WesVar Analysis Example Replication C9

WesVar 5.1 is primarily a point and click application and though a text file of commands can be used in the WesVar (V5.1) batch processing environment, all examples presented here use the GUI method. For more information on the batch processing approach, see the WesVar documentation addendum for V5.1.

Due to use of GUI method, no syntax is presented prior to results. Typically, WesVar results and setups are stored in WesVar workbooks. The analysis example replication documents include selected parts of the workbook output to highlight key results. For more on additional outputs and program features, see the WesVar documentation.

Output WesVar Analysis Example Replication C9

Example 9.1 Bivariate Testing of Predictors of Work Status (Output for Age categories only, similar output for each of the other predictor groups of Alcohol Dependence, Gender, MDE, Education, and Marital Status)

```
 OPTIONS :      Intercept,
        No Standardized Coefficient,
        Degrees of Freedom = 42
        t VALUE : 2.018
 STARTING VALUES :
    WKSTAT3C.2 INTERCEPT : 0.0000
    WKSTAT3C.2 r_ag4f.1 : 0.0000
    WKSTAT3C.2 r_ag4f.2 : 0.0000
    WKSTAT3C.2 r_ag4f.3 : 0.0000
    WKSTAT3C.3 INTERCEPT : 0.0000
    WKSTAT3C.3 r_ag4f.1 : 0.0000
    WKSTAT3C.3 r_ag4f.2 : 0.0000
    WKSTAT3C.3 r_ag4f.3 : 0.0000
 BY :    None Specified.
 MISSING :      13           (UNWEIGHTED)
        24.815480    (WEIGHTED)
 NONMISSING :   5679         (UNWEIGHTED)
        5667.184998  (WEIGHTED)
  Records in category 2 :      283          (UNWEIGHTED)
        289.816604   (WEIGHTED)
  Records in category 3 :      1630         (UNWEIGHTED)
        289.816604   (WEIGHTED)
  Records in the reference category (1) :     3766         (UNWEIGHTED)
        3671.472451  (WEIGHTED)
 ITERATIONS REQUIRED FOR FULL SAMPLE :        6
 MAXIMUM ITERATIONS FOR REPLICATE SAMPLE :    6
 -2 LOG LIKELIHOOD FOR FULL SAMPLE :   7788.92700
 -2 LOG LIKELIHOOD FOR MODEL CONTAINING INTERCEPT ONLY :     9007.13993
```

Age				
TEST	F VALUE	NUM. DF	DENOM. DF	PROB>F
OVERALL FIT	107.223	6	37	0.000
Alcohol Dependence				
TEST	F VALUE	NUM. DF	DENOM. DF	PROB>F
OVERALL FIT	2.979	2	41	0.062
Gender				
TEST	F VALUE	NUM. DF	DENOM. DF	PROB>F
OVERALL FIT	21.029	2	41	0.000
Education				
TEST	F VALUE	NUM. DF	DENOM. DF	PROB>F
OVERALL FIT	29.510	6	37	0.000
Marital Status				
TEST	F VALUE	NUM. DF	DENOM. DF	PROB>F
OVERALL FIT	35.784	4	39	0.000
MDE	F VALUE	NUM. DF	DENOM. DF	PROB>F
OVERALL FIT	6.684	2	41	0.003

