REGRESSION ANALYSIS IN THE WILMINGTON CASE

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CONTENTS

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1. Armor, improved

Weighted Least Squares Estimates:

| - | | |
|---|------------|------------|
| Constant | 562.185 | (104.981) |
| Variable 0 | -196.837 | (109.011) |
| Variable 1 | 23.9820 | (107.686) |
| R Squared: | 0.792080 | |
| Sigma hat: | 5.48721 | |
| Number of cases: | 12 | |
| Degrees of freedom: | 9 | |
| ======================================= | | ========== |
| Weighted Least Squares | Estimates: | |
| Constant | 567.940 | (27.1219) |
| Variable 0 | -248.049 | (72.6514) |
| Variable 1 | aliased | |
| Variable 2 | -192.660 | (55.5139) |
| R Squared: | 0.690145 | |
| Sigma hat: | 6.69858 | |
| Number of cases: | 12 | |
| Degrees of freedom: | 9 | |
| Weighted Least Squares | | |
| 0 | | |
| Constant | 610.048 | (38.3220) |
| Variable 0 | -163.435 | (39.5323) |
| Variable 1 | -9.07375 | (39.0469) |
| Variable 2 | -153.279 | (23.6671) |
| Variable 3 | aliased | |
| Variable 4 | -116.561 | (18.2001) |
| R Squared: | 0.978991 | |
| Sigma hat: | 1.97778 | |
| Number of cases: | 12 | |
| | 7 | |

 $(270.985537915394\ 403.8390291207603\ 27.381389932517838)$

Degrees of freedom:

Table 1. Mathematics, District 31

7

Weighted Least Squares Estimates:

| Constant | 366.334 | (61.7566) |
|---|------------|-----------|
| Variable 0 | -29.2973 | (70.5008) |
| Variable 1 | 172.585 | (68.3579) |
| Vailable 1 | | |
| R Squared: | 0.709318 | |
| Sigma hat: | 7.69128 | |
| Number of cases: | 12 | |
| Degrees of freedom: | . 9 | |
| ======================================= | :========= | ======== |
| Weighted Least Squares | | |
| _ | 500 004 | (23.7408) |
| Constant | 536.934 | (50.6022) |
| Variable O | -230.581 | (188.429) |
| Variable 1 | -336.934 | |
| Variable 2 | -192.295 | (40.5010) |
| | 0.816854 | |
| R Squared: | 6.47536 | |
| Sigma hat: | | |
| Number of cases: | 12 | |
| Degrees of freedom: | 8 | |
| Weighted Least Squares | | |
| Weldured reast pdages | | |
| Constant | 477.920 | (35.6469) |
| Variable 0 | -31.4816 | (33.8757) |
| Variable 1 | 82.4235 | (36.4256) |
| Variable 2 | -157.722 | (33.4690) |
| Variable 3 | -246.439 | (109.079) |
| Variable 4 | -133.398 | (27.0820) |
| | | |
| R Squared: | 0.955690 | |
| Sigma hat: | 3.67777 | |
| Number of cases: | 12 | |
| Degrees of freedom: | 6 | |
| 2-0-0 | | |

(532.4018474334454 335.4423191724806 81.15595889855068)

Table 2. Mathematics, District 32

| Constant | 456.057 | (81.5436) |
|---|---|--|
| Variable 0 | -113.617 | (86.9097) |
| Variable 1 | 53.2523 | (84.6328) |
| | | |
| R Squared: | 0.685912 | |
| Sigma hat: | 6.86054 | |
| Number of cases: | 12 | |
| Degrees of freedom: | 9 | |
| ======================================= | ======================================= | ====================================== |
| Weighted Least Squares | Estimates: | |
| | 504.991 | (20.4226) |
| Constant | -213.800 | (53.2648) |
| Variable 0 | -213.800 -117.198 | (239.435) |
| Variable 1 | -117.198 | (41.9607) |
| Variable 2 | -140.310 | (41.9007) |
| R Squared: | 0.749568 | |
| Sigma hat: | 6.49762 | |
| Number of cases: | 12 | |
| Degrees of freedom: | 8 | |
| Weighted Least Squares | | |
| MetBured reast oddares | Boimadob. | |
| Constant | 518.446 | (28.5018) |
| Variable 0 | -99.4242 | (29.3640) |
| Variable 1 | 8.01587 | (29.0477) |
| Variable 2 | -151.630 | (20.8470) |
| Variable 3 | -101.060 | (85.2746) |
| Variable 4 | -104.436 | (16.1025) |
| D. Canarad: | 0.976192 | |
| R Squared: | 2.31335 | |
| Sigma hat: Number of cases: | 2.31333 | |
| | 6 | |
| Degrees of freedom: | | |

(423.60366066065643 337.752565652123 32.109584116800434)

Table 3. Mathematics, District 33

Weighted Least Squares Estimates:

| Constant | 371.182 | (65.3219) |
|---|--------------|-----------|
| Variable 0 | -42.2016 | (68.1701) |
| Variable 1 | 78.9895 | (67.4359) |
| · | | |
| R Squared: | 0.713332 | |
| Sigma hat: | 4.23706 | |
| Number of cases: | 12 | |
| Degrees of freedom: | 9 | |
| | | ========= |
| Weighted Least Squares | s Estimates: | |
| Constant | 449.909 | (17.4227) |
| Variable 0 | -148.022 | (36.5192) |
| Variable 1 | aliased | |
| Variable 2 | -93.5737 | (28.7635) |
| | | |
| R Squared: | 0.701574 | |
| Sigma hat: | 4.32308 | |
| Number of cases: | 12 | |
| Degrees of freedom: | 9 | |
| ======================================= | | ========= |
| Weighted Least Squares | s Estimates: | |
| Constant | 416.605 | (18.7499) |
| Variable 0 | -31.9090 | (18.9055) |
| Variable 1 | 53.1253 | (18.8825) |
| Variable 2 | -104.956 | (10.6825) |
| Variable 3 | aliased | • |
| Variable 4 | -60.7819 | (8.38835) |
| , dr 1 m - 1 | | |
| R Squared: | 0.982936 | |
| Sigma hat: | 1.17215 | |
| Number of cases: | 12 | |
| Degrees of freedom: | 7 | |
| * | | |

(161.57442535172277 168.20150120678582 9.617490094533094)

Table 4. Mathematics, District 34

| Constant | 500.869 | (117.684) |
|---|------------|-------------|
| Variable 0 | -151.181 | (121.752) |
| Variable 1 | 64.0277 | (121.091) |
| | | |
| R Squared: | 0.742796 | |
| Sigma hat: | 6.82344 | |
| Number of cases: | 12 | |
| Degrees of freedom: | 9 | |
| _====================================== | | =========== |
| Weighted Least Squares | Estimates: | |
| Constant | 550.039 | (26.6385) |
| Variable 0 | -223.700 | (62.4822) |
| Variable 1 | -450.039 | (208.542) |
| Variable 2 | -199.206 | (50.7874) |
| Valiable 2 | 2001200 | (221, 212, |
| R Squared: | 0.766591 | |
| Sigma hat: | 6.89445 | |
| Number of cases: | 12 | |
| Degrees of freedom: | 8 | |
| ======================================= | | ========= |
| Weighted Least Squares | Estimates: | |
| Constant | 550.735 | (50.7942) |
| Variable 0 | -105.741 | (52.3050) |
| Variable 1 | 30.7358 | (51.8522) |
| Variable 2 | -135.207 | (29.9177) |
| Variable 3 | -344.994 | (89.4496) |
| Variable 4 | -128.910 | (24.2003) |
| Valiable 1 | 22010-0 | _ |
| R Squared: | 0.968930 | |
| Sigma hat: | 2.90457 | |
| Number of cases: | 12 | |
| Degrees of freedom: | 6 | |
| 5 | | |

(419.03348036182814 380.2678064438639 50.61926122533022)

