C.,** Morgan, N. R., Small, M. L., & Maggs, J. L. (2009, November). *Identifying patterns of motivations to gamble among college students using latent class analysis*. Poster presented at the 10th Annual Conference of the National Center for Responsible Gaming: "Money, Money, Money: Current Issues Affecting Research, Recovery and Responsible Gaming," Las Vegas, NV.
- Tisminetzky*, M., **Bray, B. C.,** Miozzo, R., Aupont, O., & McLaughlin, T. J. (2009, November). *Profiling symptoms of depression and anxiety in patients with an acute coronary syndrome using latent class and latent transition analysis*. Paper presented at the American Heart Association Annual Scientific Sessions, Orlando, FL.
- Wiersma*, J. D., **Bray, B. C.,** & Fischer, J. L. (2009, October). *Identifying types of young adult drinking partnerships by relationship status using latent class analysis*. Poster presented at the 4th Conference on Emerging Adulthood, Atlanta, GA.
- ***Collins, L. M.,** Lanza, S. T., & **Bray, B. C.** (2009, June). *Summer Institute on Longitudinal Methods: Latent class and latent transition analysis*. The Methodology Center at the Pennsylvania State University: University Park, PA.
- Bray, B. C.,** Morgan, N. R., Small, M. L., & Maggs, J. L. (2009, June). *Using latent class models to identify shared patterns of motivations to use alcohol and to gamble among college students*. Poster presented at the 32nd Annual Meeting of the Research Society on Alcoholism, San Diego, CA.
- Tisminetzky*, M., **Bray, B. C.,** Miozzo, R., & McLaughlin, T. J. (2009, June). *Examining the effects of treatment and patient characteristics on patient profiles of depression, anxiety and functionality*

- after an acute coronary syndrome*. Paper presented at the 42nd Annual Meeting of the Society for Epidemiological Research: "Epidemiologists as Vectors for Transmitting Health," Anaheim, CA.
- Bray, B. C.**, Morgan, N. R., Small, M. L., & Maggs, J. L. (2009, May). *Identifying unique and shared person-level risk factors for alcohol use and gambling among college students*. Poster presented at the 17th Annual Meeting of the Society for Prevention Research: "Power of Relationships: Implications for Prevention Science," Washington, DC.
- Lai*, M. H., **Bray, B. C.**, Smith, E. A., Caldwell, L. L., Wegner, L., Flisher, A. J., ... Mathews, C. (2009, May). *Substance use and delinquency profiles among South African adolescents*. Poster presented at the 17th Annual Meeting of the Society for Prevention Research: "Power of Relationships: Implications for Prevention Science," Washington, DC.
- ***Collins, L. M., & **Bray, B. C.** (2008, October). *Workshop on statistical methods in drug abuse and health-related research: Introduction to latent class/latent transition analysis for research in drug use and problem behavior*. Workshop presented at the Center for Drug Abuse Research Translation (CDART), Center for Clinical and Translational Science of the University of Kentucky: Lexington, KY.
- *****Bray, B. C.** (2008, June). *Examining gambling and substance use: Applications of advanced latent class modeling techniques for cross-sectional and longitudinal data*. Paper presented at the 22nd National Conference on Problem Gambling: "Family and Community Issues," Long Beach, CA.
- Bray, B. C.**, Cleveland, M. J., Greenberg, M. T., & Feinberg, M. E. (2008, May). *Examining differences in patterns of alcohol, tobacco, marijuana, and other drug use by gambling behavior*. Poster presented at the 16th Annual Meeting of the Society for Prevention Research: "Context and Prevention Science," San Francisco, CA.
- *****Bray, B. C.** (2008, March). *A multidimensional latent variable approach to the measurement of gambling*. Paper presented at the 8th Annual Scientific Meeting of the American Academy of Health Behavior: "Addictions: From Cells to Societies," Oxnard, CA.
- Bray, B. C.**, Collins, L. M., White, H. R., & Pandina, R. J. (2008, March). *Identifying and predicting types of college-student gamblers*. Poster presented at the 8th Annual Scientific Meeting of the American Academy of Health Behavior: "Addictions: From Cells to Societies," Oxnard, CA.
- Palen*, L., Smith, E. A., Caldwell, L. L., **Bray, B. C.**, & Flisher, A. J. (2008, March). *Longitudinal patterns of cigarette use among South African high school students*. Poster presented at the Biennial Meeting of the Society for Research on Adolescence, Chicago, IL.
- Bray, B. C.**, Collins, L. M., White, H. R., & Pandina, R. J. (2007, November). *An alternative approach to identifying types of gamblers: Using latent class analysis to identify and predict high-risk college-student gamblers*. Poster presented at the 8th Annual Conference of the National Center for Responsible Gaming: "Responsible Gaming, Regulation and Recovery: Testing Conventional Wisdom," Las Vegas, NV.
- ****Bray, B. C.**, & Rhoades, B. L. (2007, May). *Modeling risky behaviors with latent class and latent transition analysis: New applications and innovative approaches*. Organized poster forum presented at the 15th Annual Meeting of the Society for Prevention Research: "Advancing Science-Based Prevention: Creating Real World Solutions," Washington, DC.
- Bray, B. C.**, Lanza, S. T., & Collins, L. M. (2007, May). *Modeling the longitudinal relation between adolescent smoking and drinking behavior*. Poster presented at the 15th Annual Meeting of the Society for Prevention Research: "Advancing Science-Based Prevention: Creating Real World Solutions," Washington, DC.
- Bray, B. C.**, & Ridenour, T. A. (2006, June). *Do predictors of late childhood substance use also predict gambling during late childhood? Implications for prevention*. Poster presented at the National Council on Problem Gambling 20th Annual Conference on Prevention, Research, and Treatment of Problem Gambling: "Addressing Gambling Problems in Underserved Populations," St. Paul, MN.
- ****Bray, B. C.** (2006, June). *Recent research on gambling from late childhood to adulthood: Implications for prevention*. Organized paper symposium presented at the 14th Annual Meeting of the Society