Example 9.1 Multinomial Model Predicting Work Status

```
OPTIONS :       Intercept,
        No Standardized Coefficient,
        Degrees of Freedom = 42
        t VALUE : 2.018
 STARTING VALUES :
    WKSTAT3C.2 INTERCEPT : 0.0000
    WKSTAT3C.2 sexm : 0.0000
    WKSTAT3C.2 ald : 0.0000
    WKSTAT3C.2 mde : 0.0000
    WKSTAT3C.2 r_ed.1 : 0.0000
    WKSTAT3C.2 r_ed.2 : 0.0000
    WKSTAT3C.2 r_ed.3 : 0.0000
    WKSTAT3C.2 r_ag4f.1 : 0.0000
    WKSTAT3C.2 r_ag4f.2 : 0.0000
    WKSTAT3C.2 r_ag4f.3 : 0.0000
    WKSTAT3C.2 r_mar.1 : 0.0000
    WKSTAT3C.2 r_mar.2 : 0.0000
    WKSTAT3C.3 INTERCEPT : 0.0000
    WKSTAT3C.3 sexm : 0.0000
    WKSTAT3C.3 ald : 0.0000
    WKSTAT3C.3 mde : 0.0000
    WKSTAT3C.3 r_ed.1 : 0.0000
    WKSTAT3C.3 r_ed.2 : 0.0000
    WKSTAT3C.3 r_ed.3 : 0.0000
    WKSTAT3C.3 r_ag4f.1 : 0.0000
    WKSTAT3C.3 r_ag4f.2 : 0.0000
    WKSTAT3C.3 r_ag4f.3 : 0.0000
    WKSTAT3C.3 r_mar.1 : 0.0000
    WKSTAT3C.3 r_mar.2 : 0.0000
 BY :    None Specified.
 MISSING :      13           (UNWEIGHTED)
        24.815480    (WEIGHTED)
 NONMISSING :   5679         (UNWEIGHTED)
        5667.184998  (WEIGHTED)
  Records in category 2 :      283          (UNWEIGHTED)
        289.816604   (WEIGHTED)
  Records in category 3 :      1630         (UNWEIGHTED)
        289.816604   (WEIGHTED)
```

Records in the reference category (1) : 3766 (UNWEIGHTED)
3671.472451 (WEIGHTED)
ITERATIONS REQUIRED FOR FULL SAMPLE : 8
MAXIMUM ITERATIONS FOR REPLICATE SAMPLE : 8
-2 LOG LIKELIHOOD FOR FULL SAMPLE : 7351.90336
-2 LOG LIKELIHOOD FOR MODEL CONTAINING INTERCEPT ONLY : 9007.13993

Model Output

		PARAMETER	STANDARD ERROR	TEST FOR H0:			
CATEGORY	PARAMETER	ESTIMATE	OF ESTIMATE	PARAMETER=0	PROB>|T|	LOWER 95%	UPPER 95%
WKSTAT3C.	INTERCEPT	-0.644	0.298	-2.164	0.036	-1.244	-0.043
WKSTAT3C.	sexm	-1.393	0.200	-6.961	0.000	-1.797	-0.989
WKSTAT3C.	ald	-0.164	0.371	-0.442	0.661	-0.912	0.585
WKSTAT3C.	mde	-0.140	0.158	-0.886	0.381	-0.458	0.179
WKSTAT3C.	r_ed.1	-1.731	0.314	-5.511	0.000	-2.365	-1.097
WKSTAT3C.	r_ed.2	-1.365	0.257	-5.314	0.000	-1.884	-0.847
WKSTAT3C.	r_ed.3	-0.847	0.235	-3.599	0.001	-1.322	-0.372
WKSTAT3C.	r_ag4f.1	1.828	0.306	5.971	0.000	1.210	2.446
WKSTAT3C.	r_ag4f.2	-0.838	0.264	-3.179	0.003	-1.369	-0.306
WKSTAT3C.	r_ag4f.3	-0.852	0.296	-2.876	0.006	-1.451	-0.254
WKSTAT3C.	r_mar.1	-2.785	0.388	-7.169	0.000	-3.568	-2.001
WKSTAT3C.	r_mar.2	-0.590	0.228	-2.589	0.013	-1.050	-0.130
WKSTAT3C.	INTERCEPT	-0.379	0.174	-2.182	0.035	-0.730	-0.029
WKSTAT3C.	sexm	-0.640	0.110	-5.827	0.000	-0.862	-0.418
WKSTAT3C.	ald	0.333	0.130	2.562	0.014	0.071	0.596
WKSTAT3C.	mde	0.099	0.089	1.113	0.272	-0.080	0.277
WKSTAT3C.	r_ed.1	-1.230	0.159	-7.740	0.000	-1.550	-0.909
WKSTAT3C.	r_ed.2	-0.917	0.146	-6.274	0.000	-1.212	-0.622
WKSTAT3C.	r_ed.3	-0.651	0.142	-4.589	0.000	-0.938	-0.365
WKSTAT3C.	r_ag4f.1	2.381	0.174	13.701	0.000	2.030	2.731
WKSTAT3C.	r_ag4f.2	0.065	0.169	0.384	0.703	-0.276	0.406
WKSTAT3C.	r_ag4f.3	-0.316	0.129	-2.452	0.018	-0.577	-0.056
WKSTAT3C.	r_mar.1	0.553	0.132	4.172	0.000	0.285	0.820
WKSTAT3C.	r_mar.2	-0.052	0.105	-0.497	0.622	-0.265	0.160

