

The LOGISTIC Procedure

Model Information

Data Set WORK.ESR
 Response Variable y
 Number of Response Levels 2
 Model binary logit
 Optimization Technique Fisher's scoring

Number of Observations Read 32
 Number of Observations Used 32

Response Profile

Ordered Value	y	Total Frequency
1	0	26
2	1	6

Probability modeled is y=1.

Model Convergence Status

Convergence criterion (GCONV=1E-8) satisfied.

-2 Log L = 30.885

Analysis of Maximum Likelihood Estimates

Parameter	DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
Intercept	1	-1.4663	0.4529	10.4820	0.0012

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 Number of Observations Used 32

Response Profile

Ordered Value	y	Total Frequency
1	0	26
2	1	6

Probability modeled is y=1.

Model Convergence Status

Convergence criterion (GCONV=1E-8) satisfied.

Model Fit Statistics

Criterion	Intercept Only	Intercept and Covariates
AIC	32.885	28.840
SC	34.351	31.772
-2 Log L	30.885	24.840

Testing Global Null Hypothesis: BETA=0

Test	Chi-Square	DF	Pr > ChiSq
Likelihood Ratio	6.0446	1	0.0139
Score	6.7522	1	0.0094
Wald	4.1134	1	0.0425

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Analysis of Maximum Likelihood Estimates

Parameter	DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
Intercept	1	-6.8451	2.7703	6.1053	0.0135
fib	1	1.8271	0.9009	4.1134	0.0425

Odds Ratio Estimates

Effect	Point Estimate	95% Wald Confidence Limits
fib	6.216	1.063 36.333

Association of Predicted Probabilities and Observed Responses

Percent Concordant	71.2	Somers' D	0.429
Percent Discordant	28.2	Gamma	0.432
Percent Tied	0.6	Tau-a	0.135
Pairs	156	c	0.715

The LOGISTIC Procedure

Model Information

Data Set	WORK.ESR
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Model	binary logit
Optimization Technique	Fisher's scoring

Number of Observations Read	32
Number of Observations Used	32

Response Profile

Ordered Value	y	Total Frequency
1	0	26
2	1	6

Probability modeled is y=1.

Model Convergence Status

Convergence criterion (GCONV=1E-8) satisfied.

Model Fit Statistics

Criterion	Intercept Only	Intercept and Covariates
AIC	32.885	32.945
SC	34.351	35.877
-2 Log L	30.885	28.945

Testing Global Null Hypothesis: BETA=0

Test	Chi-Square	DF	Pr > ChiSq
Likelihood Ratio	1.9395	1	0.1637
Score	1.9933	1	0.1580
Wald	1.8437	1	0.1745

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Analysis of Maximum Likelihood Estimates

Parameter	DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
Intercept	1	-6.5289	3.8344	2.8993	0.0886
glob	1	0.1387	0.1022	1.8437	0.1745

Odds Ratio Estimates

Effect	Point Estimate	95% Wald Confidence Limits
glob	1.149	0.940 1.403

Association of Predicted Probabilities and Observed Responses

Percent Concordant	62.8	Somers' D	0.301
Percent Discordant	32.7	Gamma	0.315
Percent Tied	4.5	Tau-a	0.095
Pairs	156	c	0.651

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Data Set	WORK.ESR
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Model	binary logit
Optimization Technique	Fisher's scoring

Number of Observations Read	32
Number of Observations Used	32

Response Profile

Ordered Value	y	Total Frequency
1	0	26
2	1	6

Probability modeled is y=1.

Model Convergence Status

Convergence criterion (GCONV=1E-8) satisfied.

Model Fit Statistics

Criterion	Intercept Only	Intercept and Covariates
AIC	32.885	28.971
SC	34.351	33.368
-2 Log L	30.885	22.971

Testing Global Null Hypothesis: BETA=0

Test	Chi-Square	DF	Pr > ChiSq
Likelihood Ratio	7.9138	2	0.0191
Score	8.2067	2	0.0165
Wald	4.7561	2	0.0927

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Analysis of Maximum Likelihood Estimates

Parameter	DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
Intercept	1	-12.7920	5.7964	4.8704	0.0273
fib	1	1.9104	0.9710	3.8708	0.0491
glob	1	0.1558	0.1195	1.6982	0.1925

Odds Ratio Estimates

Effect	Point Estimate	95% Wald Confidence Limits
fib	6.756	1.007 45.308
glob	1.169	0.924 1.477

Association of Predicted Probabilities and Observed Responses

Percent Concordant	80.1	Somers' D	0.609
Percent Discordant	19.2	Gamma	0.613
Percent Tied	0.6	Tau-a	0.192
Pairs	156	c	0.804

The LOGISTIC Procedure

Model Information

Data Set WORK.ESR3
 Response Variable y
 Number of Response Levels 2
 Model binary logit
 Optimization Technique Fisher's scoring

Number of Observations Read 333
 Number of Observations Used 32

Response Profile

Ordered Value	y	Total Frequency
1	0	26
2	1	6

Probability modeled is y=1.

NOTE: 301 observations were deleted due to missing values for the response or explanatory variables.

Model Convergence Status

Convergence criterion (GCONV=1E-8) satisfied.

