

Program: HLM 7 Hierarchical Linear and Nonlinear Modeling
 Authors: Stephen Raudenbush, Tony Bryk, & Richard Congdon
 Publisher: Scientific Software International, Inc. (c) 2010
 techsupport@ssicentral.com
 www.ssicentral.com

Module: HLM2.EXE (7.01.21202.1001)
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Specifications for this Overdispersed Poisson HLM2 run

Problem Title: no title

The data source for this run = replicate_jls

The command file for this run = C:\Users\migrant\AppData\Local\Temp\whlmtemp.hlm

Output file name = E:\Istanbul\hlm2.html

The maximum number of level-1 units = 123

The maximum number of level-2 units = 67

The maximum number of micro iterations = 14

Method of estimation: restricted PQL

Maximum number of macro iterations = 100

Distribution at Level-1: Poisson

The outcome variable is ANFRAGEN

Summary of the model specified

Level-1 Model

$$E(ANFRAGEN_{ii} | \pi_i) = \lambda_{ii}$$

$$\log[\lambda_{ii}] = \eta_{ii}$$

$$\eta_{ii} = \pi_{0i} + \pi_{1i} * (EXECUTIV_{ii}) + \pi_{2i} * (WP_HLM_{ii}) + \pi_{3i} * (MONATE_{ii}) + \pi_{4i} * (POSITION_{ii})$$

Level-2 Model

$$\pi_{0i} = \beta_{00} + \beta_{01} * (GEN_HLM_i) + \beta_{02} * (GENDER_i) + \beta_{03} * (POL_LEVE_i) + \beta_{04} * (VISMIN_M_i) \\ + \beta_{05} * (ZEIT_MEA_i) + \beta_{06} * (LEFT_RIG_i) + \beta_{07} * (STADT_LA_i) + \beta_{08} * (VOLKSPAR_i) + r_{0i}$$

$$\pi_{1i} = \beta_{10}$$

$$\pi_{2i} = \beta_{20}$$

$$\pi_{3i} = \beta_{30}$$

$$\pi_{4i} = \beta_{40}$$

MONATE has been centered around the grand mean.

ZEIT_MEA has been centered around the grand mean.

$$\text{Level-1 variance} = \sigma^2 / \lambda_{ii}$$

Mixed Model

$$\begin{aligned} \eta_{ti} = & \beta_{00} + \beta_{01} * GEN_HLM_{-i} + \beta_{02} * GENDER_i + \beta_{03} * POL_LEVE_i \\ & + \beta_{04} * VISMIN_M_i + \beta_{05} * ZEIT_MEA_i + \beta_{06} * LEFT_RIG_i + \beta_{07} * STADT_LA_i \\ & + \beta_{08} * VOLKSPAR_i \\ & + \beta_{10} * EXECUTIV_{ti} \\ & + \beta_{20} * WP_HLM_{ti} \\ & + \beta_{30} * MONATE_{ti} \\ & + \beta_{40} * POSITION_{ti} \\ & + r_{0i} \end{aligned}$$

The value of the log-likelihood function at iteration 4 = -8.734545E+002

Results for Non-linear Model with the Log Link Function Unit-Specific Model, PQL Estimation - (macro iteration 11)

$$\sigma^2 = 5.87015$$

τ

INTRCPT1, π_0 0.49172

Random level-1 coefficient	Reliability estimate
INTRCPT1, π_0	0.570

The value of the log-likelihood function at iteration 2 = -3.271651E+002

Final estimation of fixed effects: (Unit-specific model)

Fixed Effect	Coefficient	Standard error	t-ratio	Approx. d.f.	p-value
For INTRCPT1, π_0					
INTRCPT2, β_{00}	2.428498	0.370536	6.554	58	<0.001
GEN_HLM_, β_{01}	-0.041686	0.237109	-0.176	58	0.861
GENDER, β_{02}	0.184774	0.238698	0.774	58	0.442
POL_LEVE, β_{03}	0.475885	0.330394	1.440	58	0.155

VISMIN_M, β_{04}	-0.054613	0.274141	-0.199	58	0.843
ZEIT_MEA, β_{05}	0.044245	0.025561	1.731	58	0.089
LEFT_RIG, β_{06}	0.074045	0.355606	0.208	58	0.836
STADT_LA, β_{07}	1.485344	0.319992	4.642	58	<0.001
VOLKSPAR, β_{08}	-0.463143	0.287411	-1.611	58	0.113
For EXECUTIV slope, π_1					
INTRCPT2, β_{10}	-1.928908	0.216916	-8.892	52	<0.001
For WP_HLM slope, π_2					
INTRCPT2, β_{20}	0.210774	0.093516	2.254	52	0.028
For MONATE slope, π_3					
INTRCPT2, β_{30}	0.032264	0.005215	6.186	52	<0.001
For POSITION slope, π_4					
INTRCPT2, β_{40}	-0.082200	0.199741	-0.412	52	0.682

