Online Supplemental Materials - Treatment Script

In the current study design, participants originally recruited were non-treatment seeking. At the baseline/intake assessment, if participants inquired about treatment they were excluded and provided referrals. During the first follow-up assessment (~30 days), all participants were told about an "opportunity to speak with a counselor." Specifically, the following prompt was provided to all participants:

> "Thank you for completing the questionnaires. I also wanted to tell you about a new opportunity we have for participants who are interested in talking to a counselor about their drinking. In this brief alcohol intervention, participants would meet with a counselor for up to 4 sessions over the next month. This opportunity is completely optional and would not affect your participation in the Daily Monitoring Study. Again, if you choose to participant in the brief alcohol intervention, it would be separate from your participation in the Daily Monitoring Study, and the daily data you provide over the phone will not be shared with the counselor (unless you choose to discuss this in the session). Would you be interested in taking part in this brief alcohol intervention?"

As stated in the prompt, agreeing the participate in treatment was completely voluntary and did not affect further participation in the study. This design decision was chosen to assess if changes in avoidance inclinations (original aim of the parent study; NCT01883089, AA021768) predicted treatment seeking behaviors.

Supplementary Materials

Two-part Hurdle Model

As noted in the manuscript, the data presented there uses two separate analyses (a logistic analysis and a zero-truncated negative binomial analysis). Under normal conditions, these two models, run separately, are equivalent to a negative-binomial hurdle model. However, there are some complications with this approach in the current data as level 1 and level 2 observations differ across the hurdle. Below we present an analysis that uses the full sample (Level 2 n = 92, Level 1 = 8280) estimated simultaneously using a negative-binomial hurdle model in Mplus 8.9. Note that NA in the logistic model was slightly weaker.

	Drinking Day (Yes/No)			Number of Drinks per Day		
	b	*SE*	*p*	*b*	*SE*	*p*
Within-Subject						
Positive Affect (Within-person)	0.013	0.034	.708	0.000	0.018	.996
Negative Affect (Within-person)	**0.075**	**0.043**	**.080**	0.067	0.021	.001
Tx Engagement	-0.603	0.308	.005	-0.015	0.069	.830
Day of Week	-0.156	0.053	.003	-0.089	0.026	<.001
Study Phase	-0.065	0.063	.303	0.027	0.028	.351
Between-Subject						
Gender	-0.194	0.313	.535	0.081	0.131	.536
Race	-0.982	0.390	.012	-0.156	0.149	.295
Age	-0.013	0.014	.334	-0.009	0.006	.183
AUDIT Score	0.003	0.022	.890	0.016	0.010	.090
Total Sessions Attended	0.053	0.123	.666	-0.076	0.050	.126
Positive Affect (Between-person)	-0.063	0.207	.759	0.075	0.075	.316
Negative Affect (Between-person)	0.119	0.158	.451	0.042	0.063	.506
Intercept	0.828	0.355	.020	1.539	0.120	<.001

Treatment Engagement vs Treatment Acceptance

The primary analysis controls for the effects of treatment engagement in the model. However, earlier discussions also included the possibility of treatment acceptance (i.e., days after a participant accepted offered treatment), either as a time varying covariate, or as a moderator of the level 1 affect slopes. We examined these possibilities in a series of analyses that included treatment engagement alone (primary analysis), treatment acceptance alone (below), treatment acceptance and treatment engagement in the model (below), and the extent to which treatment engagement and/or treatment acceptance may moderate affect-drinking paths at the day level. The model below shows that treatment acceptance had a significant positive association with the likelihood of drinking on any given day. This association was similar to that observed for treatment engagement from the primary analysis reported in the manuscript.

Treatment Acceptance Only Analysis

	Drinking Day (Yes/No)			Number of Drinks per Day		
	b	*SE*	*p*	*b*	*SE*	*p*
Within-Subject						
Positive Affect (Within-person)	0.020	0.052	.694	0.000	0.018	.999
Negative Affect (Within-person)	0.142	0.052	.017	0.067	0.021	.001
Tx Acceptance	-0.353	0.271	.194	0.057	0.083	.492
Day of Week	-0.232	0.086	.007	-0.089	0.026	<.001
Study Phase	-0.144	0.081	.074	0.016	0.028	.562
Between-Subject						
Gender	0.022	0.482	.964	0.077	0.130	.556
Race	-0.884	0.619	.153	-0.156	0.146	.285
Age	-0.013	0.020	.506	-0.008	0.006	.199
AUDIT Score	-0.013	0.035	.721	0.016	0.009	.085
Total Sessions Attended	-0.008	0.176	.966	-0.088	0.051	.081
Positive Affect (Between-person)	-0.194	0.342	.570	0.072	0.074	.330
Negative Affect (Between-person)	0.225	0.243	.354	0.037	0.063	.550
Intercept	-0.820	0.572	.151	1.548	0.117	<.001

Treatment Acceptance and Treatment Engagement

Next, we examined a model in which both predictors were included. There were no substantial discrepancies between treatment engagement and treatment acceptance (see below). Both had a negative association with alcohol use likelihood, and neither were associated with more drinks consumed when drinking. In this model, treatment acceptance (which had a higher sample, as more individuals accepted treatment than those that engaged in treatment) was positively associated with drinking likelihood. However, this association was diminished considerably (likely due to high collinearity with treatment engagement). In the manuscript we have retained the treatment engagement variable, as this has greater clinical implications.

	Drinking Day (Yes/No)			Number of Drinks per Day		
	b	*SE*	*p*	*b*	*SE*	*p*
Within-Subject						
Positive Affect (Within-person)	0.019	0.052	.723	0.000	0.018	.987
Negative Affect (Within-person)	0.139	0.059	.019	0.046	0.016	.004
Tx Acceptance	0.105	0.536	.845	0.114	0.139	.414
Tx Engagement	-0.768	0.573	.180	-0.114	0.146	.435
Day of Week	-0.231	0.086	.007	-0.089	0.026	<.001
Study Phase	-0.145	0.081	.075	0.016	0,028	.571
Between-Subject						
Gender	0.057	0.481	.489	0.076	0.130	.546
Race	-0.899	0.614	.143	-0.157	0.146	.281
Age	-0.014	0.020	.489	-0.008	0.007	.199
AUDIT Score	-0.013	0.035	.700	0.016	0.009	.084
Total Sessions Attended	0.076	0.174	.663	-0.076	0.049	.124
Positive Affect (Between-person)	-0.205	0.338	.545	0.070	0.074	.342
Negative Affect (Between-person)	0.227	0.239	.343	0.038	0.062	.544
Intercept	-0.770	0.568	.175	1.549	0.116	<.001

Treatment Acceptance and Treatment Engagement Moderation Analysis

Finally, we examined a series of models in which treatment acceptance and/or treatment engagement moderated the within-subject associations between affect and alcohol use outcomes. In model 1 (M1) we look only at treatment engagement and the moderating effects of treatment engagement on positive and negative affect. In model 2 (M2) we look only at treatment acceptance and the moderating effects of treatment acceptance on positive and negative affect. Finally, in model 3 (M3) we look at the moderating effects of treatment engagement and treatment acceptance in the same model. For brevity, we only provide the main effects below.

	Drinking Day (Yes/No)			Number of Drinks per Day		
	M1	M2	M3	M1	M2	M3
Within-Subject						
Positive Affect (Within-person)	0.067	0.077	0.078	0.000	0.001	0.001
Negative Affect (Within-person)	0.093*	0.101*	0.103*	0.043*	0.052*	0.049*
Tx Seeking		-0.424*	-0.420		0.029	0.083
Tx Engagement	-0.697*		0.000	-0.049		-0.125
PA x Tx Acceptance		-0.161	-0.160		0.039	0.091
NA x Tx Acceptance		0.063	0.060		-0.035	-0.126*
PA x Tx Engagement	-0.184		0.001	0.006		-0.081
NA x Tx Engagement	0.139		0.000	0.023		0.143*
Day of Week	-0.244*	-0.245	-0.245*	-0.094*	-0.093*	-0.093*
Study Phase	-0.138	0.082	.096			
Between-Subject						
Gender	0.049	0.481	.340	0.076	0.131	.581
Race	-0.899	0.614	.143	-0.162	0.149	.275
Age	-0.013	0.020	.496	-0.008	0.006	.198
AUDIT Score	-0.014	0.035	.697	0.016	0.010	.086
Total Sessions Attended	0.071	0.173	.412	-0.077	0.050	.122
Positive Affect (Between-person)	-0.204	0.339	.547	0.073	0.075	.331
Negative Affect (Between-person)	0.229	0.240	.340	0.038	0.063	.597

In these analyses, there are significant moderated effects for the count outcome in Model 3. However, these effects (a) are only significant when both treatment engagement and treatment acceptance are included in the model and (b) are directional opposite in form. One of these interactions takes the form that would be consistent with theory (e.g., negative affect is associated with greater drinking) while the other is inconsistent with theory (e.g., negative affect is associated with decreased drinking). However, the substantial increase in effect size of these interactions from Models 1 and 2 to Model 3 is likely a function of the high multicollinearity between the two treatment seeking variables (and subsequently the interaction covariances) which inflates the magnitude of the effect. Further, this dataset is not powered to detect one interaction of this form, much less two. Thus, we have not followed this thread, and do not present this data in the main analysis. The extent to which treatment acceptance (i.e., stating that treatment may be necessary) vs treatment engagement (i.e., actually participating in treatment) may differentially affect mood-drinking associations is important; however, this is a question for future research in a larger, fully powered, sample aimed at addressing this question specifically.