TABLE 5. Reading, District 31

| Constant | 324.307 | (65.4286) |
|---|------------|-----------|
| Variable 0 | -0.498378 | (75.6196) |
| Variable 1 | 193.354 | (73.4498) |
| | | |
| R Squared: | 0.655656 | |
| Sigma hat: | 9.06273 | |
| Number of cases: | 12 | |
| Degrees of freedom: | 9 | |
| ======================================= | | |
| Weighted Least Squares | Estimates: | |
| Constant | 531.255 | (21.3565) |
| Variable 0 | -246.638 | (39.6817) |
| Variable 0 | -165.255 | (186.141) |
| Variable 2 | -206.033 | (34.8292) |
| Valiable 2 | | |
| D Canarod: | 0.873962 | |
| R Squared: | 5.81553 | |
| Sigma hat: Number of cases: | 12 | |
| Degrees of freedom: | 8 | |
| pegrees of freedom: | | ========= |
| Weighted Least Squares | | |
| weighted female a land | | |
| Constant | 459.081 | (31.9288) |
| Variable 0 | -1.21404 | (29.8505) |
| Variable 1 | 90.3917 | (32.2705) |
| Variable 2 | -186.102 | (28.8383) |
| Variable 3 | -91.8668 | (115.871) |
| Variable 4 | -153.839 | (25.1932) |
| • | * | |
| R Squared: | 0.964478 | |
| Sigma hat: | 3.56496 | |
| Number of cases: | 12 | |
| Degrees of freedom: | 6 | |
| 0 | | |

(739.1971109534609 270.56315835191987 76.25373389710647)

Table 6. Reading, District 32

| Constant | 439.515 | (78.7964) |
|--|----------|---|
| Variable 0 | -75.4007 | (85.0031) |
| Variable 1 | 88.0022 | (82.1109) |
| R Squared: | 0.658837 | |
| Sigma hat: | 7.10195 | |
| Number of cases: | 12 | |
| Degrees of freedom: | 9 | |
| Weighted Least Squares | | ======================================= |
| Constant | 527.731 | (16.8018) |
| Variable 0 | -220.305 | (44.4030) |
| Variable 1 | -126.588 | (198.525) |
| Variable 2 | -154.802 | (34.2916) |
| R Squared: | 0.826526 | |
| Sigma hat: | 5.37142 | |
| Number of cases: | 12 | |
| Degrees of freedom: | 8 | |
| ====================================== | • | |
| Weighted Least Squares | | |
| Constant | 507.243 | (23.2160) |
| Variable 0 | -55.7503 | (24.0849) |
| Variable 1 | 37.6232 | (23.6801) |
| Variable 2 | -160.514 | (18.5666) |
| Variable 3 | -84.9874 | (74.2656) |
| Variable 4 | -115.270 | (13.9912) |
| R Squared: | 0.981906 | |
| Sigma hat: | 2.00315 | |
| Number of cases: | 12 | |
| Degrees of freedom: | 6 | |
| | | |

(453.9386461817118 230.81749423402877 24.075724272415552)

Table 7. Reading, District 33

Weighted Least Squares Estimates:

| Constant | 382.880 | (88.0834) |
|------------|----------|-----------|
| Variable 0 | -40.1455 | (92.0275) |
| Variable 1 | 66.9284 | (91.1952) |

R Squared: 0.502451
Sigma hat: 5.87385
Number of cases: 12
Degrees of freedom: 9

Weighted Least Squares Estimates:

| Constant | 463.341 | (12.5371) |
|------------|----------|-----------|
| Variable 0 | -171.281 | (25.7479) |
| Variable 1 | aliased | |

Variable 2 -108.987 (20.7760)

R Squared: 0.861768
Sigma hat: 3.09606
Number of cases: 12
Degrees of freedom: 9

Weighted Least Squares Estimates:

| Constant | 440.665 | (19.0697) |
|------------|----------|-----------|
| Variable 0 | -20.3483 | (19.4136) |
| Variable 1 | 37.6843 | (19.3111) |
| Variable 2 | -142.135 | (11.0778) |
| Variable 3 | aliased | |
| Variable 4 | -88.6586 | (8.77847) |

R Squared: 0.982891
Sigma hat: 1.23506
Number of cases: 12
Degrees of freedom: 7

 $(310.5193790912975\ 86.27019262061698\ 10.677640070372602)$

Table 8. Reading, District 34

2. Achilles, improved

The LOGISTIC Procedure

Data Set: WORK.LOGD31

Response Variable (Events): FREQ Response Variable (Trials): N Number of Observations: 186

Link Function: Logit

Response Profile

| Ordered Value | Binary Outcome | Count |
|------------------|-------------------|-------|
| 1 | EVENT | 236 |
| 2 | NO EVENT | 3922 |

Maximum Likelihood Iterative Phase

| Iter | Step | -2 Log L | INTERCPT | BLACK | OTHER | GENDER |
|------|---------|-------------|-----------|----------|-----------|----------|
| 0 | INITIAL | 1812.492246 | -2.810525 | 0 | 0 | 0 |
| 1 | IRLS | 1671.616322 | -3.823235 | 1.590538 | -0.055734 | 0.926593 |
| 2 | IRLS | 1641.447149 | -4.137052 | 1.523259 | -0.075761 | 0.992328 |
| 3 | IRLS | 1640.947193 | -4.202049 | 1.516995 | -0.082831 | 1.027668 |
| 4 | IRLS | 1640.946855 | -4.204250 | 1.516929 | -0.083128 | 1.029483 |
| 5 | IRLS | 1640.946855 | -4.204252 | 1.516929 | -0.083129 | 1.029485 |

Last Change in -2 Log L: 3.23098E-10

Last Evaluation of Gradient

| INTERCPT | BLACK | OTHER | GENDER |
|--------------|--------------|--------------|-------------|
| -0.000150371 | -0.000099623 | -3.523138E-6 | -0.00001091 |

Criteria for Assessing Model Fit

| Criterion | Intercept Only | Intercept and Covariates | Chi-Square for Covariates |
|-----------|-------------------|--------------------------------|---------------------------|
| AIC | 1814.492 | 1648.947 | • |

| SC | 1820.825 | 1674.278 | • |
|----------|----------|----------|------------------------------|
| -2 LOG L | 1812.492 | 1640.947 | 171.545 with 3 DF (p=0.0001) |
| Score | | • | 176.228 with 3 DF (p=0.0001) |

The LOGISTIC Procedure

Analysis of Maximum Likelihood Estimates

| Variable DF | Parameter Estimate | | Wald Chi-Square | Pr > Chi-Square | Standardized Estimate | Odds Ratio |
|-------------|-----------------------|--------|--------------------|--------------------|--------------------------|---------------|
| INTERCPT 1 | -4.2043 | 0.1638 | 658.9059 | 0.0001 | | 0.015 |
| BLACK 1 | 1.5169 | 0.1475 | 105.7729 | 0.0001 | 0.396849 | 4.558 |
| OTHER 1 | -0.0831 | 0.5222 | 0.0253 | 0.8735 | -0.008629 | 0.920 |
| GENDER 1 | 1.0295 | 0.1519 | 45.9610 | 0.0001 | 0.283793 | 2.800 |

| Concordant = 63.2% | Somers' $D = 0.46$ | 9 |
|--------------------|--------------------|---|
| Discordant = 16.3% | Gamma = 0.58 | 9 |
| Tied = 20.5% | Tau-a = 0.05 | 0 |
| (925592 pairs) | c = 0.73 | 4 |

TABLE 9. Logistic Regression in District 31, Race and Gender

The LOGISTIC Procedure

Data Set: WORK.LOGD31

Response Variable (Events): FREQ Response Variable (Trials): N Number of Observations: 186

Link Function: Logit

Response Profile

| Ordered Value | Binary Outcome | Count |
|------------------|-------------------|-------|
| 1 | EVENT | 236 |
| 2 | NO EVENT | 3922 |