- for Prevention Research: "Applying Prevention Science to Reduce Health Disparities," San Antonio, TX.
- Bray, B. C.**, & Collins, L. M. (2006, June). *The structure of gambling behavior in adulthood*. Paper presented at the 14th Annual Meeting of the Society for Prevention Research: "Applying Prevention Science to Reduce Health Disparities," San Antonio, TX.
- Ridenour, T. A., & **Bray, B. C.** (2006, June). *Do correlates of preadolescent gambling resemble correlates of early substance use targeted in prevention programs?* Paper presented at the 14th Annual Meeting of the Society for Prevention Research: "Applying Prevention Science to Reduce Health Disparities," San Antonio, TX.
- Bray, B. C.**, & Collins, L. M. (2005, December). *Using latent class analysis to examine the structure of gambling behavior*. Poster presented at the 6th Annual Conference of the National Center for Responsible Gaming: "Finding Common Ground on Prevention, Treatment, and Policy," Las Vegas, NV.
- Bray, B. C.**, & Collins, L. M. (2005, May). *The relation between the waxing and waning of adolescent substance use and delinquency*. Poster presented at the 13th Annual Meeting of the Society for Prevention Research: "Prevention Science to Public Health: Promoting Well-Being in the Population," Washington, DC.
- Bray, B. C.**, Whyte, K. S., & Collins, L. M. (2005, May). *The methodological state of research on gambling among adolescents*. Poster presented at the 13th Annual Meeting of the Society for Prevention Research: "Prevention Science to Public Health: Promoting Well-Being in the Population," Washington, DC.
- Bray, B. C.**, Zimmerman, R. S., Lynam, D., & Murphy, S. A. (2003, June). *Assessing the total effect of time-varying predictors in prevention research*. Poster presented at the 11th Annual Meeting of the Society for Prevention Research: "Research to Policy," Washington, DC.
- *****Bray, B. C.**, Zimmerman, R. S., Lynam, D., & Murphy, S. A. (2003, April). *Assessing the total effect of time-varying predictors in prevention research*. Paper presented at the University of Michigan—Dearborn, Dearborn, MI.
- Wong, P., McAuslan, P., & **Bray, B. C.** (2000, August). *Survey of problem gambling in the Metropolitan Detroit Area, 2000*. Paper presented at the Joint Mathematical Association of America and Pi Mu Epsilon National Conference, Los Angeles, CA.

Presented Locally

- *****Bray, B. C.** (2021, December). *Introduction to National Institutes of Health Grant Mechanisms*. Presentation to the Bloomberg Project Annual Staff Meeting, Institute for Health Research and Policy, The University of Illinois at Chicago, Chicago, IL.
- *****Bray, B. C.**, Kendall, A. D., Nyenhuis, S. M., & Snow-Hill*, N. L. (2021, April). *Introduction to dissemination and implementation science*. Workshop for the Center for Dissemination and Implementation Science, Department of Medicine, The University of Illinois at Chicago, Chicago, IL.
- *****Bray, B. C.** (2020, December). *Open discussion about applying latent class models in your own work*. Workshop for the Center for Dissemination and Implementation Science, Department of Medicine, The University of Illinois at Chicago, Chicago, IL.
- *****Bray, B. C.** (2020, November). *Programming advanced latent class models in SAS, Mplus, and Latent GOLD*. Workshop for the Center for Dissemination and Implementation Science, Department of Medicine, The University of Illinois at Chicago, Chicago, IL.
- *****Bray, B. C.** (2020, October). *Latent class analysis with distal outcomes, including latent class moderation*. Workshop for the Center for Dissemination and Implementation Science, Department of Medicine, The University of Illinois at Chicago, Chicago, IL.
- *****Bray, B. C.** (2020, September). *Longitudinal extensions of latent class analysis, including latent transition analysis*. Workshop for the Center for Dissemination and Implementation Science, Department of Medicine, The University of Illinois at Chicago, Chicago, IL.