Including vs Excluding Day 1 and fully missing level 1 Data

Finally, we conducted the analysis excluding all Day 1 data, as there were no mood ratings for this data as well as observations where all level 1 data were missing (n = 7694 observations total). The results are largely unchanged from those presented in the manuscript. Note that positive affect had a modest, though non-significant association with drinks consumed on drinking nights.

	Drinking Day (Yes/No)			Number of Drinks per Day		
	b	*SE*	*p*	*b*	*SE*	*p*
Within-Subject						
Positive Affect (Within-person)	0.044	0.044	.317	**0.026**	**0.016**	**.097**
Negative Affect (Within-person)	0.118	0.046	.010	0.045	0.016	.005
Tx Engagement	-0.890	0.154	<.001	0.025	0.047	.600
Day of Week	-0.244	0.062	<.001	-0.093	0.019	<.001
Study Phase	-0.138	0.083	.098	0.026	0.028	.932
Between-Subject						
Gender	0.049	0.481	.340	0.076	0.131	.581
Race	-0.899	0.614	.143	-0.162	0.149	.275
Age	-0.013	0.020	.496	-0.008	0.006	.198
AUDIT Score	-0.014	0.035	.697	0.016	0.010	.086
Total Sessions Attended	0.071	0.173	.412	-0.077	0.050	.122
Positive Affect (Between-person)	-0.204	0.339	.547	0.073	0.075	.331
Negative Affect (Between-person)	0.229	0.240	.340	0.038	0.063	.597
Intercept	-0.775	0.569	.173	1.544	0.118	<.001

Mplus VERSION 8.9 (Mac)
MUTHEN & MUTHEN
06/26/2023 12:07 PM

INPUT INSTRUCTIONS

```
  Title: Count Analysis

  Data:
    File = LOGimplist.dat ;
    type = imputation;
  Variable:
    Names are

      DRINKLOG
      AGE
      GENDER
      AUDIT_TO
      RACE_DIC
      NA_MEAN
      PA_MEAN
      MINI_AUD
      ADS_TOTA
      DRINCTOT
      TOTSESSI
      DAY
      ZTDRINKS
      MONDAY
      TUESDAY
      WEDNESDA
      THURSDAY
      FRIDAY
      SATURDAY
      STUDYPHA
      TX_ENGAG
      LAGNA
      LAGPA
      RTXSK
      TX_SEEKI
      SID;

    Missing are all (-9999) ;
  usevar are  ztDRINKS Age Gender AUDIT_TO RACE_DIC
  NA_mean PA_mean TX_ENGAG TOTSESSI STUDYPHA
   PA NA  dow;

    within are dow TX_ENGAG
```

```
 PA NA STUDYPHA;

 between are  NA_mean PA_mean Age Gender RACE_DIC AUDIT_TO TOTSESSI;

 count are ztDRINKS(nbt);

 cluster = SID;

 useobs are ztDRINKS>0;

 define:

   dow = 0;
 IF (Monday == 1) then dow = 1;
 IF (Tuesday == 1) then dow = 1;
 IF (Wednesda == 1) then dow = 1;
 IF (Thursday == 1) then dow = 1;

 PA = LAGPA;
 NA = LAGNA;

! PAxTX = PA*TX_ENGAG;
! NAxTX = NA*TX_ENGAG;


 center PA NA(groupmean);
 center Age AUDIT_TO NA_mean PA_mean TOTSESSI(grandmean);




 analysis:
 estimator=mlr;
 type = twolevel ;

 model:

 %within%

ztDRINKS on TX_ENGAG ;
ztDRINKS on PA ;
ztDRINKS on NA ;
ztDRINKS on dow  STUDYPHA;

 %between%

ztDRINKS on NA_mean PA_mean Age Gender Race_Dic AUDIT_TO TOTSESSI;
```

output:
cint;

INPUT READING TERMINATED NORMALLY

Count Analysis

SUMMARY OF ANALYSIS

Number of groups 1
Average number of observations 4344

Number of replications
Requested 100
Completed 100

Number of dependent variables 1
Number of independent variables 12
Number of continuous latent variables 0

Observed dependent variables

Count
ZTDRINKS

Observed independent variables
AGE GENDER AUDIT_TO RACE_DIC NA_MEAN PA_MEAN
TX_ENGAG TOTSESSI STUDYPHA PA NA DOW

Variables with special functions

Cluster variable SID

Within variables
TX_ENGAG STUDYPHA PA NA DOW

Between variables
AGE GENDER AUDIT_TO RACE_DIC NA_MEAN PA_MEAN
TOTSESSI

Centering (GRANDMEAN)

AGE AUDIT_TO NA_MEAN PA_MEAN
TOTSESSI

Centering (GROUPMEAN)
PA NA

Estimator MLR
Information matrix OBSERVED
Optimization Specifications for the Quasi-Newton Algorithm for
Continuous Outcomes
Maximum number of iterations 100
Convergence criterion 0.100D-05
Optimization Specifications for the EM Algorithm
Maximum number of iterations 500
Convergence criteria
Loglikelihood change 0.100D-02
Relative loglikelihood change 0.100D-05
Derivative 0.100D-02
Optimization Specifications for the M step of the EM Algorithm for
Categorical Latent variables
Number of M step iterations 1
M step convergence criterion 0.100D-02
Basis for M step termination ITERATION
Optimization Specifications for the M step of the EM Algorithm for
Censored, Binary or Ordered Categorical (Ordinal), Unordered
Categorical (Nominal) and Count Outcomes
Number of M step iterations 1
M step convergence criterion 0.100D-02
Basis for M step termination ITERATION
Maximum value for logit thresholds 15
Minimum value for logit thresholds -15
Minimum expected cell size for chi-square 0.100D-01
Maximum number of iterations for H1 2000
Convergence criterion for H1 0.100D-03
Optimization algorithm EMA
Integration Specifications
Type STANDARD
Number of integration points 15
Dimensions of numerical integration 1
Adaptive quadrature ON
Cholesky OFF

Input data file(s)
Multiple data files from
LOGimplist.dat
Input data format FREE

SUMMARY OF DATA FOR THE FIRST DATA SET

Number of clusters 89

SUMMARY OF MISSING DATA PATTERNS FOR THE FIRST DATA SET

COVARIANCE COVERAGE OF DATA FOR THE FIRST DATA SET

Minimum covariance coverage value 0.100

COUNT PROPORTION OF ZERO, MINIMUM AND MAXIMUM VALUES

ZTDRINKS 0.000 1 75

SAMPLE STATISTICS

NOTE: These are average results over 100 data sets.