Maximum Likelihood Iterative Phase

| Iter | Step | -2 Log L | INTERCPT | GENDER | LUNCH |
|------|---------|-------------|-----------|----------|----------|
| | | | | | |
| 0 | INITIAL | 1812.492246 | -2.810525 | 0 | 0 |
| 1 | IRLS | 1738.221661 | -3.527112 | 0.933705 | 0.836942 |
| 2 | IRLS | 1731.680403 | -3.695330 | 1.000818 | 0.770301 |
| 3 | IRLS | 1731.640579 | -3.712409 | 1.014059 | 0.762059 |
| 4 | IRLS | 1731.640575 | -3.712583 | 1.014240 | 0.761981 |
| 5 | HALF(1) | 1731.640575 | -3.712583 | 1.014240 | 0.761981 |

Last Change in -2 Log L: 3.410605E-12

Last Evaluation of Gradient

| LUNCH | GENDER | INTERCPT |
|--------------|-------------|--------------|
| -9.223495E-7 | -1.31452E-7 | -1.412228E-6 |

Criteria for Assessing Model Fit

| Criterion | Intercept Only | Intercept and Covariates | Chi-Square for Covariates |
|-----------|-------------------|--------------------------------|---------------------------|
| AIC | 1814.492 | 1737.641 | |
| SC | 1820.825 | 1756.639 | • |

-2 LOG L 1812.492 1731.641 80.852 with 2 DF (p=0.0001) Score . 81.036 with 2 DF (p=0.0001)

Table 10. Logistic Regression in District 31, SES and Gender

The LOGISTIC Procedure

Analysis of Maximum Likelihood Estimates

| Variable DF | Parameter Estimate | | | Pr > Chi-Square | Standardized Estimate | Odds Ratio |
|-------------|-----------------------|--------|----------|--------------------|--------------------------|---------------|
| INTERCPT 1 | -3.7126 | 0.1413 | 690.0033 | 0.0001 | | 0.024 |
| GENDER 1 | 1.0142 | 0.1504 | 45.5035 | 0.0001 | 0.279590 | 2.757 |
| LUNCH 1 | 0.7620 | 0.1365 | 31.1666 | 0.0001 | 0.190611 | 2.143 |

Association of Predicted Probabilities and Observed Responses

| Concordant | = 53.1% | Somers' D | = | 0.321 |
|-------------|---------|-----------|---|-------|
| Discordant | = 21.0% | Gamma | = | 0.433 |
| Tied | = 25.9% | Tau-a | = | 0.034 |
| (925592 pa: | irs) | С | = | 0.661 |

The LOGISTIC Procedure

Data Set: WORK.LOGD31

Response Variable (Events): FREQ Response Variable (Trials): N Number of Observations: 186

Link Function: Logit

Response Profile

| Ordered Value | Binary Outcome | Count |
|------------------|-------------------|-------|
| | EVENT | 236 |
| 2 | NO EVENT | 3922 |

Maximum Likelihood Iterative Phase

| Iter Step | -2 Log L | INTERCPT LUNCH | BLACK | OTHER | GENDER |
|-----------|-------------|-----------------------|----------|-----------|----------|
| O INITIAL | 1812.492246 | -2.810525 0 | 0 | 0 | 0 |
| 1 IRLS | 1671.611530 | -3.823826 0.005291 | 1.587929 | -0.057044 | 0.926591 |
| 2 IRLS | 1641.440618 | -4.138338 | 1.517873 | -0.078609 | 0.992392 |

| | | 0.010984 | | | |
|--------|-------------|-----------|----------|-----------|----------|
| 3 IRLS | 1640.940444 | -4.203555 | 1.510754 | -0.086167 | 1.027753 |
| | | 0.012735 | | | |
| 4 IRLS | 1640.940106 | -4.205765 | 1.510655 | -0.086484 | 1.029568 |
| | | 0.012802 | | | |
| 5 IRLS | 1640.940106 | -4.205767 | 1.510655 | -0.086485 | 1.029570 |
| | | 0.012802 | | | |

Last Change in -2 Log L: 3.192326E-10

Last Evaluation of Gradient

| T | INTERCPT | BLACK | OTHER | GENDER | LUNCH |
|------|--------------|-------------|--------------|--------------|--------------|
| '5 - | -0.000150575 | -0.00009973 | -3.542122E-6 | -0.000010974 | -0.000065364 |

The LOGISTIC Procedure

Criteria for Assessing Model Fit

| Criterion | Intercept Only | Intercept and Covariates | Chi-Square for Covariates |
|-----------|-------------------|--------------------------------|------------------------------|
| AIC | 1814.492 | 1650.940 | |
| SC | 1820.825 | 1682.604 | • |
| -2 LOG L | 1812.492 | 1640.940 | 171.552 with 4 DF (p=0.0001) |
| Score | • | | 176.229 with 4 DF (p=0.0001) |

Analysis of Maximum Likelihood Estimates

| | | Parameter | ${\tt Standard}$ | Wald | Pr > | Standardized | Odds |
|----------|----|-----------|------------------|------------|------------|--------------|-------|
| Variable | DF | Estimate | Error | Chi-Square | Chi-Square | Estimate | Ratio |
| | | | | | | | |
| INTERCPT | 1 | -4.2058 | 0.1648 | 651.0036 | 0.0001 | | 0.015 |
| BLACK | 1 | 1.5107 | 0.1661 | 82.6866 | 0.0001 | 0.395207 | 4.530 |
| OTHER | 1 | -0.0865 | 0.5238 | 0.0273 | 0.8689 | -0.008978 | 0.917 |
| GENDER | 1 | 1.0296 | 0.1519 | 45.9660 | 0.0001 | 0.283816 | 2.800 |
| LUNCH | 1 | 0.0128 | 0.1558 | 0.0067 | 0.9345 | 0.003202 | 1.013 |

| Concordant = 65.7% | Somers' | D : | = | 0.466 |
|--------------------|---------|-----|---|-------|
| Discordant = 19.1% | Gamma | : | = | 0.549 |

Tied = 15.2% Tau-a = 0.050 (925592 pairs) c = 0.733

The LOGISTIC Procedure

Data Set: WORK.LOGD31

Response Variable (Events): FREQ Response Variable (Trials): N Number of Observations: 186

Link Function: Logit

Response Profile

Ordered Binary

Value Outcome Count

1 EVENT 236 2 NO EVENT 3922

Maximum Likelihood Iterative Phase

| LUNCH MATHP25 MATHP | MATHP75 |
|---|-------------|
| READP25 READP50 READP | 7 5 |
| 0 INITIAL 1812.492246 -2.810525 0 | 0 0 |
| 0 0 | 0 0 |
| 0 0 | 0 |
| 1 IRLS 1631.769411 -4.326428 1.319445 -0.1241 | 0.937977 |
| -0.178280 -0.160199 0.7820 | 26 0.397209 |
| 0.887433 1.016098 0.0666 | 10 |
| 2 IRLS 1569.759600 -5.083485 1.161616 -0.1476 | 0.987343 |
| -0.148577 0.164541 0.8806 | 0.629489 |
| 1.113704 1.235119 0.3862 |)2 |
| 3 IRLS 1566.367583 -5.505259 1.133314 -0.1606 | 1.036372 |
| -0.143268 0.325626 0.9977 | 0.783469 |
| 1.323424 1.446733 0.6107 | 13 |
| 4 IRLS 1566.293346 -5.589170 1.132411 -0.1620 | 1.040936 |
| -0.143025 0.353447 1.0242 | 0.812845 |
| 1.375898 1.499576 0.6645 | 57 |
| 5 IRLS 1566.293265 -5.591987 1.132423 -0.1620 | 38 1.040975 |
| -0.143027 0.354232 1.0250 | 0.813686 |
| 1.377889 1.501574 0.6665 | 32 |
| 6 IRLS 1566.293265 -5.591990 1.132423 -0.1620 | 38 1.040975 |
| -0.143027 0.354232 1.0250 | 0.813687 |

1.377891 1.501577 0.666585

Last Change in -2 Log L: 1.086846E-10

Last Evaluation of Gradient

| MATHP25 | LUNCH | GENDER | OTHER | BLACK | INTERCPT |
|-------------|-------------|-------------|-------------|-------------|------------|
| -5.97643E-7 | -3.66881E-6 | -0.00002738 | -1.33123E-6 | -8.23881E-6 | -0.0000386 |

The LOGISTIC Procedure

٩.