- *****Bray, B. C.** (2020, August). *Programming basic latent class models in SAS, Mplus, and Latent GOLD*. Workshop for the Center for Dissemination and Implementation Science, Department of Medicine, The University of Illinois at Chicago, Chicago, IL.
- *****Bray, B. C.** (2020, July). *Introduction to latent class and latent profile analysis*. Workshop for the Center for Dissemination and Implementation Science, Department of Medicine, The University of Illinois at Chicago, Chicago, IL.
- *****Bray, B. C.** (2019, September). *Advancing intervention science and promoting health equity using innovative quantitative methods*. Presentation for the Community and Prevention Research Brown Bag Series, Department of Psychology, The University of Illinois at Chicago, Chicago, IL.
- *****Bray, B. C.** (2018, October). *The cutting-edge of design and analysis: Penn State's Methodology Center*. Presentation for the Penn State College of Medicine Postdoc Society, Penn State Hershey, Hershey, PA.
- *****Bray, B. C.** (2018, September). *The cutting-edge of design and analysis: Penn State's Methodology Center*. Presentation for the Human Development and Family Studies All-Campus Meeting, Penn State, University Park, PA.
- *****Bray, B. C.** (2018, February). *New advances in latent class analysis from The Methodology Center at Penn State*. Paper presented at the CTSI BERD Seminar Series, Social Science Research Institute, Penn State, University Park, PA.
- Dziak, J. J., **Bray, B. C.**, Lanza, S. T. (2017, May). *Performance of multiple imputation for missing data in latent class analysis*. Poster presented at the Rao Prize Conference, Department of Statistics, Penn State, University Park, PA.
- ***Lanza, S. T., & **Bray, B. C.** (2016, April). *Introduction to latent class analysis for health behavior research*. Workshop presented at the Department of Public Health Sciences, Penn State Hershey College of Medicine, Hershey, PA.
- *****Bray, B. C.** (2016, March). *The cutting-edge of design and analysis: Penn State's Methodology Center*. Presentation for Penn State Data Day, PSU Libraries Data Learning Center, Penn State, University Park, PA.
- *****Bray, B. C.** (2016, March). *Center for Complex Data to Knowledge in Drug Abuse and HIV Behavioral Science: What is it that we do over there on that new 4th floor?* Presentation for Spring Seminar Series, Bennett Pierce Prevention Research Center, Penn State, University Park, PA.
- *****Bray, B. C.** (2015, November). *The cutting-edge of design and analysis: Penn State's Methodology Center*. Presentation for the Stat Club, Department of Statistics, Penn State, University Park, PA.
- *****Bray, B. C.** (2015, November). *The cutting-edge of design and analysis: Penn State's Methodology Center*. Presentation for CTSI Scholars, Social Science Research Institute, Penn State, University Park, PA.
- Bray, B. C.**, Dziak, J. J., & Lanza, S. T. (2015, April). *The good, the bad, and the ugly: What we know today about latent class analysis with distal outcomes*. Poster presented at the Annual Joint Seminar of The Methodology Center and Prevention Research Center, Penn State, University Park, PA.
- Bray, B. C.**, Dziak, J. J., & Lanza, S. T. (2015, March). *The good, the bad, and the ugly: What we know today about latent class analysis with distal outcomes*. Poster presented at the College of Health and Human Development Annual Research Forum, Penn State, University Park, PA.
- *****Bray, B. C.** (2015, February). *The cutting-edge of design and analysis: Penn State's Methodology Center*. Presentation for the Stat Club, Department of Statistics, Penn State, University Park, PA.
- *****Bray, B. C.** (2015, January). *The cutting-edge of design and analysis: Penn State's Methodology Center*. Presentation for the Industrial/Organizational Psychology Program, Department of Psychology, Penn State, University Park, PA.
- Halliburton*, A. E., **Bray, B. C.**, & Ridenour, T. A. (2012, May). *Testing the validity of the anticipated DSM-5 inhalant use disorder diagnosis: An item response theory analysis*. Paper presented at the annual meeting of the Virginia Academy of Science, Norfolk, VA.

- *****Bray, B. C.** (2010, February). *Modeling relations among discrete developmental processes: A general approach to associative latent transition analysis*. Paper presented at the Department of Statistics Research Colloquium Series, Virginia Polytechnic Institute and State University, Blacksburg, VA.
- *****Bray, B. C.** (2008, September). *A multidimensional latent variable approach to the measurement of gambling*. Paper presented at the Department of Biobehavioral Health Research Colloquium Series, The Pennsylvania State University, University Park, PA.
- *****Bray, B. C.** (2006, February). *Rambling, gambling Willie: What Bob Dylan left out about pathological gambling*. Paper presented at the Centre County Correctional Facility, Bellefonte, PA.
- *****Bray, B. C.**, & Collins, L. M. (2005, February). *Modeling the development of substance use and delinquency simultaneously: An associative latent transition analysis example*. Paper presented at The Methodology Center, The Pennsylvania State University, University Park, PA.
- Lemmon, D. R., & **Bray, B. C.** (2005, February). *Parallelization strategies for a statistical model of adolescent development*. Poster presented at Penn State Computation Day, University Park, PA.

Technology Demonstrations

- Bray, B. C.**, & Weaver, C. (2021, May). *The Latent Class Analysis Knowledge Base: A new, comprehensive, online resource for latent class modeling*. Technology demonstration presented at the Society for Prevention Research 29th Annual Meeting: "Addressing Racism and Disparities when Considering Biology and Context," Washington, DC.
- Wagner, A. T., Dziak, J. J., Huang, L., Singh, K., & **Bray, B. C.** (2020, May). *Online resources and software available through the Penn State Methodology Center*. Technology demonstration presented at the Society for Prevention Research 28th Annual Meeting: "Why Context Matters: Towards a Place-Based Prevention Science," Washington, DC. [parts of conference cancelled due to COVID-19]
- Wagner, A. T., Dziak, J. J., Huang, L., Connolly, P. H., & **Bray, B. C.** (2019, May). *Software, instructional materials, videos, and other resources from The Methodology Center at Penn State*. Technology demonstration presented at the Society for Prevention Research 27th Annual Meeting: "Prevention Science in a Big Data World," San Francisco, CA.
- Wagner, A. T., Connolly, P. H., Dziak, J. J., Huang, L., & **Bray, B. C.** (2018, May). *Online methodological resources and software from the Penn State Methodology Center*. Technology demonstration presented at the Society for Prevention Research 26th Annual Meeting: "Optimizing the Relevance of Prevention Science to Systems," Washington, DC.
- Dziak, J. J., **Bray, B. C.**, Huang, L., & Wagner, A. T. (2017, May). *Free design and analysis software for use with R and SAS from the Penn State Methodology Center*. Technology demonstration presented at the Society for Prevention Research 25th Annual Meeting: "Prevention and Public Systems of Care: Research, Policy and Practice," Washington, DC.
- Dziak, J. J., **Bray, B. C.**, Huang, L., Wagner, A. T., & Lanza, S. T. (2016, May). *Free software for data analysis and experimental design from the Penn State Methodology Center*. Technology demonstration presented at the Society for Prevention Research 24th Annual Meeting: "Using Prevention Science to Promote Health Equity and Improve Well-Being," San Francisco, CA.
- Bray, B. C.**, Dziak, J. J., Huang, L., Wagner, A. T., & Lanza, S. T. (2015, May). *New online resources and software tools for analysis and design from the Penn State Methodology Center*. Technology demonstration presented at the Society for Prevention Research 23rd Annual Meeting: "Integrating Prevention Science and Public Policy," Washington, DC.
- Bray, B. C.**, Dziak, J. J., Huang, L., Wagner, A. T., & Lanza, S. T. (2014, May). *Innovative software for prevention scientists: SAS, R, and STATA tools for analysis and experimental design*. Technology demonstration presented at the Society for Prevention Research 22nd Annual Meeting: "Comprehensive and Coordinated Prevention Systems: Building Partnerships and Transcending Boundaries," Washington, DC.
- Bray, B. C.**, Huang, L., Yang, J., Dziak, J. J., Lanza, S. T., & Wagner, A. T. (2013, May). *New SAS, R, and Stata software for prevention scientists: Tools for LCA, missing data, adaptive interventions,*