SAMPLE STATISTICS

Means

TX_ENGAG	STUDYPHA	PA	NA	DOW
0.089	1.815	0.000	0.000	0.550

Means

AGE	GENDER	AUDIT_TO	RACE_DIC	NA_MEAN
0.245	0.603	0.160	0.464	0.098

Means

PA_MEAN	TOTSESSI
-0.132	-0.011

Covariances

	TX_ENGAG	STUDYPHA	PA	NA	DOW
TX_ENGAG	0.081				
STUDYPHA	0.033	0.650			
PA	-0.002	0.014	0.800		
NA	0.000	-0.042	-0.227	0.684	
DOW	-0.001	-0.005	-0.001	-0.002	0.248
AGE	0.182	-0.043	0.000	0.000	0.071
GENDER	-0.022	0.004	0.000	0.000	0.001
AUDIT_TO	-0.153	-0.099	0.000	0.000	-0.067
RACE_DIC	-0.033	-0.007	0.000	0.000	-0.008
NA_MEAN	0.004	-0.007	0.000	0.000	0.002
PA_MEAN	-0.020	0.001	0.000	0.000	-0.011
TOTSESSI	0.177	-0.066	0.000	0.000	-0.003

Covariances

	AGE	GENDER	AUDIT_TO	RACE_DIC	NA_MEAN
AGE	81.352				
GENDER	0.729	0.239			
AUDIT_TO	-6.158	0.968	46.370		
RACE_DIC	-1.116	-0.004	0.538	0.249	
NA_MEAN	0.591	0.031	1.072	-0.080	0.723
PA_MEAN	-0.489	-0.037	0.223	0.274	-0.269
TOTSESSI	0.834	-0.122	-0.480	-0.111	-0.013

Covariances

	PA_MEAN	TOTSESSI
PA_MEAN	0.889	
TOTSESSI	-0.012	0.874

Correlations

	TX_ENGAG	STUDYPHA	PA	NA	DOW
TX_ENGAG	1.000				
STUDYPHA	0.143	1.000			
PA	-0.009	0.020	1.000		
NA	0.000	-0.063	-0.308	1.000	
DOW	-0.006	-0.013	-0.002	-0.006	1.000
AGE	0.071	-0.006	0.000	0.000	0.016
GENDER	-0.161	0.009	0.000	0.000	0.002
AUDIT_TO	-0.079	-0.018	0.000	0.000	-0.020

RACE_DIC	-0.235	-0.018	0.000	0.000	-0.032
NA_MEAN	0.015	-0.010	0.000	0.000	0.004
PA_MEAN	-0.075	0.001	0.000	0.000	-0.023
TOTSESSI	0.664	-0.087	0.000	0.000	-0.007

Correlations

	AGE	GENDER	AUDIT_TO	RACE_DIC	NA_MEAN
AGE	1.000				
GENDER	0.165	1.000			
AUDIT_TO	-0.100	0.291	1.000		
RACE_DIC	-0.248	-0.015	0.158	1.000	
NA_MEAN	0.077	0.073	0.185	-0.189	1.000
PA_MEAN	-0.058	-0.079	0.035	0.583	-0.336
TOTSESSI	0.099	-0.267	-0.075	-0.238	-0.017

Correlations

	PA_MEAN	TOTSESSI
PA_MEAN	1.000	
TOTSESSI	-0.014	1.000

MODEL FIT INFORMATION

Number of Free Parameters 15

Loglikelihood

H0 Value

Mean -10366.514
Std Dev 29.554
Number of successful computations 100

Proportions		Percentiles	
Expected	Observed	Expected	Observed
0.990	0.990	-10435.264	-10444.728
0.980	0.980	-10427.208	-10427.791
0.950	0.960	-10415.127	-10414.384
0.900	0.900	-10404.390	-10408.765
0.800	0.800	-10391.386	-10392.790
0.700	0.680	-10382.012	-10383.672

0.500	0.510	-10366.514	-10365.787
0.300	0.310	-10351.016	-10350.880
0.200	0.200	-10341.642	-10341.951
0.100	0.090	-10328.638	-10330.421
0.050	0.050	-10317.901	-10318.129
0.020	0.020	-10305.820	-10314.821
0.010	0.010	-10297.764	-10305.697

Information Criteria

Akaike (AIC)

Mean	20763.028
Std Dev	59.107
Number of successful computations	100

Proportions		Percentiles	
Expected	Observed	Expected	Observed
0.990	0.990	20625.527	20579.260
0.980	0.980	20641.640	20641.394
0.950	0.950	20665.803	20664.682
0.900	0.910	20687.276	20686.655
0.800	0.800	20713.283	20707.036
0.700	0.690	20732.032	20731.369
0.500	0.490	20763.028	20761.003
0.300	0.320	20794.024	20796.264
0.200	0.200	20812.772	20812.174
0.100	0.100	20838.780	20832.812
0.050	0.040	20860.253	20852.938
0.020	0.020	20884.416	20878.510
0.010	0.010	20900.529	20885.582

Bayesian (BIC)

Mean	20858.676
Std Dev	59.107
Number of successful computations	100

Proportions		Percentiles	
Expected	Observed	Expected	Observed
0.990	0.990	20721.176	20674.909
0.980	0.980	20737.288	20737.042
0.950	0.950	20761.451	20760.330
0.900	0.910	20782.925	20782.303
0.800	0.800	20808.932	20802.685
0.700	0.690	20827.681	20827.017
0.500	0.490	20858.676	20856.652

0.300	0.320	20889.672	20891.912
0.200	0.200	20908.421	20907.823
0.100	0.100	20934.428	20928.461
0.050	0.040	20955.901	20948.586
0.020	0.020	20980.064	20974.158
0.010	0.010	20996.177	20981.231

Sample-Size Adjusted BIC (n* = (n + 2) / 24)

Mean	20811.012
Std Dev	59.107
Number of successful computations	100

Proportions		Percentiles	
Expected	Observed	Expected	Observed
0.990	0.990	20673.512	20627.245
0.980	0.980	20689.624	20689.378
0.950	0.950	20713.787	20712.666
0.900	0.910	20735.261	20734.639
0.800	0.800	20761.268	20755.021
0.700	0.690	20780.017	20779.353
0.500	0.490	20811.012	20808.988
0.300	0.320	20842.008	20844.248
0.200	0.200	20860.757	20860.159
0.100	0.100	20886.764	20880.797
0.050	0.040	20908.238	20900.922
0.020	0.020	20932.401	20926.494
0.010	0.010	20948.513	20933.567

MODEL RESULTS

	Estimate	S.E.	Est./S.E.	Two-Tailed P-Value	Rate of Missing
Within Level					
ZTDRINKS ON					
TX_ENGAG	-0.015	0.069	-0.216	0.829	0.055
PA	0.000	0.018	-0.014	0.988	0.431
NA	0.067	0.021	3.210	0.001	0.325
DOW	-0.089	0.026	-3.490	0.000	0.128
STUDYPHA	0.026	0.028	0.932	0.351	0.051
Dispersion					
ZTDRINKS	0.159	0.035	4.541	0.000	0.016

Between Level

ZTDRINKS ON					
NA_MEAN	0.038	0.063	0.597	0.551	0.024
PA_MEAN	0.073	0.075	0.972	0.331	0.053
AGE	-0.008	0.006	-1.286	0.198	0.018
GENDER	0.076	0.131	0.581	0.561	0.033
RACE_DIC	-0.162	0.149	-1.092	0.275	0.052
AUDIT_TO	0.016	0.010	1.715	0.086	0.041
TOTSESSI	-0.077	0.050	-1.546	0.122	0.060
Intercepts					
ZTDRINKS	1.544	0.118	13.047	0.000	0.053
Residual Variances					
ZTDRINKS	0.224	0.032	6.988	0.000	0.046

QUALITY OF NUMERICAL RESULTS

Average Condition Number for the Information Matrix 0.479E-04
(ratio of smallest to largest eigenvalue)

CONFIDENCE INTERVALS OF MODEL RESULTS

	Lower .5%	Lower 2.5%	Lower 5%	Estimate	Upper 5%	Upper 2.5%	Upper .5%
Within Level							
ZTDRINKS ON							
TX_ENGAG	-0.193	-0.151	-0.129	-0.015	0.099	0.121	0.163
PA	-0.047	-0.036	-0.030	0.000	0.030	0.035	0.047
NA	0.013	0.026	0.032	0.067	0.101	0.107	0.120
DOW	-0.155	-0.139	-0.131	-0.089	-0.047	-0.039	-0.023
STUDYPHA	-0.047	-0.029	-0.020	0.026	0.073	0.082	0.100
Dispersion							
ZTDRINKS	0.069	0.090	0.101	0.159	0.216	0.227	0.249
Between Level							
ZTDRINKS ON							
NA_MEAN	-0.125	-0.086	-0.066	0.038	0.142	0.162	0.200
PA_MEAN	-0.120	-0.074	-0.050	0.073	0.195	0.219	0.265

AGE	-0.025	-0.021	-0.019	-0.008	0.002	0.004	0.008
GENDER	-0.262	-0.181	-0.140	0.076	0.292	0.333	0.414
RACE_DIC	-0.545	-0.453	-0.407	-0.162	0.082	0.129	0.220
AUDIT_TO	-0.008	-0.002	0.001	0.016	0.032	0.035	0.041
TOTSESSI	-0.205	-0.174	-0.159	-0.077	0.005	0.021	0.051
Intercepts							
ZTDRINKS	1.239	1.312	1.349	1.544	1.738	1.776	1.848
Residual Variances							
ZTDRINKS	0.141	0.161	0.171	0.224	0.277	0.287	0.307