Fixed Effect	Coefficient	Event Rate Ratio	Confidence Interval
For INTRCPT1, π_0			
INTRCPT2, β_{00}	2.428498	11.341837	(5.402,23.815)
GEN_HLM_, β_{01}	-0.041686	0.959170	(0.597,1.542)
GENDER, β_{02}	0.184774	1.202947	(0.746,1.940)
POL_LEVE, β_{03}	0.475885	1.609438	(0.831,3.118)
VISMIN_M, β_{04}	-0.054613	0.946851	(0.547,1.639)
ZEIT_MEA, β_{05}	0.044245	1.045238	(0.993,1.100)
LEFT_RIG, β_{06}	0.074045	1.076856	(0.528,2.195)
STADT_LA, β_{07}	1.485344	4.416483	(2.327,8.381)
VOLKSPAR, β_{08}	-0.463143	0.629303	(0.354,1.119)
For EXECUTIV slope, π_1			
INTRCPT2, β_{10}	-1.928908	0.145307	(0.094,0.225)
For WP_HLM slope, π_2			
INTRCPT2, β_{20}	0.210774	1.234633	(1.023,1.490)
For MONATE slope, π_3			
INTRCPT2, β_{30}	0.032264	1.032790	(1.022,1.044)
For POSITION slope, π_4			
INTRCPT2, β_{40}	-0.082200	0.921088	(0.617,1.375)

Final estimation of fixed effects
(Unit-specific model with robust standard errors)

Fixed Effect	Coefficient	Standard error	t-ratio	Approx. d.f.	p-value
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For INTRCPT1, π_0					
INTRCPT2, β_{00}	2.428498	0.292089	8.314	58	<0.001
GEN_HLM_, β_{01}	-0.041686	0.196865	-0.212	58	0.833
GENDER, β_{02}	0.184774	0.222044	0.832	58	0.409
POL_LEVE, β_{03}	0.475885	0.285722	1.666	58	0.101
VISMIN_M, β_{04}	-0.054613	0.213183	-0.256	58	0.799
ZEIT_MEA, β_{05}	0.044245	0.026212	1.688	58	0.097
LEFT_RIG, β_{06}	0.074045	0.332195	0.223	58	0.824
STADT_LA, β_{07}	1.485344	0.295697	5.023	58	<0.001
VOLKSPAR, β_{08}	-0.463143	0.238089	-1.945	58	0.057
For EXECUTIV slope, π_1					
INTRCPT2, β_{10}	-1.928908	0.213014	-9.055	52	<0.001
For WP_HLM slope, π_2					
INTRCPT2, β_{20}	0.210774	0.091860	2.295	52	0.026
For MONATE slope, π_3					
INTRCPT2, β_{30}	0.032264	0.005184	6.224	52	<0.001
For POSITION slope, π_4					
INTRCPT2, β_{40}	-0.082200	0.203386	-0.404	52	0.688

Fixed Effect	Coefficient	Event Rate Ratio	Confidence Interval
For INTRCPT1, π_0			
INTRCPT2, β_{00}	2.428498	11.341837	(6.320,20.354)
GEN_HLM_, β_{01}	-0.041686	0.959170	(0.647,1.423)
GENDER, β_{02}	0.184774	1.202947	(0.771,1.876)
POL_LEVE, β_{03}	0.475885	1.609438	(0.908,2.852)
VISMIN_M, β_{04}	-0.054613	0.946851	(0.618,1.451)
ZEIT_MEA, β_{05}	0.044245	1.045238	(0.992,1.102)
LEFT_RIG, β_{06}	0.074045	1.076856	(0.554,2.094)
STADT_LA, β_{07}	1.485344	4.416483	(2.443,7.983)
VOLKSPAR, β_{08}	-0.463143	0.629303	(0.391,1.014)
For EXECUTIV slope, π_1			
INTRCPT2, β_{10}	-1.928908	0.145307	(0.095,0.223)
For WP_HLM slope, π_2			
INTRCPT2, β_{20}	0.210774	1.234633	(1.027,1.485)
For MONATE slope, π_3			
INTRCPT2, β_{30}	0.032264	1.032790	(1.022,1.044)
For POSITION slope, π_4			
INTRCPT2, β_{40}	-0.082200	0.921088	(0.612,1.385)

Final estimation of variance components

Random Effect	Standard Deviation	Variance Component	<i>d.f.</i>	χ^2	<i>p</i> -value
INTRCPT1, r_0	0.70123	0.49172	58	303.59981	<0.001
level-1, e	2.42284	5.87015			

Results for Population-Average Model

The value of the log-likelihood function at iteration 2 = -3.304048E+002

Final estimation of fixed effects: (Population-average model)