- and EMA data*. Technology demonstration presented at the Society for Prevention Research 21st Annual Meeting: "The Science of Prevention: Building a Comprehensive National Strategy for Well-Being," San Francisco, CA.
- Lemmon, D. R., **Bray, B. C.**, Lanza, S. T., & Dziak, J. J. (2008, May). *New developments in SAS procedures for prevention research*. Technology demonstration presented at the 16th Annual Meeting of the Society for Prevention Research: "Context and Prevention Science," San Francisco, CA.
- Lemmon, D. R., **Bray, B. C.**, Lanza, S. T., & Chung, H. (2007, May). *PROC LTA: A SAS procedure for latent transition analysis*. Technology demonstration presented at the 15th Annual Meeting of the Society for Prevention Research: "Advancing Science-Based Prevention: Creating Real World Solutions," Washington, DC.
- *****Bray, B. C.** (2006, Summer). *An introduction to programming in SAS*. The Pennsylvania State University: University Park, PA.

Online Multimedia

- Bray, B. C.** [Latent Class Analysis Knowledge Base] (2021, June 4). *SPR tech demo on the LCAKB* [video]. Retrieved from https://youtu.be/y-cLi0_hRoo
- ***The Methodology Center, Penn State (Producer). (2020, June). *Latent class and latent transition analysis online learning path* [created by **Bethany Bray**]. Retrieved from <https://www.methodology.psu.edu/ra/lca/learningpath>
- ***The Methodology Center, Penn State (Producer). (2020, April). *The Methodology Center Teachers' Corner: Latent transition analysis* [created by **Bethany Bray**]. Retrieved from <https://www.methodology.psu.edu/ra/lca/learningpath/>
- ***The Methodology Center, Penn State (Producer). (2019, April). *Introduction to latent transition analysis with **Bethany Bray*** [video]. Retrieved from <http://methodology.psu.edu/multimedia/videos>
- ***The Methodology Center, Penn State (Producer). (2019, February). *1-and-1 Workshop: An introduction to latent class analysis with **Bethany Bray*** [virtual forum]. Retrieved from <https://zoom.us/j/5379178158> on February 26, 2019.
- ***The Methodology Center, Penn State (Producer). (2018, November). *30-and-30 Workshop: Postdoctoral Fellowships and The Prevention and Methodology Training (PAMT) T32 Program with **Bethany Bray*** [virtual forum]. Retrieved from <https://zoom.us/j/5379178158> on November 6, 2018.
- ***The Methodology Center, Penn State (Producer). (2018, March). *1-and-1 Workshop: An introduction to latent transition analysis with **Bethany Bray*** [virtual forum]. Retrieved from <https://zoom.us/j/5379178158> on March 29, 2018.
- ***The Methodology Center, Penn State (Producer). (2017, May). *The Methodology Center Teachers' Corner: Latent class analysis* [created by **Bethany Bray**]. Retrieved from <http://methodology.psu.edu/ra/lca/teacherscorner>
- ***The Methodology Center, Penn State (Producer). (2016, April). *Introduction to latent class analysis with **Bethany Bray*** [video]. Retrieved from <http://methodology.psu.edu/multimedia/videos>
- ***The Methodology Center, Penn State (Producer). (2013, January 22). *Methodology minutes: Latent class analysis (LCA) Part 2: Extensions of LCA with Stephanie Lanza and **Bethany Bray*** [podcast]. Retrieved from <http://methodology.psu.edu/multimedia/podcast>
- Bray, B. C.** [The Methodology Center, Penn State] (2012, November 28). *Introduction to PROC LCA* [video]. Retrieved from http://www.youtube.com/watch?feature=player_embedded&v=bJyrlDTyIbM
- ***The Methodology Center, Penn State (Producer). (2012, November 26). *Methodology minutes: Latent class analysis (LCA) Part 1: Common questions about LCA with Stephanie Lanza and **Bethany Bray*** [podcast]. Retrieved from <http://methodology.psu.edu/multimedia/podcast>
- ***The Methodology Center, Penn State (Producer). (2011, March 10). *Methodology minutes: Where are they now? With **Bethany Bray*** [podcast]. Retrieved from <http://methodology.psu.edu/multimedia/podcast>

Producer for Methodology Center Multimedia

Archived materials from The Methodology Center at Penn State are available from Penn State's ScholarSphere: <https://scholarsphere.psu.edu/resources/94ccacc5-c3e5-4b16-a085-878aba344b77>

Annual Report: The Methodology Center, Penn State (Producer). (2014-2022). *The Methodology Center Annual Report*.

eNews: The Methodology Center, Penn State (Producer). (2014-2022). *The Methodology Center eNews*.

Learning Paths: The Methodology Center, Penn State (Producer). (2019-2022). *The Methodology Center Learning Paths* [virtual learning modules]. Topics: latent class and latent transition analysis, time-varying effect modeling

Videos: The Methodology Center, Penn State (Producer). (2016-2022). *The Methodology Center Introductory Videos* [videos]. Topics: just-in-time adaptive interventions, latent class analysis, latent transition analysis, microrandomized trials, multiphase optimization strategy, time-varying effect modeling

Podcasts: The Methodology Center, Penn State (Producer). (2014-2022). *Methodology Minutes Podcasts, Nos. 18-36* [podcasts].