TECHNICAL 1 OUTPUT

PARAMETER SPECIFICATION FOR WITHIN

NU

ZTDRINKS	ZTDRINKS	TX_ENGAG	STUDYPHA	PA
0	0	0	0	0

NU

NA	DOW
0	0

LAMBDA

	ZTDRINKS	ZTDRINKS	TX_ENGAG	STUDYPHA	PA
ZTDRINKS	0	0	0	0	0
ZTDRINKS	0	0	0	0	0
TX_ENGAG	0	0	0	0	0
STUDYPHA	0	0	0	0	0
PA	0	0	0	0	0
NA	0	0	0	0	0
DOW	0	0	0	0	0

LAMBDA

	NA	DOW
ZTDRINKS	0	0

ZTDRINKS	0	0
TX_ENGAG	0	0
STUDYPHA	0	0
PA	0	0
NA	0	0
DOW	0	0

THETA

	ZTDRINKS	ZTDRINKS	TX_ENGAG	STUDYPHA	PA
ZTDRINKS	0				
ZTDRINKS	0	0			
TX_ENGAG	0	0	0		
STUDYPHA	0	0	0	0	
PA	0	0	0	0	0
NA	0	0	0	0	0
DOW	0	0	0	0	0

THETA

	NA	DOW
NA	0	
DOW	0	0

ALPHA

ZTDRINKS	ZTDRINKS	TX_ENGAG	STUDYPHA	PA
0	0	0	0	0

ALPHA

NA	DOW
0	0

BETA

	ZTDRINKS	ZTDRINKS	TX_ENGAG	STUDYPHA	PA
ZTDRINKS	0	0	0	0	0
ZTDRINKS	0	0	1	2	3
TX_ENGAG	0	0	0	0	0
STUDYPHA	0	0	0	0	0
PA	0	0	0	0	0

NA	0	0	0	0	0
DOW	0	0	0	0	0

BETA

	NA	DOW
ZTDRINKS	0	0
ZTDRINKS	4	5
TX_ENGAG	0	0
STUDYPHA	0	0
PA	0	0
NA	0	0
DOW	0	0

PSI

	ZTDRINKS	ZTDRINKS	TX_ENGAG	STUDYPHA	PA
ZTDRINKS	0				
ZTDRINKS	0	6			
TX_ENGAG	0	0	0		
STUDYPHA	0	0	0	0	
PA	0	0	0	0	0
NA	0	0	0	0	0
DOW	0	0	0	0	0

PSI

	NA	DOW
NA	0	
DOW	0	0

PARAMETER SPECIFICATION FOR BETWEEN

NU

ZTDRINKS	ZTDRINKS	AGE	GENDER	AUDIT_TO
0	0	0	0	0

NU

RACE_DIC	NA_MEAN	PA_MEAN	TOTSESSI

0 0 0 0

LAMBDA

	ZTDRINKS	ZTDRINKS	AGE	GENDER	AUDIT_TO
ZTDRINKS	0	0	0	0	0
ZTDRINKS	0	0	0	0	0
AGE	0	0	0	0	0
GENDER	0	0	0	0	0
AUDIT_TO	0	0	0	0	0
RACE_DIC	0	0	0	0	0
NA_MEAN	0	0	0	0	0
PA_MEAN	0	0	0	0	0
TOTSESSI	0	0	0	0	0

LAMBDA

	RACE_DIC	NA_MEAN	PA_MEAN	TOTSESSI
ZTDRINKS	0	0	0	0
ZTDRINKS	0	0	0	0
AGE	0	0	0	0
GENDER	0	0	0	0
AUDIT_TO	0	0	0	0
RACE_DIC	0	0	0	0
NA_MEAN	0	0	0	0
PA_MEAN	0	0	0	0
TOTSESSI	0	0	0	0

THETA

	ZTDRINKS	ZTDRINKS	AGE	GENDER	AUDIT_TO
ZTDRINKS	0				
ZTDRINKS	0	0			
AGE	0	0	0		
GENDER	0	0	0	0	
AUDIT_TO	0	0	0	0	0
RACE_DIC	0	0	0	0	0
NA_MEAN	0	0	0	0	0
PA_MEAN	0	0	0	0	0
TOTSESSI	0	0	0	0	0

THETA

	RACE_DIC	NA_MEAN	PA_MEAN	TOTSESSI

RACE_DIC	0			
NA_MEAN	0	0		
PA_MEAN	0	0	0	
TOTSESSI	0	0	0	0

ALPHA

ZTDRINKS	ZTDRINKS	AGE	GENDER	AUDIT_TO
0	7	0	0	0

ALPHA

RACE_DIC	NA_MEAN	PA_MEAN	TOTSESSI
0	0	0	0

BETA

	ZTDRINKS	ZTDRINKS	AGE	GENDER	AUDIT_TO
ZTDRINKS	0	0	0	0	0
ZTDRINKS	0	0	8	9	10
AGE	0	0	0	0	0
GENDER	0	0	0	0	0
AUDIT_TO	0	0	0	0	0
RACE_DIC	0	0	0	0	0
NA_MEAN	0	0	0	0	0
PA_MEAN	0	0	0	0	0
TOTSESSI	0	0	0	0	0

BETA

	RACE_DIC	NA_MEAN	PA_MEAN	TOTSESSI
ZTDRINKS	0	0	0	0
ZTDRINKS	11	12	13	14
AGE	0	0	0	0
GENDER	0	0	0	0
AUDIT_TO	0	0	0	0
RACE_DIC	0	0	0	0
NA_MEAN	0	0	0	0
PA_MEAN	0	0	0	0
TOTSESSI	0	0	0	0

PSI

	ZTDRINKS	ZTDRINKS	AGE	GENDER	AUDIT_TO
ZTDRINKS	0				
ZTDRINKS	0	15			
AGE	0	0	0		
GENDER	0	0	0	0	
AUDIT_TO	0	0	0	0	0
RACE_DIC	0	0	0	0	0
NA_MEAN	0	0	0	0	0
PA_MEAN	0	0	0	0	0
TOTSESSI	0	0	0	0	0

PSI

	RACE_DIC	NA_MEAN	PA_MEAN	TOTSESSI
RACE_DIC	0			
NA_MEAN	0	0		
PA_MEAN	0	0	0	
TOTSESSI	0	0	0	0

STARTING VALUES FOR WITHIN

NU

ZTDRINKS	ZTDRINKS	TX_ENGAG	STUDYPHA	PA
0.000	0.000	0.000	0.000	0.000

NU

NA	DOW
0.000	0.000

LAMBDA

	ZTDRINKS	ZTDRINKS	TX_ENGAG	STUDYPHA	PA
ZTDRINKS	1.000	0.000	0.000	0.000	0.000
ZTDRINKS	0.000	1.000	0.000	0.000	0.000
TX_ENGAG	0.000	0.000	1.000	0.000	0.000
STUDYPHA	0.000	0.000	0.000	1.000	0.000
PA	0.000	0.000	0.000	0.000	1.000
NA	0.000	0.000	0.000	0.000	0.000

DOW 0.000 0.000 0.000 0.000 0.000

LAMBDA

	NA	DOW
ZTDRINKS	0.000	0.000
ZTDRINKS	0.000	0.000
TX_ENGAG	0.000	0.000
STUDYPHA	0.000	0.000
PA	0.000	0.000
NA	1.000	0.000
DOW	0.000	1.000

THETA

	ZTDRINKS	ZTDRINKS	TX_ENGAG	STUDYPHA	PA
ZTDRINKS	0.000				
ZTDRINKS	0.000	0.000			
TX_ENGAG	0.000	0.000	0.000		
STUDYPHA	0.000	0.000	0.000	0.000	
PA	0.000	0.000	0.000	0.000	0.000
NA	0.000	0.000	0.000	0.000	0.000
DOW	0.000	0.000	0.000	0.000	0.000