ODDS RATIO	PARAMETER	ESTIMATE	LOWER 95%	UPPER 95%
WKSTAT3C.2 vs. WKSTAT3C.1	sexm	0.248	0.166	0.372
WKSTAT3C.2 vs. WKSTAT3C.1	ald	0.849	0.402	1.794
WKSTAT3C.2 vs. WKSTAT3C.1	mde	0.870	0.633	1.195
WKSTAT3C.2 vs. WKSTAT3C.1	r_ed.1	0.177	0.094	0.334
WKSTAT3C.2 vs. WKSTAT3C.1	r_ed.2	0.255	0.152	0.429
WKSTAT3C.2 vs. WKSTAT3C.1	r_ed.3	0.429	0.267	0.689
WKSTAT3C.2 vs. WKSTAT3C.1	r_ag4f.1	6.224	3.355	11.546
WKSTAT3C.2 vs. WKSTAT3C.1	r_ag4f.2	0.433	0.254	0.736
WKSTAT3C.2 vs. WKSTAT3C.1	r_ag4f.3	0.426	0.234	0.775
WKSTAT3C.2 vs. WKSTAT3C.1	r_mar.1	0.062	0.028	0.135
WKSTAT3C.2 vs. WKSTAT3C.1	r_mar.2	0.554	0.350	0.878
WKSTAT3C.3 vs. WKSTAT3C.1	sexm	0.527	0.422	0.658
WKSTAT3C.3 vs. WKSTAT3C.1	ald	1.395	1.073	1.814
WKSTAT3C.3 vs. WKSTAT3C.1	mde	1.104	0.923	1.319
WKSTAT3C.3 vs. WKSTAT3C.1	r_ed.1	0.292	0.212	0.403
WKSTAT3C.3 vs. WKSTAT3C.1	r_ed.2	0.400	0.298	0.537
WKSTAT3C.3 vs. WKSTAT3C.1	r_ed.3	0.521	0.391	0.694
WKSTAT3C.3 vs. WKSTAT3C.1	r_ag4f.1	10.811	7.614	15.352
WKSTAT3C.3 vs. WKSTAT3C.1	r_ag4f.2	1.067	0.759	1.501
WKSTAT3C.3 vs. WKSTAT3C.1	r_ag4f.3	0.729	0.562	0.946
WKSTAT3C.3 vs. WKSTAT3C.1	r_mar.1	1.738	1.330	2.271
WKSTAT3C.3 vs. WKSTAT3C.1	r_mar.2	0.949	0.768	1.174

TEST	F VALUE	NUM. DF	DENOM. DF	PROB>F
OVERALL FIT	71.848	22	21	0.000
AGE	83.323	6	37	0.000
SEX	35.546	2	41	0.000
ALD	5.011	2	41	0.011
MDE	1.097	2	41	0.343
EDUCATION	13.642	6	37	0.000
MARITAL STATUS	23.868	4	39	0.000

Example 9.2 Ordinal Logistic Regression is Not Available in WesVar

Example 9.3 Poisson, Negative Binomial and Zero-Inflated Negative Binomial Models are Not Available in WesVar