Last Evaluation of Gradient

| READP75 | READP50 | READP25 | MATHP75 | MATHP50 |
|-------------|-------------|-------------|-------------|-------------|
| -1.26748E-6 | -9.03469E-7 | -3.07506E-7 | -6.99494E-6 | -3.44116E-6 |

Criteria for Assessing Model Fit

| Criterion | Intercept Only | Intercept and Covariates | Chi-Square for Covariates |
|-----------|-------------------|--------------------------------|-------------------------------|
| AIC | 1814.492 | 1588.293 | |
| SC | 1820.825 | 1657.954 | • |
| -2 LOG L | 1812.492 | 1566.293 | 246.199 with 10 DF (p=0.0001) |
| Score | | • | 239.599 with 10 DF (p=0.0001) |

Analysis of Maximum Likelihood Estimates

| Variable | DF | Parameter Estimate | Standard Error | Wald Chi-Square | Pr > Chi-Square | Standardized Estimate | Odds Ratio |
|----------|----|-----------------------|-------------------|--------------------|--------------------|--------------------------|---------------|
| INTERCPT | 1 | -5.5920 | 0.3380 | 273.7188 | 0.0001 | • | 0.004 |
| BLACK | 1 | 1.1324 | 0.1697 | 44.5063 | 0.0001 | 0.296257 | 3.103 |
| OTHER | 1 | -0.1620 | 0.5295 | 0.0936 | 0.7596 | -0.016821 | 0.850 |
| GENDER | 1 | 1.0410 | 0.1535 | 46.0158 | 0.0001 | 0.286960 | 2.832 |
| LUNCH | 1 | -0.1430 | 0.1580 | 0.8198 | 0.3653 | -0.035778 | 0.867 |
| MATHP25 | 1 | 0.3542 | 0.3266 | 1.1764 | 0.2781 | 0.091265 | 1.425 |
| MATHP50 | 1 | 1.0251 | 0.3197 | 10.2779 | 0.0013 | 0.219004 | 2.787 |
| MATHP75 | 1 | 0.8137 | 0.3201 | 6.4628 | 0.0110 | 0.181016 | 2.256 |
| READP25 | 1 | 1.3779 | | 15.0850 | 0.0001 | 0.316472 | 3.967 |
| READP50 | 1 | 1.5016 | | 19.2821 | 0.0001 | 0.359717 | 4.489 |
| READP 35 | 1 | 0.6666 | | | 0.0557 | 0.156764 | 1.948 |

| Concordant = 78.0% | Somers' D | = | 0.580 |
|--------------------|-----------|---|-------|
| Discordant = 20.0% | Gamma | = | 0.592 |
| Tied = 2.0% | Tau-a | = | 0.062 |
| (925592 pairs) | С | = | 0.790 |

Table 11. Logistic Regression in District 31

The LOGISTIC Procedure

Data Set: WORK.LOGD32

Response Variable (Events): FREQ Response Variable (Trials): N Number of Observations: 204

Link Function: Logit

Response Profile

| Ordered Value | Binary Outcome | Count | |
|------------------|-------------------|-------------|--|
| 1 | EVENT | 714 4860 | |

Criteria for Assessing Model Fit

| Criterion | Intercept Only | Intercept and Covariates | Chi-Square for Covariates |
|-----------|-------------------|--------------------------------|------------------------------|
| AIC | 4268.883 | 3834.237 | • |
| SC | 4275.509 | 3867.366 | • |
| -2 LOG L | 4266.883 | 3824.237 | 442.646 with 4 DF (p=0.0001) |
| Score | • | • | 428.577 with 4 DF (p=0.0001) |

Analysis of Maximum Likelihood Estimates

| Variable 1 | DF | Parameter Estimate | | Wald Chi-Square | Pr > Chi-Square | Standardized Estimate | Odds Ratio |
|------------|------------------|--|--|--|--|---|---|
| BLACK | 1 1 1 1 | -3.3388 1.4489 0.9728 -1.5921 1.1036 | 0.1008 0.0919 0.1427 0.7171 0.0931 | 1096.2275 248.4355 46.4571 4.9293 140.4657 | 0.0001 0.0001 0.0001 0.0264 0.0001 | 0.375408 0.154508 -0.136888 0.303190 | 0.035 4.258 2.645 0.203 3.015 |

| Concordant | = | 63.9% | Somers' | D | = | 0.458 |
|------------|---|-------|---------|---|---|-------|
| Discordant | = | 18.1% | Gamma | | = | 0.559 |
| Tied | = | 18.0% | Tau-a | | = | 0.102 |

(3470040 pairs)

= 0.729

The LOGISTIC Procedure

Data Set: WORK.LOGD32

Response Variable (Events): FREQ Response Variable (Trials): N Number of Observations: 204

Link Function: Logit

Response Profile

| Ordered Value | Binary Outcome | Count | | |
|------------------|-------------------|-------------|--|--|
| 1 | EVENT | 714 4860 | | |

Criteria for Assessing Model Fit

| a to set on | Intercept | Intercept and Covariates | Chi-Square for Covariates |
|-------------|-----------|--------------------------------|------------------------------|
| Criterion | Only | Covariaces | CIII-Eduare for covariates |
| AIC | 4268.883 | 3792.764 | |
| SC | 4275.509 | 3832.520 | • |
| -2 LOG L | 4266.883 | 3780.764 | 486.118 with 5 DF (p=0.0001) |
| Score | • | • | 471.124 with 5 DF (p=0.0001) |

Analysis of Maximum Likelihood Estimates

| Variable DI | Parameter Estimate | Standard Error | Wald Chi-Square | Pr > Chi-Square | Standardized Estimate | Odds Ratio |
|-------------|-----------------------|-------------------|--------------------|--------------------|--------------------------|---------------|
| INTERCPT 1 | -3.4917 | 0.1054 | 1096.7212 | 0.0001 | • | 0.030 |
| BLACK 1 | 1.0817 | 0.1075 | 101.3088 | 0.0001 | 0.280265 | 2.950 |
| HISP 1 | 0.5534 | 0.1563 | 12.5393 | 0.0004 | 0.087897 | 1.739 |
| OTHER 1 | -1.5270 | 0.7175 | 4.5296 | 0.0333 | -0.131293 | 0.217 |
| GENDER 1 | 1.1214 | 0.0936 | 143.5443 | 0.0001 | 0.308077 | 3.069 |
| LUNCH 1 | 0.6710 | 0.1028 | 42.6077 | 0.0001 | 0.181737 | 1.956 |

| Concordant | = 68.9% | Somers' I |) = | 0.486 |
|-------------|---------|-----------|-----|-------|
| Discordant | = 20.2% | Gamma | = | 0.546 |
| Tied | = 10.9% | Tau-a | = | 0.109 |
| (3470040 pa | airs) | С | = | 0.743 |

The LOGISTIC Procedure

Data Set: WORK.LOGD32

Response Variable (Events): FREQ Response Variable (Trials): N Number of Observations: 204

Link Function: Logit

Response Profile

| Ordered Value | Binary Outcome | Count |
|------------------|-------------------|-------------|
| 1 2 | EVENT NO EVENT | 714 4860 |

Criteria for Assessing Model Fit

| Criterion | Intercept Only | Intercept and Covariates | Chi-Square for Covariates |
|-----------|-------------------|--------------------------------|-------------------------------|
| AIC | 4268.883 | 3730.480 | • |
| SC | 4275.509 | 3809.990 | • |
| -2 LOG L | 4266.883 | 3706.480 | 560.403 with 11 DF (p=0.0001) |
| Score | • | • | 522.826 with 11 DF (p=0.0001) |