THETA

	NA	DOW
NA	0.000	
DOW	0.000	0.000

ALPHA

ZTDRINKS	ZTDRINKS	TX_ENGAG	STUDYPHA	PA
0.000	0.000	0.000	0.000	0.000

ALPHA

NA	DOW
0.000	0.000

BETA

	ZTDRINKS	ZTDRINKS	TX_ENGAG	STUDYPHA	PA
ZTDRINKS	0.000	0.000	0.000	0.000	0.000
ZTDRINKS	0.000	0.000	0.000	0.000	0.000
TX_ENGAG	0.000	0.000	0.000	0.000	0.000
STUDYPHA	0.000	0.000	0.000	0.000	0.000
PA	0.000	0.000	0.000	0.000	0.000
NA	0.000	0.000	0.000	0.000	0.000
DOW	0.000	0.000	0.000	0.000	0.000

BETA

	NA	DOW
ZTDRINKS	0.000	0.000
ZTDRINKS	0.000	0.000
TX_ENGAG	0.000	0.000
STUDYPHA	0.000	0.000
PA	0.000	0.000
NA	0.000	0.000
DOW	0.000	0.000

PSI

	ZTDRINKS	ZTDRINKS	TX_ENGAG	STUDYPHA	PA
ZTDRINKS	0.000				
ZTDRINKS	0.000	0.553			
TX_ENGAG	0.000	0.000	0.040		
STUDYPHA	0.000	0.000	0.000	0.324	
PA	0.000	0.000	0.000	0.000	0.404
NA	0.000	0.000	0.000	0.000	0.000
DOW	0.000	0.000	0.000	0.000	0.000

PSI

	NA	DOW
NA	0.331	
DOW	0.000	0.124

STARTING VALUES FOR BETWEEN

NU

	ZTDRINKS	ZTDRINKS	AGE	GENDER	AUDIT_TO

0.000	0.000	0.000	0.000	0.000

NU

RACE_DIC	NA_MEAN	PA_MEAN	TOTSESSI
0.000	0.000	0.000	0.000

LAMBDA

	ZTDRINKS	ZTDRINKS	AGE	GENDER	AUDIT_TO
ZTDRINKS	1.000	0.000	0.000	0.000	0.000
ZTDRINKS	0.000	1.000	0.000	0.000	0.000
AGE	0.000	0.000	1.000	0.000	0.000
GENDER	0.000	0.000	0.000	1.000	0.000
AUDIT_TO	0.000	0.000	0.000	0.000	1.000
RACE_DIC	0.000	0.000	0.000	0.000	0.000
NA_MEAN	0.000	0.000	0.000	0.000	0.000
PA_MEAN	0.000	0.000	0.000	0.000	0.000
TOTSESSI	0.000	0.000	0.000	0.000	0.000

LAMBDA

	RACE_DIC	NA_MEAN	PA_MEAN	TOTSESSI
ZTDRINKS	0.000	0.000	0.000	0.000
ZTDRINKS	0.000	0.000	0.000	0.000
AGE	0.000	0.000	0.000	0.000
GENDER	0.000	0.000	0.000	0.000
AUDIT_TO	0.000	0.000	0.000	0.000
RACE_DIC	1.000	0.000	0.000	0.000
NA_MEAN	0.000	1.000	0.000	0.000
PA_MEAN	0.000	0.000	1.000	0.000
TOTSESSI	0.000	0.000	0.000	1.000

THETA

	ZTDRINKS	ZTDRINKS	AGE	GENDER	AUDIT_TO
ZTDRINKS	0.000				
ZTDRINKS	0.000	0.000			
AGE	0.000	0.000	0.000		
GENDER	0.000	0.000	0.000	0.000	
AUDIT_TO	0.000	0.000	0.000	0.000	0.000
RACE_DIC	0.000	0.000	0.000	0.000	0.000

NA_MEAN	0.000	0.000	0.000	0.000	0.000
PA_MEAN	0.000	0.000	0.000	0.000	0.000
TOTSESSI	0.000	0.000	0.000	0.000	0.000

THETA

	RACE_DIC	NA_MEAN	PA_MEAN	TOTSESSI
RACE_DIC	0.000			
NA_MEAN	0.000	0.000		
PA_MEAN	0.000	0.000	0.000	
TOTSESSI	0.000	0.000	0.000	0.000

ALPHA

ZTDRINKS	ZTDRINKS	AGE	GENDER	AUDIT_TO
-20.000	2.192	0.000	0.000	0.000

ALPHA

RACE_DIC	NA_MEAN	PA_MEAN	TOTSESSI
0.000	0.000	0.000	0.000

BETA

	ZTDRINKS	ZTDRINKS	AGE	GENDER	AUDIT_TO
ZTDRINKS	0.000	0.000	0.000	0.000	0.000
ZTDRINKS	0.000	0.000	0.000	0.000	0.000
AGE	0.000	0.000	0.000	0.000	0.000
GENDER	0.000	0.000	0.000	0.000	0.000
AUDIT_TO	0.000	0.000	0.000	0.000	0.000
RACE_DIC	0.000	0.000	0.000	0.000	0.000
NA_MEAN	0.000	0.000	0.000	0.000	0.000
PA_MEAN	0.000	0.000	0.000	0.000	0.000
TOTSESSI	0.000	0.000	0.000	0.000	0.000

BETA

	RACE_DIC	NA_MEAN	PA_MEAN	TOTSESSI
ZTDRINKS	0.000	0.000	0.000	0.000
ZTDRINKS	0.000	0.000	0.000	0.000
AGE	0.000	0.000	0.000	0.000
GENDER	0.000	0.000	0.000	0.000

AUDIT_TO	0.000	0.000	0.000	0.000
RACE_DIC	0.000	0.000	0.000	0.000
NA_MEAN	0.000	0.000	0.000	0.000
PA_MEAN	0.000	0.000	0.000	0.000
TOTSESSI	0.000	0.000	0.000	0.000

PSI

	ZTDRINKS	ZTDRINKS	AGE	GENDER	AUDIT_TO
ZTDRINKS	0.000				
ZTDRINKS	0.000	0.553			
AGE	0.000	0.000	40.676		
GENDER	0.000	0.000	0.000	0.120	
AUDIT_TO	0.000	0.000	0.000	0.000	23.117
RACE_DIC	0.000	0.000	0.000	0.000	0.000
NA_MEAN	0.000	0.000	0.000	0.000	0.000
PA_MEAN	0.000	0.000	0.000	0.000	0.000
TOTSESSI	0.000	0.000	0.000	0.000	0.000

PSI

	RACE_DIC	NA_MEAN	PA_MEAN	TOTSESSI
RACE_DIC	0.124			
NA_MEAN	0.000	0.362		
PA_MEAN	0.000	0.000	0.444	
TOTSESSI	0.000	0.000	0.000	0.437

Beginning Time: 12:07:45
Ending Time: 12:10:08
Elapsed Time: 00:02:23

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Mplus VERSION 8.9 (Mac)
MUTHEN & MUTHEN
06/26/2023 11:50 AM

INPUT INSTRUCTIONS

```
  Title: Logistic Analysis


  Data:
    File = LOGimplist.dat ;
    type = imputation;
  Variable:
    Names are
       DRINKLOG
      AGE
      GENDER
      AUDIT_TO
      RACE_DIC
      NA_MEAN
      PA_MEAN
      MINI_AUD
      ADS_TOTA
      DRINCTOT
      TOTSESSI
      DAY
      ZTDRINKS
      MONDAY
      TUESDAY
      WEDNESDA
      THURSDAY
      FRIDAY
      SATURDAY
      STUDYPHA
      TX_ENGAG
      LAGNA
      LAGPA
      RTXSK
      TX_SEEKI
      SID;

    Missing are all (-9999) ;
  usevar are  Drinklog Age Gender AUDIT_TO RACE_DIC
  NA_mean PA_mean  TOTSESSI STUDYPHA
  dow PA NA TX  ;

  !useobs are Day/=1;
```

```
  within are NA PA TX dow STUDYPHA  ;

  between are  NA_mean PA_mean Age Gender Race_Dic AUDIT_TO
  TOTSESSI;

  categorical are Drinklog;

  cluster = SID;

  define:

  dow = 0;
  IF (Monday == 1) then dow = 1;
  IF (Tuesday == 1) then dow = 1;
  IF (Wednesda == 1) then dow = 1;
  IF (Thursday == 1) then dow = 1;

  PA = LAGPA;

  NA = LAGNA;

  TX = TX_ENGAG;

 ! PAxTX = PA*TX;
  !NAxTX = NA*TX;

  center PA NA (groupmean);

  center Age AUDIT_To NA_mean PA_mean (grandmean);



  analysis:
  estimator = mlr;
  PROCESSORS = 2;
  type = twolevel ;

  model:

  %within%
Drinklog on TX ;
Drinklog on PA ;
Drinklog on NA ;

Drinklog on  dow STUDYPHA;
```