Teachers' Corner: The Methodology Center, Penn State (Producer). (2017-2022). *The Methodology Center Teachers' Corner* [downloads]. Topics: latent class analysis, latent transition analysis, multiphase optimization strategy, time-varying effect modeling

Virtual Discussion Forums: The Methodology Center, Penn State (Producer). (2017-2022). *The Methodology Center 1-and-1 Workshops* [virtual forums/videos]. Topics: configural frequency analysis, factorial experiments, latent class analysis, latent transition analysis, microrandomized trials, multilevel modeling, multiphase optimization strategy, Prevention and Methodology Training (PAMT) program, time-varying effect modeling

Teaching

Graduate Courses – Required/Recommended

Measurement in Human Development (HDFS 526, Graduate)

Department: Human Development and Family Studies (Penn State)

Instructor (Fall 2018: rating 6.3/7.0)

Psychometric Theory (PSYC 5134, Graduate)

Department: Psychology (Virginia Tech)

Instructor (Spring 2012: 4.9/5.0, Spring 2011: rating 3.0/4.0)

Research Methods (PSYC 5315, Graduate)

Department: Psychology (Virginia Tech)

Instructor (Fall 2011: rating 3.9/4.0, Fall 2010: rating 4.0/4.0, Fall 2009: rating 3.1/4.0)

Graduate Applied Statistics Lab (Graduate)

Department: Human Development and Family Studies (Penn State)

Instructor (Fall 2005: rating: 6.8/7.0)

Graduate Courses – Special Topics

Advanced Topics in Latent Class Analysis (Graduate)

Department: Human Development and Family Studies (Penn State)

Instructor (Fall 2018: 6.8/7.0, Fall 2015: rating 6.7/7.0)

An Introduction to Latent Class and Latent Profile Analysis (Graduate)

Department: Human Development and Family Studies (Penn State)

Instructor (Fall 2017: 6.9/7.0, Fall 2014: rating 6.9/7.0)
 Latent Class Analysis for Cross-sectional and Repeated Measures Data (Graduate)
 Department: Human Development and Family Studies (Penn State)
 Course Assistant (2009, 2007)
 Instructor (Fall 2012: rating 6.5/7.0)
 Applied Categorical Data Analysis (PSYC 6014, Graduate)
 Department: Psychology (Virginia Tech)
 Instructor (Fall 2011: rating 3.9/4.0)

Undergraduate Courses

Principles of Psychological Research (PSYC 2094, Undergraduate)
 Department: Psychology (Virginia Tech)
 Instructor (Fall 2010: rating 3.7/4.0, Spring 2010: rating 4.0/4.0)
 Introduction to Statistics and Data Analysis (Undergraduate)
 Department: Statistics (The University of Michigan)
 Laboratory Course Instructor (2001)

Guest Lectures

Finite Mixture Modeling in Prevention Science
 Department: Human Development, Washington State University
 Guest Lectures on Grouping Variables vs. Covariates in Latent Class Analysis and on Latent Transition Analysis (2020)
 Human Decision Making
 Department: Penn State College of Medicine, Penn State Hershey
 Guest Lecture on Research on Probability and Risk (2017)
 Social Data Analytics: Approaches and Issues
 Department: Political Science, Penn State University Park
 Guest Lecturer on Latent Class and Latent Transition Analysis (2016)
 Methods of Research in Human Development
 Department: Human Development and Family Studies, Penn State University Park
 Guest Lecturer on Sampling Designs (2008, 2006, 2005)
 Casino Operations Management
 Department: Hotel, Restaurant, and Institutional Management, Penn State University Park
 Guest Lecturer on Research on Gambling and Problem Gambling (2008)
 Criminology
 Department: Sociology and Crime, Law and Justice, Penn State University Park
 Guest Lecturer on Research on Gambling and Problem Gambling (2007, 2006)
 Sociology of Deviance
 Department: Sociology and Crime, Law, and Justice, Penn State University Park
 Guest Lecturer on Research on Gambling and Problem Gambling (2007)

Advising

Graduate faculty: UIC Department of Medicine, 2019-Present
 Graduate faculty: Penn State Department of Human Development and Family Studies, 2013-2020
 Graduate faculty: Virginia Tech Department of Psychology, 2009-2013

Master's Thesis Committee Chair or Co-Chair

Amanda Halliburton (2013, Psychology, Virginia Tech)
 "Adolescent inhalant use in the United States: Examining long-term trends and evaluating the applicability of self-determination theory"

Master's Thesis Committee Member

Patrick Coyle (2012, Psychology, Virginia Tech)

Neville Galloway-Williams (2010, Psychology, Virginia Tech)
Thorhildur Halldorsdottir (2011, Psychology, Virginia Tech)
Nicole Kreiser (2011, Psychology, Virginia Tech)
Ashley McDonald (2017, Psychology, Penn State)
Brenna Maddox (2012, Psychology, Virginia Tech)
Scott Moshier (2011, Psychology, Virginia Tech)
Amie Schry (2011, Psychology, Virginia Tech)

Preliminary/Comprehensive Examination Committee Member

Anuradha Anantharaman (2018, Psychology, Penn State)
Patrick Coyle (2013, Psychology, Virginia Tech)
Neville Galloway-Williams (2012, Psychology, Virginia Tech)
Jennifer Glayzer (2020, Nursing, UIC)
Eric Layland (2019, Human Development & Family Studies, Penn State)
Emily LoBraico (2019, Human Development & Family Studies, Penn State)
Megan Maas (2015, Human Development & Family Studies, Penn State)
Amy Neal (2011, Psychology, Virginia Tech)
Sarah Perzow (2017, Psychology, Penn State)
Jessica Salas-Brooks (2016, Biobehavioral Health, Penn State)
Amie Schry (2011, Psychology, Virginia Tech)
Ryan Smith (2012, Psychology, Virginia Tech)
Christina Temes (2014, Psychology, Penn State)
Nicole Thompson (2011, Psychology, Virginia Tech)
Jessica Versele (2010, Psychology, Virginia Tech)

