Simulation Tables

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Table 1: Model results for simulated data with n = 1000, k = 4, p = 2, h = 3, r = 2. 1000 iterations were run with a burn in of 100. Missingness mechanism was MAR and P(miss) = 0. Model results for the multivariate skew normal (MSN) and multivariate normal (MN) mixtures are presented.

		Class 1			Class 2			Class 3		
Component	Param.	True	MSN Est. (95% CrI)	MN Est. (95% CrI)	True	MSN Est. (95% CrI)	MN Est. (95% CrI)	True	MSN Est. (95% CrI)	MN Est. (95% CrI)
MVSN Regression	β_{11}	-3.07	-2.7 (-3.27, -2.34)	-3.44 (-3.76, -3.11)	0.42	0.9 (-0.06, 1.7)	0.82 (0.45, 1.19)	2.46	2.23 (1.75, 2.56)	1.3 (1.06, 1.54)
	β_{21}	-2.04	-1.99 (-2.17, -1.82)	-1.96 (-2.13, -1.8)	-0.31	-0.26 (-0.44, -0.02)	-0.27 (-0.43, -0.08)	3.26	3.27 (3.16, 3.38)	3.28 (3.16, 3.4)
	β_{31}	-3.03	-3.14 (-3.55, -2.77)	-3.41 (-3.74, -3.08)	0.34	0.49 (-0.41, 1.35)	0.62 (0.23, 0.94)	2.93	2.77 (2.05, 3.09)	1.82 (1.61, 2.07)
	β_{41}	-3.26	-3.24 (-3.4, -3.07)	-3.25 (-3.42, -3.09)	-0.63	-0.59 (-0.77, -0.38)	-0.6 (-0.76, -0.42)	2.53	2.54 (2.43, 2.65)	2.55 (2.45, 2.67)
	β_{12}	-3.12	-3.48 (-3.88, -2.82)	-3.44 (-3.71, -3.18)	0.09	0.51 (-0.32, 1.27)	0.4 (0.04, 0.72)	2.67	2.22 (1.4, 2.57)	1.54 (1.31, 1.77)
	β_{22}	-2.61	-2.62 (-2.77, -2.48)	-2.62 (-2.76, -2.5)	-0.37	-0.35 (-0.52, -0.15)	-0.34 (-0.51, -0.18)	2.1	2.07 (1.96, 2.18)	2.08 (1.96, 2.18)
	β_{32}	-2.84	-2.8 (-3.4, -2.36)	-3.29 (-3.59, -2.97)	-0.06	0.24 (-0.71, 1.12)	0.26 (-0.1, 0.62)	1.89	1.57 (1.07, 1.87)	0.72 (0.51, 0.94)
	β_{42}	-2.8	-2.62 (-2.79, -2.48)	-2.65 (-2.8, -2.49)	0.09	0.14 (-0.06, 0.34)	0.16 (-0.01, 0.32)	3.38	3.35 (3.24, 3.45)	3.35 (3.24, 3.46)
	σ_{11}	1	1.13 (0.79, 1.63)	1.48 (1.21, 1.83)	1	1.13 (0.63, 4.43)	1.25 (0.95, 1.68)	1	1.27 (0.88, 1.76)	1.74 (1.53, 1.99)
	σ_{12}	0.5	0.73 (0.46, 1.09)	0.9 (0.69, 1.22)	0.5	0.58 (0.21, 3.5)	0.61 (0.4, 0.95)	0.5	0.8 (0.48, 1.42)	1.28 (1.08, 1.5)
	σ_{13}	0.25	0.47 (0.21, 0.71)	0.48 (0.3, 0.71)	0.25	0.29 (-0.01, 2.68)	0.3 (0.1, 0.56)	0.25	0.59 (0.32, 1.09)	0.93 (0.75, 1.15)