%between%

Drinklog on NA_mean PA_mean Age Gender Race_Dic AUDIT_To TOTSESSI;

output:
cint;

*** WARNING
Input line exceeded 90 characters. Some input may be truncated.
Stata2Mplus conversion for /Users/RO584734/Library/CloudStorage/OneDrive-UniversityofCent
1 WARNING(S) FOUND IN THE INPUT INSTRUCTIONS

Stata2Mplus conversion for /Users/RO584734/Library/CloudStorage/OneDrive-UniversityofCen
List of variables converted shown below

SUMMARY OF ANALYSIS

Number of groups 1
Average number of observations 8280

Number of replications
Requested 100
Completed 100

Number of dependent variables 1
Number of independent variables 12
Number of continuous latent variables 0

Observed dependent variables

Binary and ordered categorical (ordinal)
DRINKLOG

Observed independent variables
AGE GENDER AUDIT_TO RACE_DIC NA_MEAN PA_MEAN
TOTSESSI STUDYPHA DOW PA NA TX

Variables with special functions

Cluster variable SID

Within variables
STUDYPHA DOW PA NA TX

Between variables
AGE GENDER AUDIT_TO RACE_DIC NA_MEAN PA_MEAN
TOTSESSI

Centering (GRANDMEAN)
AGE AUDIT_TO NA_MEAN PA_MEAN

Centering (GROUPMEAN)
PA NA

Estimator	MLR
Information matrix	OBSERVED
Optimization Specifications for the Quasi-Newton Algorithm for Continuous Outcomes	
Maximum number of iterations	100
Convergence criterion	0.100D-05
Optimization Specifications for the EM Algorithm	
Maximum number of iterations	500
Convergence criteria	
Loglikelihood change	0.100D-02
Relative loglikelihood change	0.100D-05
Derivative	0.100D-02
Optimization Specifications for the M step of the EM Algorithm for Categorical Latent variables	
Number of M step iterations	1
M step convergence criterion	0.100D-02
Basis for M step termination	ITERATION
Optimization Specifications for the M step of the EM Algorithm for Censored, Binary or Ordered Categorical (Ordinal), Unordered Categorical (Nominal) and Count Outcomes	
Number of M step iterations	1
M step convergence criterion	0.100D-02
Basis for M step termination	ITERATION
Maximum value for logit thresholds	15
Minimum value for logit thresholds	-15
Minimum expected cell size for chi-square	0.100D-01
Maximum number of iterations for H1	2000
Convergence criterion for H1	0.100D-03
Optimization algorithm	EMA
Integration Specifications	

```
  Type                                    STANDARD
  Number of integration points                  15
  Dimensions of numerical integration            1
  Adaptive quadrature                           ON
Link                                      LOGIT
Cholesky                                    ON

Input data file(s)
  Multiple data files from
    LOGimplist.dat
Input data format  FREE


SUMMARY OF DATA FOR THE FIRST DATA SET

     Number of missing data patterns             1
     Number of y missing data patterns           0
     Number of u missing data patterns           1
     Number of clusters                         92


SUMMARY OF MISSING DATA PATTERNS FOR THE FIRST DATA SET


COVARIANCE COVERAGE OF DATA FOR THE FIRST DATA SET

Minimum covariance coverage value   0.100


UNIVARIATE PROPORTIONS FOR CATEGORICAL VARIABLES

NOTE:  These are average results over 100 data sets.

    DRINKLOG
      Category 1    0.503
      Category 2    0.497


SAMPLE STATISTICS

NOTE:  These are average results over 100 data sets.


     SAMPLE STATISTICS
```

Means

STUDYPHA	DOW	PA	NA	TX
1.849	0.567	0.000	0.000	0.099

Means

AGE	GENDER	AUDIT_TO	RACE_DIC	NA_MEAN
0.000	0.576	0.000	0.572	0.000

Means

PA_MEAN	TOTSESSI
0.000	0.359

Covariances

	STUDYPHA	DOW	PA	NA	TX
STUDYPHA	0.657				
DOW	-0.003	0.246			
PA	0.033	0.002	0.756		
NA	-0.043	0.000	-0.209	0.651	
TX	0.048	0.001	0.003	-0.007	0.089
AGE	-0.367	-0.005	0.000	0.000	0.111
GENDER	-0.010	0.000	0.000	0.000	-0.029
AUDIT_TO	0.008	-0.003	0.000	0.000	-0.157
RACE_DIC	0.003	0.000	0.000	0.000	-0.029
NA_MEAN	-0.009	0.000	0.000	0.000	0.004
PA_MEAN	0.025	0.000	0.000	0.000	-0.010
TOTSESSI	-0.012	0.000	0.000	0.000	0.199

Covariances

	AGE	GENDER	AUDIT_TO	RACE_DIC	NA_MEAN
AGE	79.649				
GENDER	0.953	0.244			
AUDIT_TO	-0.623	0.821	52.475		
RACE_DIC	-0.998	-0.005	0.788	0.245	
NA_MEAN	0.665	0.050	1.146	-0.078	0.762
PA_MEAN	-1.291	-0.032	0.954	0.256	-0.275
TOTSESSI	0.479	-0.141	-0.672	-0.086	-0.032

Covariances

	PA_MEAN	TOTSESSI
PA_MEAN	1.014	
TOTSESSI	0.015	0.926

Correlations

	STUDYPHA	DOW	PA	NA	TX
STUDYPHA	1.000				
DOW	-0.008	1.000			
PA	0.047	0.004	1.000		
NA	-0.066	0.000	-0.298	1.000	
TX	0.198	0.004	0.010	-0.028	1.000
AGE	-0.051	-0.001	0.000	0.000	0.042
GENDER	-0.025	0.000	0.000	0.000	-0.193
AUDIT_TO	0.001	-0.001	0.000	0.000	-0.072
RACE_DIC	0.007	0.001	0.000	0.000	-0.193
NA_MEAN	-0.013	0.000	0.000	0.000	0.017
PA_MEAN	0.031	0.000	0.000	0.000	-0.034
TOTSESSI	-0.016	0.000	0.000	0.000	0.691

Correlations

	AGE	GENDER	AUDIT_TO	RACE_DIC	NA_MEAN
AGE	1.000				
GENDER	0.216	1.000			
AUDIT_TO	-0.010	0.229	1.000		
RACE_DIC	-0.226	-0.019	0.220	1.000	
NA_MEAN	0.085	0.115	0.181	-0.180	1.000
PA_MEAN	-0.144	-0.065	0.131	0.515	-0.313
TOTSESSI	0.056	-0.297	-0.096	-0.180	-0.038

Correlations

	PA_MEAN	TOTSESSI
PA_MEAN	1.000	
TOTSESSI	0.016	1.000

MODEL FIT INFORMATION

Number of Free Parameters 14

Loglikelihood

H0 Value

Mean -3943.960
Std Dev 14.881
Number of successful computations 100

Proportions		Percentiles	
Expected	Observed	Expected	Observed
0.990	0.980	-3978.577	-3980.743
0.980	0.970	-3974.521	-3978.968
0.950	0.940	-3968.438	-3968.881
0.900	0.920	-3963.031	-3962.625
0.800	0.810	-3956.484	-3957.403
0.700	0.710	-3951.764	-3950.634
0.500	0.470	-3943.960	-3944.657
0.300	0.270	-3936.156	-3938.508
0.200	0.160	-3931.436	-3934.501
0.100	0.090	-3924.889	-3926.279
0.050	0.050	-3919.482	-3920.482
0.020	0.040	-3913.399	-3912.119
0.010	0.010	-3909.342	-3910.171

Information Criteria

Akaike (AIC)

Mean 7915.920
Std Dev 29.762
Number of successful computations 100

Proportions		Percentiles	
Expected	Observed	Expected	Observed
0.990	0.990	7846.685	7812.073
0.980	0.960	7854.798	7848.342
0.950	0.950	7866.965	7861.227
0.900	0.910	7877.777	7876.318
0.800	0.840	7890.872	7895.084
0.700	0.730	7900.313	7903.196
0.500	0.530	7915.920	7916.969
0.300	0.290	7931.527	7929.229
0.200	0.190	7940.968	7940.568
0.100	0.080	7954.063	7950.166
0.050	0.060	7964.875	7965.330

0.020	0.030	7977.042	7979.363
0.010	0.020	7985.155	7985.936

Bayesian (BIC)