Fixed Effect	Coefficient	Standard error	<i>t</i> -ratio	Approx. <i>d.f.</i>	<i>p</i> -value
For INTRCPT1, π_0					
INTRCPT2, β_{00}	2.532608	0.348612	7.265	58	<0.001
GEN_HLM_, β_{01}	-0.019489	0.224956	-0.087	58	0.931
GENDER, β_{02}	0.209724	0.227289	0.923	58	0.360
POL_LEVE, β_{03}	0.496570	0.310838	1.598	58	0.116
VISMIN_M, β_{04}	-0.005098	0.260262	-0.020	58	0.984
ZEIT_MEA, β_{05}	0.043462	0.023890	1.819	58	0.074
LEFT_RIG, β_{06}	0.102412	0.333439	0.307	58	0.760
STADT_LA, β_{07}	1.516647	0.304349	4.983	58	<0.001
VOLKSPAR, β_{08}	-0.541742	0.272576	-1.987	58	0.052
For EXECUTIV slope, π_1					
INTRCPT2, β_{10}	-1.931276	0.203968	-9.469	52	<0.001
For WP_HLM slope, π_2					
INTRCPT2, β_{20}	0.207684	0.086985	2.388	52	0.021
For MONATE slope, π_3					
INTRCPT2, β_{30}	0.032375	0.005146	6.292	52	<0.001
For POSITION slope, π_4					
INTRCPT2, β_{40}	-0.074274	0.183589	-0.405	52	0.687

Fixed Effect	Coefficient	Event Rate Ratio	Confidence Interval
For INTRCPT1, π_0			
INTRCPT2, β_{00}	2.532608	12.586285	(6.263,25.293)
GEN_HLM_, β_{01}	-0.019489	0.980700	(0.625,1.539)
GENDER, β_{02}	0.209724	1.233338	(0.782,1.944)
POL_LEVE, β_{03}	0.496570	1.643077	(0.882,3.061)
VISMIN_M, β_{04}	-0.005098	0.994915	(0.591,1.675)

ZEIT_MEA, β_{05}	0.043462	1.044420	(0.996,1.096)
LEFT_RIG, β_{06}	0.102412	1.107839	(0.568,2.160)
STADT_LA, β_{07}	1.516647	4.556921	(2.478,8.381)
VOLKSPAR, β_{08}	-0.541742	0.581734	(0.337,1.004)
For EXECUTIV slope, π_1			
INTRCPT2, β_{10}	-1.931276	0.144963	(0.096,0.218)
For WP_HLM slope, π_2			
INTRCPT2, β_{20}	0.207684	1.230825	(1.034,1.466)
For MONATE slope, π_3			
INTRCPT2, β_{30}	0.032375	1.032905	(1.022,1.044)
For POSITION slope, π_4			
INTRCPT2, β_{40}	-0.074274	0.928417	(0.642,1.342)

Final estimation of fixed effects
(Population-average model with robust standard errors)

Fixed Effect	Coefficient	Standard error	t-ratio	Approx. d.f.	p-value
For INTRCPT1, π_0					
INTRCPT2, β_{00}	2.532608	0.252699	10.022	58	<0.001
GEN_HLM, β_{01}	-0.019489	0.187768	-0.104	58	0.918
GENDER, β_{02}	0.209724	0.212522	0.987	58	0.328
POL_LEVE, β_{03}	0.496570	0.257564	1.928	58	0.059
VISMIN_M, β_{04}	-0.005098	0.192113	-0.027	58	0.979
ZEIT_MEA, β_{05}	0.043462	0.023692	1.834	58	0.072
LEFT_RIG, β_{06}	0.102412	0.306529	0.334	58	0.740
STADT_LA, β_{07}	1.516647	0.264299	5.738	58	<0.001
VOLKSPAR, β_{08}	-0.541742	0.219202	-2.471	58	0.016
For EXECUTIV slope, π_1					
INTRCPT2, β_{10}	-1.931276	0.183967	-10.498	52	<0.001
For WP_HLM slope, π_2					
INTRCPT2, β_{20}	0.207684	0.078635	2.641	52	0.011
For MONATE slope, π_3					
INTRCPT2, β_{30}	0.032375	0.005018	6.452	52	<0.001
For POSITION slope, π_4					
INTRCPT2, β_{40}	-0.074274	0.176308	-0.421	52	0.675

Fixed Effect	Coefficient	Event Rate Ratio	Confidence Interval
For INTRCPT1, π_0			

INTRCPT2, β_{00}	2.532608	12.586285	(7.589,20.874)
GEN_HLM_, β_{01}	-0.019489	0.980700	(0.673,1.428)
GENDER, β_{02}	0.209724	1.233338	(0.806,1.887)
POL_LEVE, β_{03}	0.496570	1.643077	(0.981,2.752)
VISMIN_M, β_{04}	-0.005098	0.994915	(0.677,1.462)
ZEIT_MEA, β_{05}	0.043462	1.044420	(0.996,1.095)
LEFT_RIG, β_{06}	0.102412	1.107839	(0.600,2.046)
STADT_LA, β_{07}	1.516647	4.556921	(2.685,7.735)
VOLKSPAR, β_{08}	-0.541742	0.581734	(0.375,0.902)
For EXECUTIV slope, π_1			
INTRCPT2, β_{10}	-1.931276	0.144963	(0.100,0.210)
For WP_HLM slope, π_2			
INTRCPT2, β_{20}	0.207684	1.230825	(1.051,1.441)
For MONATE slope, π_3			
INTRCPT2, β_{30}	0.032375	1.032905	(1.023,1.043)
For POSITION slope, π_4			
INTRCPT2, β_{40}	-0.074274	0.928417	(0.652,1.323)