Analysis of Maximum Likelihood Estimates

| Variable | DF | Parameter Estimate | Standard Error | Wald Chi-Square | Pr > Chi-Square | Standardized Estimate | Odds Ratio |
|----------|----|-----------------------|-------------------|--------------------|--------------------|--------------------------|---------------|
| INTERCPT | 1 | -4.4020 | 0.1972 | 498.3940 | 0.0001 | • | 0.012 |
| BLACK | 1 | 0.9007 | 0.1092 | 67.9991 | 0.0001 | 0.233375 | 2.461 |
| HISP | 1 | 0.3564 | 0.1585 | 5.0565 | 0.0245 | 0.056601 | 1.428 |
| OTHER | 1 | -1.2131 | 0.7207 | 2.8333 | 0.0923 | -0.104297 | 0.297 |
| GENDER | 1 | 1.1206 | 0.0945 | 140.5857 | 0.0001 | 0.307862 | 3.067 |
| LUNCH | 1 | 0.5353 | 0.1058 | 25.5800 | 0.0001 | 0.144980 | 1.708 |
| MATHP25 | 1 | 0.1923 | 0.2117 | 0.8251 | 0.3637 | 0.051076 | 1.212 |

| MATHP50 | 1 | 0.6458 | 0.2066 | 9.7719 | 0.0018 | 0.146543 | 1.908 |
|---------|---|--------|--------|---------|--------|----------|-------|
| MATHP75 | 1 | 0.6135 | 0.1988 | 9.5273 | 0.0020 | 0.135817 | 1.847 |
| READP25 | 1 | 0.9766 | 0.2104 | 21.5332 | 0.0001 | 0.252286 | 2.655 |
| READP50 | 1 | 0.8423 | 0.2023 | 17.3304 | 0.0001 | 0.200298 | 2.322 |
| READP75 | 1 | 0.4488 | 0.2018 | 4.9443 | 0.0262 | 0.099719 | 1.566 |

| Concordant = 75.4% | Somers' l | D = | 0.529 |
|--------------------|-----------|-----|-------|
| Discordant = 22.5% | Gamma | = | 0.540 |
| Tied = 2.1% | Tau-a | = | 0.118 |
| (3470040 pairs) | С | = | 0.764 |

Table 12. Logistic Regression in District 32

The LOGISTIC Procedure

Data Set: WORK.LOGD33

Response Variable (Events): FREQ Response Variable (Trials): N Number of Observations: 213

Link Function: Logit

Response Profile

| Ordered | ${	t Binary}$ | |
|---------|---------------|-------|
| Value | Outcome | Count |
| | , | |
| 1 | EVENT | 534 |
| 2 | NO EVENT | 4916 |

Criteria for Assessing Model Fit

| Criterion | Intercept Only | Intercept and Covariates | Chi-Square for Covariates |
|-----------|-------------------|--------------------------------|------------------------------|
| AIC | 3496.817 | 3384.597 | • |
| SC | 3503.421 | 3417.614 | • |
| -2 LOG L | 3494.817 | 3374.597 | 120.220 with 4 DF (p=0.0001) |
| Score | • | • | 120.889 with 4 DF (p=0.0001) |

Analysis of Maximum Likelihood Estimates

| Variable | DF | Parameter Estimate | Standard Error | Wald Chi-Square | Pr > Chi-Square | Standardized Estimate | Odds Ratio |
|---------------------------|-------------|-----------------------------|----------------------------|--------------------------------|----------------------------|--------------------------|-------------------------|
| INTERCPT BLACK HISP | 1 1 1 | -2.8463 0.7892 0.2753 | 0.0881 0.0949 0.2800 | 1042.7066 69.1069 0.9665 | 0.0001 0.0001 0.3256 | 0.195854 0.025149 | 0.058 2.202 1.317 |
| OTHER GENDER | 1 | -1.2569 0.6336 | 0.5879 0.0955 | 4.5706 44.0491 | 0.0325 0.0001 | -0.107321 0.174638 | 0.285 1.884 |

| Concordant | = | 51.8% | Somers' | D | = | 0.275 |
|------------|---|-------|---------|---|---|-------|
| Discordant | = | 24.3% | Gamma | | = | 0.362 |
| Tied | = | 23.9% | Tau-a | | = | 0.049 |

(2625144 pairs)

= 0.638

The LOGISTIC Procedure

Data Set: WORK.LOGD33

Response Variable (Events): FREQ Response Variable (Trials): N Number of Observations: 213

Link Function: Logit

Response Profile

| Ordered Value | Binary Outcome | Count |
|------------------|-------------------|-------|
| 1 | EVENT | 534 |
| 2 | NO EVENT | 4916 |

Criteria for Assessing Model Fit

| Criterion | Intercept Only | Intercept and Covariates | Chi-Square for Covariates |
|-----------|-------------------|--------------------------------|------------------------------|
| AIC | 3496.817 | 3384.574 | |
| SC | 3503.421 | 3424.194 | • |
| -2 LOG L | 3494.817 | 3372.574 | 122.243 with 5 DF (p=0.0001) |
| Score | • | • | 123.087 with 5 DF (p=0.0001) |

Analysis of Maximum Likelihood Estimates

| Variable | DF | Parameter Estimate | Standard Error | Wald Chi-Square | Pr > Chi-Square | Standardized Estimate | Odds Ratio |
|----------|----|-----------------------|-------------------|--------------------|--------------------|--------------------------|---------------|
| INTERCPT | 1 | -2.8678 | 0.0896 | 1024.5505 | 0.0001 | • | 0.057 |
| BLACK | 1 | 0.7107 | 0.1100 | 41.7124 | 0.0001 | 0.176363 | 2.035 |
| HISP | 1 | 0.1837 | 0.2874 | 0.4085 | 0.5227 | 0.016785 | 1.202 |
| OTHER | 1 | -1.2717 | 0.5881 | 4.6765 | 0.0306 | -0.108588 | 0.280 |
| GENDER | 1 | 0.6332 | 0.0955 | 43.9854 | 0.0001 | 0.174545 | 1.884 |
| LUNCH | 1 | 0.1594 | 0.1118 | 2.0349 | 0.1537 | 0.039623 | 1.173 |

| Concordant = 55.5% | Somers' D |) = | 0.281 |
|--------------------|-----------|-----|-------|
| Discordant = 27.5% | Gamma | = | 0.338 |
| Tied = 17.0% | Tau-a | = | 0.050 |
| (2625144 pairs) | c - | = | 0.640 |

The LOGISTIC Procedure

Data Set: WORK.LOGD33

Response Variable (Events): FREQ Response Variable (Trials): N Number of Observations: 213

Link Function: Logit

Response Profile

| Ordered Value | Binary Outcome | Count |
|------------------|-------------------|-------------|
| 1 | EVENT NO EVENT | 534 4916 |

Criteria for Assessing Model Fit

| Criterion | Intercept Only | Intercept and Covariates | Chi-Square for Covariates |
|-----------|-------------------|--------------------------------|-------------------------------|
| AIC | 3496.817 | 3260.815 | • |
| SC | 3503.421 | 3340.055 | |
| -2 LOG L | 3494.817 | 3236.815 | 258.003 with 11 DF (p=0.0001) |
| Score | • | • | 257.565 with 11 DF (p=0.0001) |