Mean	8014.222
Std Dev	29.762
Number of successful computations	100

Proportions		Percentiles	
Expected	Observed	Expected	Observed
0.990	0.990	7944.987	7910.376
0.980	0.960	7953.100	7946.645
0.950	0.950	7965.267	7959.529
0.900	0.910	7976.080	7974.620
0.800	0.840	7989.175	7993.386
0.700	0.730	7998.615	8001.498
0.500	0.530	8014.222	8015.272
0.300	0.290	8029.829	8027.531
0.200	0.190	8039.270	8038.871
0.100	0.080	8052.365	8048.468
0.050	0.060	8063.178	8063.632
0.020	0.030	8075.344	8077.665
0.010	0.020	8083.457	8084.239

Sample-Size Adjusted BIC (n* = (n + 2) / 24)

Mean	7969.733
Std Dev	29.762
Number of successful computations	100

Proportions		Percentiles	
Expected	Observed	Expected	Observed
0.990	0.990	7900.498	7865.886
0.980	0.960	7908.611	7902.155
0.950	0.950	7920.778	7915.040
0.900	0.910	7931.590	7930.131
0.800	0.840	7944.685	7948.897
0.700	0.730	7954.126	7957.009
0.500	0.530	7969.733	7970.782
0.300	0.290	7985.340	7983.042
0.200	0.190	7994.781	7994.381
0.100	0.080	8007.876	8003.979
0.050	0.060	8018.688	8019.143
0.020	0.030	8030.855	8033.176
0.010	0.020	8038.968	8039.749

MODEL RESULTS

	Estimate	S.E.	Two-Tailed Est./S.E.	P-Value	Rate of Missing
Within Level					
DRINKLOG ON					
TX	-0.672	0.234	-2.875	0.004	0.021
PA	0.019	0.052	0.362	0.717	0.339
NA	0.140	0.059	2.351	0.019	0.220
DOW	-0.231	0.086	-2.677	0.007	0.067
STUDYPHA	-0.138	0.083	-1.656	0.098	0.027
Between Level					
DRINKLOG ON					
NA_MEAN	0.229	0.240	0.954	0.340	0.006
PA_MEAN	-0.204	0.339	-0.602	0.547	0.005
AGE	-0.013	0.020	-0.681	0.496	0.009
GENDER	0.049	0.481	0.103	0.918	0.005
RACE_DIC	-0.899	0.614	-1.464	0.143	0.011
AUDIT_TO	-0.014	0.035	-0.390	0.697	0.011
TOTSESSI	0.071	0.173	0.412	0.680	0.013
Thresholds					
DRINKLOG$1	-0.775	0.569	-1.362	0.173	0.011
Residual Variances					
DRINKLOG	3.997	0.756	5.289	0.000	0.012

QUALITY OF NUMERICAL RESULTS

Average Condition Number for the Information Matrix 0.402E-03
(ratio of smallest to largest eigenvalue)

CONFIDENCE INTERVALS OF MODEL RESULTS

	Lower .5%	Lower 2.5%	Lower 5%	Estimate	Upper 5%	Upper 2.5%	Upper .5%
Within Level							

DRINKLOG ON

TX	-1.275	-1.131	-1.057	-0.672	-0.288	-0.214	-0.070
PA	-0.116	-0.083	-0.067	0.019	0.105	0.121	0.153
NA	-0.013	0.023	0.042	0.140	0.237	0.256	0.292
DOW	-0.453	-0.400	-0.373	-0.231	-0.089	-0.062	-0.009
STUDYPHA	-0.352	-0.301	-0.274	-0.138	-0.001	0.025	0.076

Thresholds

DRINKLOG$1	-2.240	-1.890	-1.711	-0.775	0.161	0.341	0.691

Between Level

DRINKLOG ON

NA_MEAN	-0.389	-0.241	-0.166	0.229	0.623	0.699	0.847
PA_MEAN	-1.077	-0.868	-0.762	-0.204	0.353	0.460	0.669
AGE	-0.064	-0.052	-0.046	-0.013	0.019	0.025	0.037
GENDER	-1.189	-0.893	-0.741	0.049	0.840	0.992	1.288
RACE_DIC	-2.479	-2.102	-1.908	-0.899	0.111	0.304	0.682
AUDIT_TO	-0.103	-0.081	-0.071	-0.014	0.044	0.054	0.076
TOTSESSI	-0.375	-0.268	-0.214	0.071	0.356	0.411	0.518

Thresholds

DRINKLOG$1	-2.240	-1.890	-1.711	-0.775	0.161	0.341	0.691

Residual Variances

DRINKLOG	2.050	2.516	2.754	3.997	5.240	5.478	5.943

CONFIDENCE INTERVALS FOR THE LOGISTIC REGRESSION ODDS RATIO RESULTS

Within Level

DRINKLOG ON

TX	0.280	0.323	0.348	0.511	0.750	0.807	0.932
PA	0.891	0.920	0.935	1.019	1.111	1.129	1.166
NA	0.987	1.024	1.043	1.150	1.268	1.292	1.340
DOW	0.636	0.670	0.689	0.794	0.915	0.940	0.991
STUDYPHA	0.703	0.740	0.760	0.871	0.999	1.026	1.079

TECHNICAL 1 OUTPUT

PARAMETER SPECIFICATION FOR WITHIN

TAU

DRINKLOG
0

NU

DRINKLOG	STUDYPHA	DOW	PA	NA
0	0	0	0	0

NU

TX
0

LAMBDA

	DRINKLOG	STUDYPHA	DOW	PA	NA
DRINKLOG	0	0	0	0	0
STUDYPHA	0	0	0	0	0
DOW	0	0	0	0	0
PA	0	0	0	0	0
NA	0	0	0	0	0
TX	0	0	0	0	0

LAMBDA

	TX
DRINKLOG	0
STUDYPHA	0
DOW	0
PA	0
NA	0
TX	0

THETA

	DRINKLOG	STUDYPHA	DOW	PA	NA
DRINKLOG	0				
STUDYPHA	0	0			
DOW	0	0	0		
PA	0	0	0	0	

NA	0	0	0	0	0
TX	0	0	0	0	0

THETA

	TX
TX	0

ALPHA

	DRINKLOG	STUDYPHA	DOW	PA	NA
	0	0	0	0	0

ALPHA

	TX
	0

BETA

	DRINKLOG	STUDYPHA	DOW	PA	NA
DRINKLOG	0	1	2	3	4
STUDYPHA	0	0	0	0	0
DOW	0	0	0	0	0
PA	0	0	0	0	0
NA	0	0	0	0	0
TX	0	0	0	0	0

BETA

	TX
DRINKLOG	5
STUDYPHA	0
DOW	0
PA	0
NA	0
TX	0

PSI

	DRINKLOG	STUDYPHA	DOW	PA	NA

DRINKLOG	0				
STUDYPHA	0	0			
DOW	0	0	0		
PA	0	0	0	0	
NA	0	0	0	0	0
TX	0	0	0	0	0

PSI

	TX
TX	0

PARAMETER SPECIFICATION FOR BETWEEN

TAU

DRINKLOG
14

NU

DRINKLOG	AGE	GENDER	AUDIT_TO	RACE_DIC
0	0	0	0	0

NU

NA_MEAN	PA_MEAN	TOTSESSI
0	0	0

LAMBDA

	DRINKLOG	AGE	GENDER	AUDIT_TO	RACE_DIC
DRINKLOG	0	0	0	0	0
AGE	0	0	0	0	0
GENDER	0	0	0	0	0
AUDIT_TO	0	0	0	0	0
RACE_DIC	0	0	0	0	0
NA_MEAN	0	0	0	0	0
PA_MEAN	0	0	0	0	0
TOTSESSI	0	0	0	0	0

LAMBDA

	NA_MEAN	PA_MEAN	TOTSESSI
DRINKLOG	0	0	0
AGE	0	0	0
GENDER	0	0	0
AUDIT_TO	0	0	0
RACE_DIC	0	0	0
NA_MEAN	0	0	0
PA_MEAN	0	0	0
TOTSESSI	0	0	0

THETA

	DRINKLOG	AGE	GENDER	AUDIT_TO	RACE_DIC
DRINKLOG	0				
AGE	0	0			
GENDER	0	0	0		
AUDIT_TO	0	0	0	0	
RACE_DIC	0	0	0	0	0
NA_MEAN	0	0	0	0	0
PA_MEAN	0	0	0	0	0
TOTSESSI	0	0	0	0	0