Doctoral Dissertation Committee Chair or Co-Chair

Eric Layland (2020, Human Development & Family Studies, Penn State)
Leveraging latent class modeling at the intersection of racism and homonegativism: Identifying subgroups of Black and Latino sexual minority young men and links with substance use
Sarah Perzow (2018, Psychology, Penn State)
Individual differences in adolescent coping

Doctoral Dissertation Committee Member

Lisa Boyd (2016, Sociology and Criminology, Penn State)
Patrick Coyle (2015, Psychology, Virginia Tech)
Nicole Constance (2017, Human Development & Family Studies, Penn State)
Jennifer Glayzer (ongoing, Nursing, UIC; awards: Ehlers-Danlos Society Microgrant, Heilbrunn Nurse Scholar Award, Sigma Theta Tau Alpha Lambda Chapter Award, UIC College of Nursing PhD Student Research Award)
Celina Joos (2019, Psychology, Penn State)
Bo-Ram Kim (2014, Human Development & Family Studies, Penn State)
Emily LoBraico (2021, Human Development & Family Studies, Penn State)
Megan Maas (2016, Human Development & Family Studies, Penn State)
Cara Pugliese (2012, Psychology, Virginia Tech)
Christina Temes (2017, Psychology, Penn State)
Mark Scott (2011, Psychology, Virginia Tech)
Zvi Shapiro (2020, Psychology, Penn State)
Natalia Van Doren (ongoing, Psychology, Penn State)
Cynthia Willner (2016, Human Development & Family Studies, Penn State)
Mengya Xia (2019, Human Development & Family Studies, Penn State)

Prevention and Methodology Training (PAMT) Program Methodology Mentor

Scott Graupensperger (2018, predoctoral, Penn State)

Emily LoBracio (2017-2019, predoctoral, Penn State)
Sarah Perzow (2015-2017, predoctoral, Penn State)
Peter Rivera (2016-2017, postdoctoral, Penn State)
Emily Simpson (2019-2021, postdoctoral, Penn State)
Mengya Xia (2016-2018, predoctoral, Penn State)
Bridget Weymouth (2016-2018, postdoctoral, Penn State)

The Methodology Center Graduate Students

Eric Layland (2018-2020, Human Development & Family Studies, Penn State)
Sarah Perzow (2017-2018, Psychology, Penn State)

Graduate Minor in Quantitative Methods

Anuradha Anantharaman (2019, Psychology, Penn State)

Center for Dissemination and Implementation Science Postdocs

Nyssa Snow-Hill (ongoing, UIC)
Katherine Merrill (ongoing, UIC)

Clinical Psychology Interns

Jessica Fitts (2020-2021, UIC)
Loretta Hsueh (2019-2020, UIC)

Early-Career Faculty

Katherine Breen (Nursing, UIC)
Ashley Friend-Kendall (Medicine, UIC)
Monte Staton (Medicine, UIC)

Visiting International Students

Cinthia Hiroko Higuchi (Escola Paulista de Medicina da Universidade Federal de São Paulo, 4/3/2017-10/2/2017)
Claire Mawditt (University College London, 5/1/2016-7/31/2016)
Aoife O'Neill (University of Limerick, 4/28/2018-5/12/2018)
Jieting "Jenny" Zhang (South China Normal University, 9/1/2012-12/31/2013)

Society for Prevention Research Sloboda and Bukoski Cup Competition Team Advisor

Boone, M., Griffin, A., & Li, A. (2015). Time-varying effects of health behaviors on cardio-metabolic outcomes in older Mexican adults.

National Institutes of Health F31 Co-Sponsor

Jennifer Glayzer F31 NR019529, Characterization of vulvodynia and Ehlers-Danlos Syndrome (EDS) pain in women, 05/01/2021-12/31/2023
Emily LoBraico: F31 DA048522, Understanding for whom family-based substance use prevention programs work best: A person-centered approach, 08/01/2019-07/31/2021

National Institutes of Health K99 Advisor

Katherine Merrill: K99 HD105490, Evidence-based sexual and reproductive health intervention using a multiphase optimization strategy, 11/08/2021-31/07/2023

National Institutes of Health K01 Advisor

Jody Vogel: K08 HS023901, Improving the quality of patient care and outcomes for frequent emergency department visitors, 01/04/2015-31/03/2020

Professional Service

Journal Editorial Board Member
Health Psychology (2010-2012)

Journal Reviewing

Addiction
Addictive Behaviors
Alcoholism: Clinical and Experimental Research
American Journal of Health Behavior
Behavior Therapy
BioMed Central Public Health
Child Development
Emerging Adulthood
Evaluation and the Health Professions
Journal of Abnormal Child Psychology
Journal of Addictive Diseases
Journal of Adolescence
Journal of Adolescent Health
Journal of Affective Disorders
Journal of Child Psychology and Psychiatry
Journal of Consulting and Clinical Psychology
Journal of Gambling Studies
Journal of Methods and Measurement in the Social Sciences
Journal of School Psychology
Journal of Studies on Alcohol and Drugs
Lawrence Erlbaum Associates, Publishers
Methodology
Multivariate Behavioral Research
Nicotine and Tobacco Research
Organizational Research Methods
Prevention Science
Psychological Methods
Psychology of Addictive Behaviors
SAGE Publications
Social Psychiatry and Psychiatric Epidemiology
Structural Equation Modeling: A Multidisciplinary Journal