Analysis of Maximum Likelihood Estimates

| | Parameter | Standard | Wald | Pr > | Standardized | Odds |
|------------|------------|----------|------------|------------|--------------|-------|
| Variable D | F Estimate | Error | Chi-Square | Chi-Square | Estimate | Ratio |
| | | | | | | |
| INTERCPT 1 | -3.9126 | 0.1912 | 418.9451 | 0.0001 | | 0.020 |
| BLACK 1 | 0.4368 | 0.1126 | 15.0587 | 0.0001 | 0.108406 | 1.548 |
| HISP 1 | -0.0568 | 0.2914 | 0.0380 | 0.8455 | -0.005188 | 0.945 |
| OTHER 1 | -1.1346 | 0.5913 | 3.6813 | 0.0550 | -0.096882 | 0.322 |
| GENDER 1 | 0.6032 | 0.0969 | 38.7808 | 0.0001 | 0.166272 | 1.828 |
| LUNCH 1 | -0.1335 | 0.1154 | 1.3370 | 0.2476 | -0.033166 | 0.875 |

| MATHP25 | 1 | 0.7612 | 0.2185 | 12.1398 | 0.0005 | 0.185992 | 2.141 |
|---------|---|--------|--------|---------|--------|----------|-------|
| MATHP50 | 1 | 0.8624 | 0.2093 | 16.9788 | 0.0001 | 0.206630 | 2.369 |
| MATHP75 | 1 | 0.8094 | 0.2009 | 16.2261 | 0.0001 | 0.195040 | 2.247 |
| READP25 | 1 | 1.1926 | 0.1961 | 36.9819 | 0.0001 | 0.275369 | 3.296 |
| READP50 | 1 | 0.4486 | 0.1894 | 5.6131 | 0.0178 | 0.108124 | 1.566 |
| READP75 | 1 | 0.2715 | 0.1832 | 2.1950 | 0.1385 | 0.066633 | 1.312 |

| Concordant = 69.6% | Somers' D |) = | 0.412 |
|--------------------|-----------|-----|-------|
| Discordant = 28.4% | Gamma | = | 0.420 |
| Tied = 1.9% | Tau-a | = | 0.073 |
| (2625144 pairs) | С | = | 0.706 |

Table 13. Logistic Regression in District 33

The LOGISTIC Procedure

Data Set: WORK.LOGD34

Response Variable (Events): FREQ Response Variable (Trials): N Number of Observations: 185

Link Function: Logit

Response Profile

| Ordered Value | Binary Outcome | Count |
|------------------|-------------------|-------|
| 1 | EVENT | 610 |
| 2 | NO EVENT | 3649 |

Criteria for Assessing Model Fit

| Criterion | Intercept Only | Intercept and Covariates | Chi-Square for Covariates |
|-----------|-------------------|--------------------------------|-----------------------------|
| AIC | 3500.997 | 3415.846 | |
| SC | 3507.354 | 3447.630 | • |
| -2 LOG L | 3498.997 | 3405.846 | 93.152 with 4 DF (p=0.0001) |
| Score | • | • | 91.355 with 4 DF (p=0.0001) |

Analysis of Maximum Likelihood Estimates

| Parameter Estimate | Standard Error | Wald Chi-Square | Pr > Chi-Square | Standardized Estimate | Odds Ratio |
|-----------------------|--|--|------------------------------------|---|--|
| -2.4172 | 0.0875 | 762.3868 | 0.0001 | • | 0.089 |
| 0.5185 | 0.0903 | 32.9388 | 0.0001 | 0.137715 | 1.680 |
| 0.2598 | 0.2525 | 1.0585 | 0.3036 | 0.024551 | 1.297 |
| -0.9415 | 0.7304 | 1.6616 | 0.1974 | -0.049450 | 0.390 |
| 0.6915 | 0.0932 | 54.9968 | 0.0001 | 0.190039 | 1.997 |
| | -2.4172 0.5185 0.2598 -0.9415 | -2.4172 0.0875 0.5185 0.0903 0.2598 0.2525 -0.9415 0.7304 | Estimate Error Chi-Square -2.4172 | Estimate Error Chi-Square Chi-Square -2.4172 | Estimate Error Chi-Square Chi-Square Estimate -2.4172 |

| Concordant | = | 49.7% | Somers' | D | = | 0.230 |
|------------|---|-------|---------|---|---|-------|
| Discordant | = | 26.7% | Gamma | | = | 0.301 |
| Tied | = | 23.6% | Tau-a | | = | 0.056 |

(2225890 pairs)

= 0.615

The LOGISTIC Procedure

Data Set: WORK.LOGD34

Response Variable (Events): FREQ Response Variable (Trials): N Number of Observations: 185

Link Function: Logit

Response Profile

| Ordered | Binary | |
|---------|----------|-------|
| Value | Outcome | Count |
| 1 | EVENT | 610 |
| 2 | NO EVENT | 3649 |

Criteria for Assessing Model Fit

| Criterion | Intercept Only | Intercept and Covariates | Chi-Square for Covariates |
|-----------|-------------------|--------------------------------|-----------------------------|
| AIC | 3500.997 | 3417.580 | • |
| SC | 3507.354 | 3455.721 | • |
| -2 LOG L | 3498.997 | 3405.580 | 93.417 with 5 DF (p=0.0001) |
| Score | • | • | 91.575 with 5 DF (p=0.0001) |

Analysis of Maximum Likelihood Estimates

| Variable | DF | Parameter Estimate | | Wald Chi-Square | Pr > Chi-Square | Standardized Estimate | Odds Ratio |
|---|-----------------------|--|--|--|--|---|--|
| INTERCPT BLACK HISP OTHER GENDER LUNCH | 1 1 1 1 1 | -2.4297 0.4996 0.2376 -0.9480 0.6916 0.0498 | 0.0910 0.0975 0.2562 0.7305 0.0932 0.0967 | 713.1530 26.2581 0.8601 1.6841 55.0142 0.2659 | 0.0001 0.0001 0.3537 0.1944 0.0001 0.6061 | 0.132696 0.022454 -0.049793 0.190082 0.013456 | 0.088 1.648 1.268 0.387 1.997 1.051 |

| -a = | 0.271 0.057 0.617 |
|------|-------------------------|
| | -a = |

The LOGISTIC Procedure

Data Set: WORK.LOGD34

Response Variable (Events): FREQ Response Variable (Trials): N Number of Observations: 185

Link Function: Logit

Response Profile

| Ordered Value | Binary Outcome | Count | |
|------------------|-------------------|-------|--|
| 1 | EVENT | 610 | |
| 2 | NO EVENT | 3649 | |

Criteria for Assessing Model Fit

| Criterion | Intercept Only | Intercept and Covariates | Chi-Square for Covariates |
|--------------------------------|----------------------------------|----------------------------------|--|
| AIC SC -2 LOG L Score | 3500.997 3507.354 3498.997 | 3391.267 3467.549 3367.267 | 131.730 with 11 DF (p=0.0001) 124.108 with 11 DF (p=0.0001) |

Analysis of Maximum Likelihood Estimates

| Variable DF | Parameter | Standard | Wald | Pr > | Standardized | Odds |
|--|---|--|---------------------------------------|----------------------------|------------------------------------|---|
| | Estimate | Error | Chi-Square | Chi-Square | Estimate | Ratio |
| INTERCPT 1 BLACK 1 HISP 1 OTHER 1 GENDER 1 LUNCH 1 MATHP25 1 | -3.2606 0.4032 0.1681 -0.9377 0.7038 -0.0405 0.5178 | 0.0994 0.2579 0.7322 0.0939 0.0996 | 0.4250 1.6399 56.1586 0.1654 | 0.2003 0.0001 0.6843 | -0.049249 0.193422 -0.010931 | 0.038 1.497 1.183 0.392 2.021 0.960 1.678 |

| MATHP50 | 1 | 0.2767 | 0.1954 | 2.0054 | 0.1567 | 0.069005 | 1.319 |
|---------|---|--------|--------|---------|--------|----------|-------|
| MATHEOU | _ | 0.2101 | 0.1001 | | | | |
| MATHP75 | 1 | 0.3604 | 0.1904 | 3.5818 | 0.0584 | 0.081783 | 1.434 |
| | _ | | | | | 0.404440 | 4 005 |
| READP25 | 1 | 0.6339 | 0.2129 | 8.8653 | 0.0029 | 0.164418 | 1.885 |
| | | | | | 0.0405 | 0.129906 | 1.671 |
| READP50 | 1 | 0.5135 | 0.2056 | 6.2352 | 0.0125 | 0.129906 | 1.071 |
| | | | | 40 0500 | 0.0005 | 0.160201 | 2.001 |
| READP75 | 1 | 0.6935 | 0.1981 | 12.2589 | 0.0005 | 0.160201 | 2.001 |

| Concordant = 62.7% | Somers' | D = | 0.277 |
|--------------------|---------|-----|-------|
| Discordant = 35.1% | Gamma | = | 0.283 |
| Tied = 2.2% | Tau-a | = | 0.068 |
| (2225890 pairs) | С | = | 0.638 |