THETA

	NA_MEAN	PA_MEAN	TOTSESSI
NA_MEAN	0		
PA_MEAN	0	0	
TOTSESSI	0	0	0

ALPHA

DRINKLOG	AGE	GENDER	AUDIT_TO	RACE_DIC
0	0	0	0	0

ALPHA

NA_MEAN	PA_MEAN	TOTSESSI
0	0	0

BETA

	DRINKLOG	AGE	GENDER	AUDIT_TO	RACE_DIC
DRINKLOG	0	6	7	8	9
AGE	0	0	0	0	0
GENDER	0	0	0	0	0
AUDIT_TO	0	0	0	0	0
RACE_DIC	0	0	0	0	0
NA_MEAN	0	0	0	0	0
PA_MEAN	0	0	0	0	0
TOTSESSI	0	0	0	0	0

BETA

	NA_MEAN	PA_MEAN	TOTSESSI
DRINKLOG	10	11	12
AGE	0	0	0
GENDER	0	0	0
AUDIT_TO	0	0	0
RACE_DIC	0	0	0
NA_MEAN	0	0	0
PA_MEAN	0	0	0
TOTSESSI	0	0	0

PSI

	DRINKLOG	AGE	GENDER	AUDIT_TO	RACE_DIC
DRINKLOG	13				
AGE	0	0			
GENDER	0	0	0		
AUDIT_TO	0	0	0	0	
RACE_DIC	0	0	0	0	0
NA_MEAN	0	0	0	0	0
PA_MEAN	0	0	0	0	0
TOTSESSI	0	0	0	0	0

PSI

	NA_MEAN	PA_MEAN	TOTSESSI
NA_MEAN	0		
PA_MEAN	0	0	
TOTSESSI	0	0	0

STARTING VALUES FOR WITHIN

TAU

DRINKLOG
0.000

NU

DRINKLOG	STUDYPHA	DOW	PA	NA
0.000	0.000	0.000	0.000	0.000

NU

TX
0.000

LAMBDA

	DRINKLOG	STUDYPHA	DOW	PA	NA
DRINKLOG	1.000	0.000	0.000	0.000	0.000
STUDYPHA	0.000	1.000	0.000	0.000	0.000
DOW	0.000	0.000	1.000	0.000	0.000
PA	0.000	0.000	0.000	1.000	0.000
NA	0.000	0.000	0.000	0.000	1.000
TX	0.000	0.000	0.000	0.000	0.000

LAMBDA

	TX
DRINKLOG	0.000
STUDYPHA	0.000
DOW	0.000
PA	0.000
NA	0.000
TX	1.000

THETA

	DRINKLOG	STUDYPHA	DOW	PA	NA
DRINKLOG	0.000				

STUDYPHA	0.000	0.000			
DOW	0.000	0.000	0.000		
PA	0.000	0.000	0.000	0.000	
NA	0.000	0.000	0.000	0.000	0.000
TX	0.000	0.000	0.000	0.000	0.000

THETA

	TX
TX	0.000

ALPHA

DRINKLOG	STUDYPHA	DOW	PA	NA
0.000	0.000	0.000	0.000	0.000

ALPHA

	TX
	0.000

BETA

	DRINKLOG	STUDYPHA	DOW	PA	NA
DRINKLOG	0.000	0.000	0.000	0.000	0.000
STUDYPHA	0.000	0.000	0.000	0.000	0.000
DOW	0.000	0.000	0.000	0.000	0.000
PA	0.000	0.000	0.000	0.000	0.000
NA	0.000	0.000	0.000	0.000	0.000
TX	0.000	0.000	0.000	0.000	0.000

BETA

	TX
DRINKLOG	0.000
STUDYPHA	0.000
DOW	0.000
PA	0.000
NA	0.000
TX	0.000

PSI

	DRINKLOG	STUDYPHA	DOW	PA	NA
DRINKLOG	1.000				
STUDYPHA	0.000	0.328			
DOW	0.000	0.000	0.123		
PA	0.000	0.000	0.000	0.379	
NA	0.000	0.000	0.000	0.000	0.319
TX	0.000	0.000	0.000	0.000	0.000

PSI

	TX
TX	0.045

STARTING VALUES FOR BETWEEN

TAU

DRINKLOG
0.002

NU

DRINKLOG	AGE	GENDER	AUDIT_TO	RACE_DIC
0.000	0.000	0.000	0.000	0.000

NU

NA_MEAN	PA_MEAN	TOTSESSI
0.000	0.000	0.000

LAMBDA

	DRINKLOG	AGE	GENDER	AUDIT_TO	RACE_DIC
DRINKLOG	1.000	0.000	0.000	0.000	0.000
AGE	0.000	1.000	0.000	0.000	0.000
GENDER	0.000	0.000	1.000	0.000	0.000
AUDIT_TO	0.000	0.000	0.000	1.000	0.000
RACE_DIC	0.000	0.000	0.000	0.000	1.000
NA_MEAN	0.000	0.000	0.000	0.000	0.000

PA_MEAN	0.000	0.000	0.000	0.000	0.000
TOTSESSI	0.000	0.000	0.000	0.000	0.000

LAMBDA

	NA_MEAN	PA_MEAN	TOTSESSI
DRINKLOG	0.000	0.000	0.000
AGE	0.000	0.000	0.000
GENDER	0.000	0.000	0.000
AUDIT_TO	0.000	0.000	0.000
RACE_DIC	0.000	0.000	0.000
NA_MEAN	1.000	0.000	0.000
PA_MEAN	0.000	1.000	0.000
TOTSESSI	0.000	0.000	1.000

THETA

	DRINKLOG	AGE	GENDER	AUDIT_TO	RACE_DIC
DRINKLOG	0.000				
AGE	0.000	0.000			
GENDER	0.000	0.000	0.000		
AUDIT_TO	0.000	0.000	0.000	0.000	
RACE_DIC	0.000	0.000	0.000	0.000	0.000
NA_MEAN	0.000	0.000	0.000	0.000	0.000
PA_MEAN	0.000	0.000	0.000	0.000	0.000
TOTSESSI	0.000	0.000	0.000	0.000	0.000

THETA

	NA_MEAN	PA_MEAN	TOTSESSI
NA_MEAN	0.000		
PA_MEAN	0.000	0.000	
TOTSESSI	0.000	0.000	0.000

ALPHA

DRINKLOG	AGE	GENDER	AUDIT_TO	RACE_DIC
0.000	0.000	0.000	0.000	0.000

ALPHA

NA_MEAN	PA_MEAN	TOTSESSI

0.000 0.000 0.000

BETA

	DRINKLOG	AGE	GENDER	AUDIT_TO	RACE_DIC
DRINKLOG	0.000	0.000	0.000	0.000	0.000
AGE	0.000	0.000	0.000	0.000	0.000
GENDER	0.000	0.000	0.000	0.000	0.000
AUDIT_TO	0.000	0.000	0.000	0.000	0.000
RACE_DIC	0.000	0.000	0.000	0.000	0.000
NA_MEAN	0.000	0.000	0.000	0.000	0.000
PA_MEAN	0.000	0.000	0.000	0.000	0.000
TOTSESSI	0.000	0.000	0.000	0.000	0.000

BETA

	NA_MEAN	PA_MEAN	TOTSESSI
DRINKLOG	0.000	0.000	0.000
AGE	0.000	0.000	0.000
GENDER	0.000	0.000	0.000
AUDIT_TO	0.000	0.000	0.000
RACE_DIC	0.000	0.000	0.000
NA_MEAN	0.000	0.000	0.000
PA_MEAN	0.000	0.000	0.000
TOTSESSI	0.000	0.000	0.000

PSI

	DRINKLOG	AGE	GENDER	AUDIT_TO	RACE_DIC
DRINKLOG	1.000				
AGE	0.000	39.824			
GENDER	0.000	0.000	0.122		
AUDIT_TO	0.000	0.000	0.000	26.374	
RACE_DIC	0.000	0.000	0.000	0.000	0.122
NA_MEAN	0.000	0.000	0.000	0.000	0.000
PA_MEAN	0.000	0.000	0.000	0.000	0.000
TOTSESSI	0.000	0.000	0.000	0.000	0.000

PSI

	NA_MEAN	PA_MEAN	TOTSESSI
NA_MEAN	0.381		
PA_MEAN	0.000	0.507	

TOTSESSI	0.000	0.000	0.463

Beginning Time: 11:50:33
Ending Time: 11:54:45
Elapsed Time: 00:04:12

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