Grant Reviewing

Alberta Gaming Research Institute
International Center for Responsible Gaming (formerly the United States National Center for Responsible Gaming)
United States National Institutes of Health:
Ruth L. Kirschstein National Research Service Award (NRSA) Institutional Research Training Grants (T32) Panel ZDA1 SKM-D (01) S (11/2021)
Improving Outcomes for Pediatric, Adolescent and Young Adult Cancer Survivors U01 Review Panel ZCA1 RPRB-L (M2) S (05/2020)
Conference Grant R13 Review Panel ZDA1 IXN-O (08) S (02/2018)
Cancer Management and Health Behavior R03/R21 Omnibus Review Panel ZCA1 TCRB-B (M2) S (03/2015)
Cancer Management and Health Behavior R03/R21 Omnibus Review Panel ZCA1 TCRB-B (J1) S (10/2014)
United States National Science Foundation

The Netherlands Organisation for Health Research and Development (ZonMw)
 The Netherlands Organisation for Scientific Research (NWO)
 United Kingdom Prevention Research Partnership

Other Expert Reviewing

United Kingdom Medical Research Council, Large Investments Review

Service to the National Institutes of Health

- Bray, B. C.** (2015, May). *The Prevention and Methodology Training Program (PAMT) at Penn State*. Visit to the National Institute on Drug Abuse (NIDA) with PAMT trainees, Bethesda, MD.
- Bray, B. C.** (2015, April). *The Prevention and Methodology Training Program (PAMT) at Penn State*. Visit to the National Institute on Drug Abuse (NIDA) for the NIDA Diversity Supplements Workshop, Bethesda, MD.

Service to National Professional Organizations

- 2022-Present Treasurer (elected), Board of Directors, Society for Prevention Research
- 2021-Present Member (appointed), Finance Committee, Board of Directors, Society for Prevention Research
- 2020 Co-Chair, Program Thematic Sub-Committee: Increasing Health Equity and Strengthening Resilience, Society for Prevention Research Annual Meeting
- 2019 Moderator, Paper Symposium, National Center for Responsible Gaming Annual Conference: Ortiz, V., Perrotte, J., Rinker, D., & **Bray, B. C.** (2019, October). *Health Disparities and Minorities in Gambling and Addiction*. Paper symposium presented at the 20th Annual National Center for Responsible Gaming Conference on Gambling and Addiction, Las Vegas, NV.
- 2019-Present Member, Communications Committee, Society for Prevention Research
- 2019-2020 Member, Code of Conduct Committee, Society for Prevention Research
- 2019 Co-Coordinator, Grouped Paper Sessions Review, Program Thematic Sub-Committee: Development and Testing of Interventions, Society for Prevention Research Annual Meeting
- 2018-2020 Member/Faculty Mentor for Student Review, Abstract Review Committee, Society for Prevention Research Annual Meeting
- 2018-2022 Director-at-Large (elected), Board of Directors, Society for Prevention Research
- 2018-2021 Member, Planning Committee, Society for Prevention Research Annual Meeting
- 2018-2021 Lead Member, Methods Subcommittee, Task Force: Prevention Science's Role in Reducing Disparities and Promoting Equity, Society for Prevention Research
- 2017-2021 Member, Task Force: Prevention Science's Role in Reducing Disparities and Promoting Equity, Society for Prevention Research
- 2017-2019 Lead Member, Mentorship/Fellowship Subcommittee, Training Committee, Society for Prevention Research
- 2017-2019 Member, Strategic Planning Subcommittee, Training Committee, Society for Prevention Research
- 2017-Present Member, Training Committee, Society for Prevention Research
- 2017 Judge, 11th Annual SPR Sloboda and Bukoski Cup Competition, Society for Prevention Research Annual Meeting
- 2016 Judge, 10th Annual SPR Sloboda and Bukoski Cup Competition, Society for Prevention Research Annual Meeting
- 2015 Moderator, Pre-Conference Workshop, National Center for Responsible Gaming Conference: Gros, R., & Stutz, H. (2015, September). *Workshop for Researchers – Working with the Media*. Pre-conference workshop presented at the 16th Annual National Center for Responsible Gaming Conference on Gambling and Addiction, Las Vegas, NV.
- 2011-Present Member, Conference Planning Board, National Center for Responsible Gaming
- 2011-2015, Member, Poster Award Committee, National Center for Responsible Gaming

- 2019
- 2009-2012 Member, Annual Meeting Program Subcommittee, Early Career Preventionists Network Steering Committee, Society for Prevention Research
- 2009-2012 Member, Membership Subcommittee, Early Career Preventionists Network Steering Committee, Society for Prevention Research
- 2009-2012 Member, Newsletter Subcommittee, Early Career Preventionists Network Steering Committee, Society for Prevention Research
- 2008-2010 Member, Research Review Committee, American Academy of Health Behavior Annual Meeting
- 2007-2011 Member, Program Thematic Sub-Committee: Innovative Methods, Society for Prevention Research Annual Meeting
- 2006-2010 Member, Abstract Review Committee, Society for Prevention Research Annual Meeting

Service to UIC

- 2022 Judge, Poster Competition, School of Public Health Research and Scholarship Week Poster Session
- 2022 Member, Narrative Framework Advisory Committee, Center for Clinical and Translational Science
- 2022-Present Member, Scholars' Team, Institute of Government & Public Affairs and Illinois Department of Human Services Partnership
- 2022-Present Member, Influencer Group, Academic Professional Advisory Committee
- 2020-2021 Faculty Mentor for Monte Staton, College of Medicine
- 2020 Member, Faculty Search Committee, Center for Dissemination and Implementation Science
- 2019-Present Member, Navigating Allyship Educational Group, Gender and Sexuality Center