	σ_{14}	0.12	0.21 (-0.04, 0.54)	0.46 (0.28, 0.69)	0.12	0.06 (-0.2, 2.72)	0.1 (-0.1, 0.34)	0.12	0.32 (0.08, 0.76)	0.78 (0.61, 0.97)
	σ_{22}	1	1.3 (1.03, 1.65)	1.42 (1.16, 1.74)	1	0.98 (0.53, 3.36)	1.08 (0.81, 1.42)	1	1.21 (0.91, 1.88)	1.71 (1.47, 1.95)
	σ_{23}	0.5	0.73 (0.52, 1)	0.77 (0.57, 1.01)	0.5	0.58 (0.26, 2.72)	0.66 (0.44, 0.94)	0.5	0.85 (0.57, 1.36)	1.18 (0.98, 1.38)
	σ_{24}	0.25	0.52 (0.31, 0.82)	0.63 (0.44, 0.88)	0.25	0.16 (-0.17, 2.34)	0.27 (0.06, 0.5)	0.25	0.5 (0.25, 1.02)	0.94 (0.76, 1.16)
	σ_{33}	1	1.03 (0.78, 1.31)	1.12 (0.91, 1.37)	1	0.87 (0.5, 2.88)	0.97 (0.75, 1.3)	1	1.43 (1.12, 1.81)	1.67 (1.47, 1.9)
	σ_{34}	0.5	0.68 (0.48, 0.92)	0.71 (0.54, 0.95)	0.5	0.36 (0.04, 2.38)	0.51 (0.33, 0.77)	0.5	0.84 (0.61, 1.29)	1.17 (1, 1.38)
	σ_{44}	1	1.1 (0.75, 1.45)	1.28 (1.07, 1.56)	1	0.83 (0.45, 3.03)	1.05 (0.81, 1.4)	1	1.21 (0.93, 1.63)	1.65 (1.44, 1.89)
	ψ_1	-0.67	-0.92 (-1.34, -0.19)	0 (0, 0)	0.33	-0.14 (-1.17, 0.97)	0 (0, 0)	-1.33	-1.19 (-1.58, -0.62)	0 (0, 0)
	ψ_2	-0.67	-0.39 (-0.81, 0.09)	0 (0, 0)	0.33	0.14 (-0.93, 1.1)	0 (0, 0)	-1.33	-1.21 (-1.57, -0.38)	0 (0, 0)
	ψ_3	-0.67	0 (-0.83, 0.45)	0 (0, 0)	0.33	-0.21 (-1.09, 0.75)	0 (0, 0)	-1.33	-0.87 (-1.33, 0.11)	0 (0, 0)
	ψ_4	-0.67	-0.68 (-1.18, 0.09)	0 (0, 0)	0.33	-0.08 (-1.19, 1.03)	0 (0, 0)	-1.33	-1.07 (-1.39, -0.5)	0 (0, 0)
Multinom.	δ_{11}	-0.5	-0.29 (-0.54, -0.05)	0.45 (0.22, 0.68)	-0.5	-0.29 (-0.54, -0.05)	0.45 (0.22, 0.68)	-0.5	-0.29 (-0.54, -0.05)	0.45 (0.22, 0.68)
	δ_{12}	0.33	0.12 (-0.24, 0.48)	0.4 (0.04, 0.73)	0.33	0.12 (-0.24, 0.48)	0.4 (0.04, 0.73)	0.33	0.12 (-0.24, 0.48)	0.4 (0.04, 0.73)
	δ_{21}	0.36	0.33 (0.12, 0.53)	0.6 (0.38, 0.83)	0.36	0.33 (0.12, 0.53)	0.6 (0.38, 0.83)	0.36	0.33 (0.12, 0.53)	0.6 (0.38, 0.83)
	δ_{22}	0.96	0.98 (0.69, 1.28)	0.42 (0.12, 0.77)	0.96	0.98 (0.69, 1.28)	0.42 (0.12, 0.77)	0.96	0.98 (0.69, 1.28)	0.42 (0.12, 0.77)
Clustering	π_l	0.25	0.25 (0.22, 0.27)	0.26 (0.23, 0.29)	0.19	0.18 (0.15, 0.21)	0.18 (0.15, 0.21)	0.56	0.57 (0.55, 0.59)	0.56 (0.53, 0.6)