Model Fit Statistics

Criterion	Intercept and Covariates	
	Intercept Only	
AIC	32.885	28.840
SC	34.351	31.772
-2 Log L	30.885	24.840

R-Square 0.1721 Max-rescaled R-Square 0.2780

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Testing Global Null Hypothesis: BETA=0

Test	Chi-Square	DF	Pr > ChiSq
Likelihood Ratio	6.0446	1	0.0139
Score	6.7522	1	0.0094
Wald	4.1134	1	0.0425

Analysis of Maximum Likelihood Estimates

Parameter	DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
Intercept	1	-6.8451	2.7703	6.1053	0.0135
fib	1	1.8271	0.9009	4.1134	0.0425

Odds Ratio Estimates

Effect	Point Estimate	95% Wald Confidence Limits
fib	6.216	1.063 36.333

Association of Predicted Probabilities and Observed Responses

Percent Concordant	71.2	Somers' D	0.429
Percent Discordant	28.2	Gamma	0.432
Percent Tied	0.6	Tau-a	0.135
Pairs	156	c	0.715

Profile Likelihood Confidence Interval for Parameters

Parameter	Estimate	95% Confidence Limits
Intercept	-6.8451	-13.6554 -2.3265
fib	1.8271	0.3388 3.9983

Wald Confidence Interval for Parameters

Parameter	Estimate	95% Confidence Limits
Intercept	-6.8451	-12.2747 -1.4154
fib	1.8271	0.0614 3.5927

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Profile Likelihood Confidence Interval for Adjusted Odds Ratios

Effect	Unit	Estimate	95% Confidence Limits	
fib	0.1000	1.200	1.034	1.492
fib	1.0000	6.216	1.403	54.508

Wald Confidence Interval for Adjusted Odds Ratios

Effect	Unit	Estimate	95% Confidence Limits	
fib	0.1000	1.200	1.006	1.432
fib	1.0000	6.216	1.063	36.333

Partition for the Hosmer and Lemeshow Test

Group	Total	y = 1		y = 0	
		Observed	Expected	Observed	Expected
1	3	1	0.15	2	2.85
2	3	0	0.17	3	2.83
3	3	0	0.19	3	2.81
4	3	1	0.24	2	2.76
5	3	0	0.30	3	2.70
6	3	0	0.34	3	2.66
7	3	0	0.42	3	2.58
8	3	0	0.70	3	2.30
9	4	1	1.24	3	2.76
10	4	3	2.25	1	1.75

Hosmer and Lemeshow Goodness-of-Fit Test

Chi-Square	DF	Pr > ChiSq
10.8320	8	0.2114

Obs	individual	fib	glob	y	_LEVEL_	seeta	pred	l	u
1	23	2.09	44	1	1	0.98371	0.04624	0.00700	0.25003
8	27	2.15	31	0	1	0.93799	0.05133	0.00853	0.25381
12	4	2.18	31	0	1	0.91548	0.05406	0.00941	0.25583
14	3	2.19	33	0	1	0.90803	0.05500	0.00972	0.25653
17	8	2.21	37	0	1	0.89321	0.05693	0.01038	0.25797
20	20	2.23	37	0	1	0.87851	0.05893	0.01107	0.25945
26	24	2.28	36	0	1	0.84234	0.06420	0.01299	0.26340
28	11	2.29	36	0	1	0.83521	0.06531	0.01341	0.26423
29	26	2.29	31	0	1	0.83521	0.06531	0.01341	0.26423
36	12	2.35	29	0	1	0.79322	0.07233	0.01620	0.26958
40	15	2.38	37	1	1	0.77279	0.07610	0.01779	0.27250
49	6	2.46	36	0	1	0.72043	0.08703	0.02270	0.28122
56	1	2.52	38	0	1	0.68352	0.09614	0.02711	0.28881
59	28	2.54	28	0	1	0.67173	0.09937	0.02872	0.29158
62	2	2.56	31	0	1	0.66023	0.10268	0.03042	0.29448
67	10	2.60	41	0	1	0.63812	0.10962	0.03405	0.30070
68	19	2.60	38	0	1	0.63812	0.10962	0.03405	0.30070
74	22	2.65	46	0	1	0.61235	0.11886	0.03903	0.30936
77	25	2.67	39	0	1	0.60267	0.12274	0.04117	0.31313
79	18	2.68	34	0	1	0.59798	0.12472	0.04227	0.31508
100	21	2.88	30	0	1	0.52820	0.17036	0.06797	0.36637
112	31	2.99	36	0	1	0.51327	0.20067	0.08409	0.40706
129	9	3.15	39	0	1	0.52524	0.25166	0.10724	0.48493
130	16	3.15	36	0	1	0.52524	0.25166	0.10724	0.48493
138	7	3.22	38	0	1	0.54258	0.27650	0.11657	0.52537
149	32	3.32	35	0	1	0.57847	0.31450	0.12865	0.58773
152	14	3.34	32	1	1	0.58704	0.32243	0.13088	0.60060
153	30	3.34	30	0	1	0.58704	0.32243	0.13088	0.60060
161	5	3.41	37	0	1	0.62025	0.35098	0.13819	0.64587
174	17	3.53	46	1	1	0.68699	0.40240	0.14907	0.72131
215	29	3.93	32	1	1	0.96516	0.58306	0.17417	0.90265
329	13	5.06	37	1	1	1.90603	0.91682	0.20820	0.99784

Fitted curve, Model m1