Service to Penn State

- 2018-2019 Member, Executive Committee, The Penn State Consortium to Combat Substance Abuse
- 2018-2019 Member (elected), Non-Tenure Line Promotion Review College Committee, College of Health and Human Development
- 2017 Panel Member, Discussion on Research in Health and Human Development at Penn State, Health and Human Development Honor Society
- 2017-2019 Member, LGBTQA Safe Zone Program, LGBTQA Student Resource Center, Student Affairs
- 2017-2018 Executive Committee Member, Research Computing and Cyberinfrastructure Governance (appointed by Dr. Neil Sharkey, Vice President for Research)
- 2017-2019 Co-Chair/Member, Research Computing and Cyberinfrastructure Governance Communications and Onboarding working group
- 2016-2017 Member, Office of the Vice President for Information Technology (OVPIT) Search Committee for Assistant Senior Director, Enterprise Infrastructure
- 2016-2017 Member, Research Cyberinfrastructure working group "Communications and Onboarding"
- 2015 *****Bray, B. C.** (2015, November). *Grant writing in the social, behavioral, and health sciences*. Discussion hosted at the Center for Teaching Initiatives, Penn State Erie, the Behrend College.
- 2015-2016 Member, Research Cyberinfrastructure working group "Data, Data Governance, Data Preservation, Data Dissemination, Data Security, Managing the Scientific Data Life-Cycle"
- 2005-2006 Graduate Student Representative, Developmental Methodology Faculty Search Committee, Department of Human Development and Family Studies
- 2004-2005 Co-Chair, Graduate Student Steering Committee, Department of Human Development and Family Studies

- 2003-2004 Community Outreach Representative, Graduate Student Steering Committee, Department of Human Development and Family Studies
- 2002-2003 Graduate Student Association Representative, Graduate Student Steering Committee, Department of Human Development and Family Studies

Service to Virginia Tech

- 2011-2013 Member, LGBTQA Safe Zone Program, Community and Cultural Centers, Student Affairs
- 2011 Faculty Guest Speaker, Psychology Club/Psi Chi Meeting
- 2010-2012 Proposal Reviewer, Graduate Research Development Program (GRDP) Student Grant Program
- 2010-2011 Application Review Committee Member, Departmental Council of Graduate Departments of Psychology (COGDOP)
- 2009 Faculty Representative, Psi Xi Graduate School Panel

Consulting

- 2022-2024 Implementing Prescriber-Pharmacist Collaborative Care for Evidence-based Anticoagulant Use, Geoffrey Barnes and Shawna Smith (R18-HS-028562; innovative study design and data analysis)
- 2021-2022 Center for Methodologies for Adapting and Personalizing Prevention, Treatment and Recovery Services for SUD and HIV (MAPS), Daniel Almirall, Linda Collins, Susan Murphy, and Inbal Nahum-Shani (P50-DA-054039; dissemination, outreach, software, technology, training)
- 2020-Present Center for Coordination of Analytics, Science, Enhancement, and Logistics (CASEL) in Tobacco Regulatory Science, Westat, Jeanne Rosenthal and Robin Mermelstein (U54-DA-046060; innovative quantitative methods)
- 2020-Present Department of Human Development and Family Science, Falk College, Syracuse University, Sara Vasilenko (R03-HD-096101; latent class modeling, time-varying effect modeling)
- 2020-Present Internal Medicine, Atrium Health, Stephanie Taylor (R21-LM-013373; latent class and latent profile modeling)
- 2019-Present Helping to End Addiction Long-term (HEAL) Prevention Coordinating Center, Research Triangle Institute, Phillip Graham (U24-DA-050182; innovative quantitative methods)
- 2017-2019 Center for Coordination of Analytics, Science, Enhancement, and Logistics (CASEL) in Tobacco Regulatory Science, Westat, Howard Fishbein (latent class and latent transition modeling)
- 2016-2018 Center for Health Research, Kaiser Permanente, Stephanie Fitzpatrick (latent class modeling)
- 2016-2017 Department of Medicine, The University of Chicago, Megan Huisinigh-Scheetz (latent class modeling)
- 2015-2017 Dana-Farber Cancer Institute, Center for Community Based Research and Harvard T. H. Chan School of Public Health, Department of Social and Behavioral Sciences, Reginald Tucker-Seeley (latent class modeling)
- 2014-2018 External Advisory Steering Committee, Program Evaluation for Prevention (PEP-C) Contract from the Center for Substance Abuse Prevention (CSAP) in the Substance Abuse Mental Health Services Administration (SAMHSA), RTI International, Phillip Graham (innovative quantitative methods)
- 2014-2015 Neurobehavioral Research Laboratory and Clinic, University of Texas Health Science Center, Donald Dougherty (growth curve modeling)
- 2012-2014 Department of Epidemiology, Mailman School of Public Health, Columbia University, Silvia Martins (latent transition modeling)
- 2010-2011 Department of Mental Health, Bloomberg School of Public Health, Johns Hopkins University, Silvia Martins (latent transition modeling)

2008-2009 Department of Epidemiology and Community Health, University of Minnesota, Melissa Nelson Laska (latent class modeling)

Service to Others

2021-2025 Member, Data Safety and Monitoring Board, Scaling a parenting EBI for Latinx youth mental health in primary care (R01-MH-124718), MPIs: Guillermo Prado and C. Hendricks Brown

2020 Member, Data Safety Monitoring Board, *PrEP2Prevent* (R34-DA-050531), MPIs: Michele Kipke and Lisa Hightow-Weidman

2015 *****Bray, B. C.** (2015, April). *Emerging scholars meeting: Answering your questions about my career*. Discussion hosted at the Methodology, Analytics, & Psychometrics (MAP) Academy Emerging Scholar Series, University of Nebraska – Lincoln, Lincoln, NE.

2005-2009 Help Desk Director, The Methodology Center (internationally available help and collaboration on latent class modeling techniques and software distributed by The Methodology Center at Penn State)

Professional Memberships

Society for Prevention Research