TABLE 14. Logistic Regression in District 34

District 31

18:04 Friday, December 23, 1994 1

31

The LOGISTIC Procedure

Data Set: WORK.LOGD31

Response Variable (Events): FREQ Response Variable (Trials): N Number of Observations: 186

Link Function: Logit

Response Profile

| Ordered | Binary | |
|---------|----------|-------|
| Value | Outcome | Count |
| 1 | EVENT | 236 |
| 2 | NO EVENT | 3922 |

Criteria for Assessing Model Fit

| Criterion | Intercept Only | Intercept and Covariates | Chi-Square for Covariates |
|-----------|-------------------|--------------------------------|-----------------------------|
| AIC | 1814.492 | 1737.641 | |
| SC | 1820.825 | 1756.639 | • |
| -2 LOG L | 1812.492 | 1731.641 | 80.852 with 2 DF (p=0.0001) |
| Score | • | • | 81.036 with 2 DF (p=0.0001) |

Analysis of Maximum Likelihood Estimates

| Variable DF | Parameter Estimate | | Wald Chi-Square | Pr > Chi-Square | Standardized Estimate | Odds Ratio |
|-------------|-----------------------|--------|--------------------|--------------------|--------------------------|---------------|
| INTERCPT 1 | -3.7126 | 0.1413 | 690.0033 | 0.0001 | • | 0.024 |
| GENDER 1 | 1.0142 | 0.1504 | 45.5035 | 0.0001 | 0.279590 | 2.757 |
| LUNCH 1 | 0.7620 | 0.1365 | 31.1666 | 0.0001 | 0.190611 | 2.143 |

| Concordant | = | 53.1% | Somers' | D | = | 0.321 |
|------------|---|-------|---------|---|---|-------|
| Discordant | = | 21.0% | Gamma | | = | 0.433 |
| Tied | = | 25.9% | Tau-a | | = | 0.034 |

(925592 pairs)

= 0.661

District 32

18:04 Friday, December 23, 1994

The LOGISTIC Procedure

Data Set: WORK.LOGD32

Response Variable (Events): FREQ Response Variable (Trials): N Number of Observations: 204

Link Function: Logit

Response Profile

| Ordered | Binary | |
|---------|----------|-------|
| Value | Outcome | Count |
| | | |
| 1 | EVENT | 714 |
| 2 | NO EVENT | 4860 |

Criteria for Assessing Model Fit

| | Intercept | $\begin{array}{c} {\tt Intercept} \\ {\tt and} \end{array}$ | |
|-----------|-----------|---|------------------------------|
| Criterion | Only | Covariates | Chi-Square for Covariates |
| AIC | 4268.883 | 3906.941 | |
| SC | 4275.509 | 3926.818 | • |
| -2 LOG L | 4266.883 | 3900.941 | 365.942 with 2 DF (p=0.0001) |
| Score | | • | 356.520 with 2 DF (p=0.0001) |

Analysis of Maximum Likelihood Estimates

| | | Parameter | ${\tt Standard}$ | Wald | Pr > | Standardized | Odds |
|----------|----|-----------|------------------|------------|------------|--------------|-------|
| Variable | DF | Estimate | Error | Chi-Square | Chi-Square | Estimate | Ratio |
| | | | | | • | | |
| INTERCPT | 1 | -3.2448 | 0.0969 | 1121.1040 | 0.0001 | • | 0.039 |
| GENDER | 1 | 1.0964 | 0.0926 | 140.3288 | 0.0001 | 0.301204 | 2.993 |
| LUNCH | 1 | 1.2270 | 0.0856 | 205.5959 | 0.0001 | 0.332338 | 3.411 |

| Concordant = 58.6% | Somers' | D | = | 0.405 |
|--------------------|---------|---|---|-------|
| Discordant = 18 2% | Gamma | | = | 0.527 |

Tied = 23.2% Tau-a = 0.090 (3470040 pairs) c = 0.702

The LOGISTIC Procedure

Data Set: WORK.LOGD33

Response Variable (Events): FREQ Response Variable (Trials): N Number of Observations: 213

Link Function: Logit

Response Profile

| Ordered | Binary | |
|---------|----------|-------|
| Value | Outcome | Count |
| | | |
| 1 | EVENT | 534 |
| 2 | NO EVENT | 4916 |

Criteria for Assessing Model Fit

| Criterion | Intercept Only | Intercept and Covariates | Chi-Square for Covariates |
|-----------|-------------------|--------------------------------|-----------------------------|
| AIC | 3496.817 | 3431.034 | |
| SC | 3503.421 | 3450.844 | • |
| -2 LOG L | 3494.817 | 3425.034 | 69.783 with 2 DF (p=0.0001) |
| Score | • | • | 70.426 with 2 DF (p=0.0001) |

Analysis of Maximum Likelihood Estimates

| Variable DF | Parameter Estimate | | | Pr > Chi-Square | Standardized Estimate | Odds Ratio |
|-----------------------------|-----------------------------|--------|---------------------------------|--------------------|--------------------------|-------------------------|
| INTERCPT 1 GENDER 1 LUNCH 1 | -2.7344 0.6103 0.5142 | 0.0949 | 1069.3448 41.3908 29.2253 | | 0.168241 0.127779 | 0.065 1.841 1.672 |

| Concordant = 46.3% | Somers' D = | 0.202 |
|--------------------|-------------|-------|
| Discordant = 26.1% | Gamma = | 0.279 |

Tied = 27.6% Tau-a = 0.036 (2625144 pairs) c = 0.601

The LOGISTIC Procedure

Data Set: WORK.LOGD34

Response Variable (Events): FREQ Response Variable (Trials): N Number of Observations: 185

Link Function: Logit

Response Profile

| Ordered | Binary | |
|---------|----------|-------|
| Value | Outcome | Count |
| 1 | EVENT | 610 |
| 2 | NO EVENT | 3649 |

Criteria for Assessing Model Fit

| Criterion | Intercept Only | Intercept and Covariates | Chi-Square for Covariates |
|-----------|-------------------|--------------------------------|-----------------------------|
| AIC | 3500.997 | 3441.272 | |
| SC | 3507.354 | 3460.343 | • |
| -2 LOG L | 3498.997 | 3435.272 | 63.725 with 2 DF (p=0.0001) |
| Score | • | • | 62.328 with 2 DF (p=0.0001) |

Analysis of Maximum Likelihood Estimates

| Variable DF | Parameter Estimate | _ | | Pr > Chi-Square | Standardized Estimate | Odds Ratio |
|---------------------|-----------------------|------------------|---------|--------------------|--------------------------|---------------|
| INTERCPT 1 GENDER 1 | -2.2958 0.6826 | 0.0850 0.0929 | 54.0088 | 0.0001 | 0.187608 | 0.101 |
| LUNCH 1 | 0.2337 | 0.0888 | 6.9259 | 0.0085 | 0.063106 | 1.263 |

| Concordant = 46.7% | Somers, $D = 0.193$ |
|-----------------------|---------------------|
| Discordant = 27.4% | Gamma = 0.26 |

Tied = 25.8% Tau-a = 0.047 (2225890 pairs) c = 0.597

Table 15. Logistic Regression in Districts

3. RESCHLY, IMPROVED

DIST94=31

The LOGISTIC Procedure

Data Set: WORK.TEST

Response Variable: HANDICAP

Response Levels: 2

Number of Observations: 13089

Link Function: Logit

Response Profile

| Ordered Value | HANDICAP | Count |
|------------------|----------|-------|
| 1 | 1 | 1258 |
| 2 | 0 | 11831 |

Criteria for Assessing Model Fit

| Criterion | Intercept Only | Intercept and Covariates | Chi-Square for Covariates |
|-----------|-------------------|--------------------------------|------------------------------|
| AIC | 8286.119 | 7942.277 | • |
| SC | 8293.599 | 7964.715 | • |
| -2 LOG L | 8284.119 | 7936.277 | 347.843 with 2 DF (p=0.0001) |
| Score | • | • | 374.360 with 2 DF (p=0.0001) |

Analysis of Maximum Likelihood Estimates

| Variable DF | Parameter Estimate | | | Pr > Chi-Square | Standardized Estimate | Odds Ratio |
|-------------|-----------------------|--------|-----------|--------------------|--------------------------|---------------|
| INTERCPT 1 | -2.7058 | 0.0451 | 3602.8613 | 0.0001 | | 0.067 |
| BLACK 1 | 1.1132 | 0.0612 | 331.2308 | 0.0001 | 0.285885 | 3.044 |
| OTHER 1 | -0.1672 | 0.1961 | 0.7270 | 0.3939 | -0.018369 | 0.846 |

Association of Predicted Probabilities and Observed Responses

Concordant = 41.4%

Somers' D = 0.270

| Discordant = 14.4% | Gamma | = 0.484 |
|--------------------|-------|---------|
| Tied = 44.2% | Tau-a | = 0.047 |
| (14883398 pairs) | С | = 0.635 |

DIST94=32

The LOGISTIC Procedure

Data Set: WORK.TEST

Response Variable: HANDICAP

Response Levels: 2

Number of Observations: 16771

Link Function: Logit

Response Profile

| Ordered Value | HANDICAP | Count |
|------------------|----------|-------|
| 1 | 1 | 1602 |
| 2 | 0 | 15169 |

Criteria for Assessing Model Fit

| Criterion | Intercept Only | Intercept and Covariates | Chi-Square for Covariates |
|-----------|-------------------|--------------------------------|------------------------------|
| AIC | 10572.123 | 10269.264 | |
| SC | 10579.850 | 10292.447 | • |
| -2 LOG L | 10570.123 | 10263.264 | 306.858 with 2 DF (p=0.0001) |
| Score | • | • | 327.967 with 2 DF (p=0.0001) |

Analysis of Maximum Likelihood Estimates

| Variable DF | Parameter Estimate | | Wald Chi-Square | Pr > Chi-Square | Standardized Estimate | Odds Ratio |
|-------------|-----------------------|--------|--------------------|--------------------|--------------------------|---------------|
| INTERCPT 1 | -2.6640 | 0.0407 | 4279.3398 | 0.0001 | • | 0.070 |
| BLACK 1 | 0.9956 | 0.0567 | 308.3965 | 0.0001 | 0.248351 | 2.706 |
| OTHER 1 | 0.3989 | 0.0859 | 21.5668 | 0.0001 | 0.072068 | 1.490 |

| Concordant = 42.3% | Somers' | D = | 0.234 |
|--------------------|---------|-----|-------|
| Discordant = 18.9% | Gamma | = | 0.382 |
| Tied = 38.8% | Tau-a | = | 0.040 |
| (24300738 pairs) | С | = | 0.617 |

DIST94=33

The LOGISTIC Procedure

Data Set: WORK.TEST

Response Variable: HANDICAP

Response Levels: 2

Number of Observations: 21960

Link Function: Logit

Response Profile

| Ordered Value | HANDICAP | Count |
|------------------|----------|-------|
| 1 | 1 | 1941 |
| 2 | 0 | 20019 |

Criteria for Assessing Model Fit

| Criterion | Intercept Only | Intercept and Covariates | Chi-Square for Covariates |
|-----------|-------------------|--------------------------------|------------------------------|
| AIC | 13124.955 | 12950.668 | • |
| SC | 13132.952 | 12974.659 | • |
| -2 LOG L | 13122.955 | 12944.668 | 178.287 with 2 DF (p=0.0001) |
| Score | • | • | 189.758 with 2 DF (p=0.0001) |

| Variable | | Parameter Estimate | | Wald Chi-Square | | Standardized Estimate | Odds Ratio |
|----------------------------|-------------|------------------------------|--------|---------------------------------|----------------------------|--------------------------|-------------------------|
| INTERCPT BLACK OTHER | 1 1 1 | -2.5478 0.6438 -0.1657 | 0.0494 | 6230.8001 169.7823 2.0219 | 0.0001 0.0001 0.1550 | 0.160792 -0.022078 | 0.078 1.904 0.847 |

Association of Predicted Probabilities and Observed Responses

| Concordant = 34.1% Discordant = 18.8% | Gamma | D = 0.153 = 0.289 |
|--|-------|----------------------|
| Tied = 47.2% | Tau-a | = 0.025 |
| (38856879 pairs) | С | = 0.576 |

DIST94=34

The LOGISTIC Procedure

Data Set: WORK.TEST

Response Variable: HANDICAP

Response Levels: 2

Number of Observations: 11660

Link Function: Logit

Response Profile

| Ordered Value | HANDICAP | Count |
|------------------|----------|-------|
| 1 | 1 | 1157 |
| 2 | 0 | 10503 |

Criteria for Assessing Model Fit

| Criterion | Intercept Only | Intercept and Covariates | Chi-Square for Covariates |
|--------------------------------|----------------------------------|----------------------------------|---|
| AIC SC -2 LOG L Score | 7543.308 7550.671 7541.308 | 7485.734 7507.826 7479.734 | . 61.573 with 2 DF (p=0.0001) 63.811 with 2 DF (p=0.0001) |

| Variable DF | Parameter Estimate | | Wald Chi-Square | Standardized Estimate | Odds Ratio |
|--------------------|-----------------------|------------------|--------------------|------------------------------|---------------|
| INTERCPT 1 BLACK 1 | -2.3919 0.4921 | 0.0425 0.0636 | 4 | 0.128355 | 0.091 |

OTHER 1 -0.0736 0.1721 0.1830 0.6688 -0.008208 0.929

Association of Predicted Probabilities and Observed Responses

Concordant = 32.1% Somers' D = 0.119
Discordant = 20.3% Gamma = 0.226
Tied = 47.6% Tau-a = 0.021
(12151971 pairs) c = 0.559

TABLE 16. Logistic Regression in Districts, Black Only

DIST94=31

The LOGISTIC Procedure

Data Set: WORK.TEST

Response Variable: HANDICAP

Response Levels: 2

Number of Observations: 13089

Link Function: Logit

Response Profile

| Ordered Value | HANDICAP | Count |
|------------------|----------|-------|
| 1 | 1 | 1258 |
| 2 | 0 | 11831 |

Criteria for Assessing Model Fit

| Criterion | Intercept Only | Intercept and Covariates | Chi-Square for Covariates |
|--------------------------------|----------------------------------|----------------------------------|--|
| AIC SC -2 LOG L Score | 8286.119 8293.599 8284.119 | 7571.404 7601.322 7563.404 | 720.715 with 3 DF (p=0.0001) 866.583 with 3 DF (p=0.0001) |

Analysis of Maximum Likelihood Estimates

| Variable | | Parameter Estimate | Standard Error | Wald Chi-Square | | Standardized Estimate | Odds Ratio |
|------------------------------|-------------|---------------------------------------|--------------------------------------|--|--------|----------------------------------|-----------------------------------|
| INTERCPT AL ANL NAL | 1 1 1 | -2.8466 1.8396 2.8466 1.5391 | 0.0439 0.0873 0.5363 0.0684 | 4204.6547 444.3371 28.1714 506.4701 | 0.0001 | 0.256255 0.051302 0.315582 | 0.058 6.294 17.230 4.660 |

| Concordant = 47.9% | Somers' $D = 0.371$ | |
|--------------------|---------------------|--|
| Discordant = 10.8% | Gamma = 0.632 | |

| Tied | = 41.3% | Tau-a | = 0.064 |
|-----------|---------|-------|---------|
| (14883398 | pairs) | С | = 0.686 |

DIST94=32

The LOGISTIC Procedure

Data Set: WORK.TEST

Response Variable: HANDICAP

Response Levels: 2

Number of Observations: 16771

Link Function: Logit

Response Profile

| Ordered Value | HANDICAP | Count |
|------------------|----------|-------|
| 1 | 1 | 1602 |
| 2 | 0 | 15169 |

Criteria for Assessing Model Fit

| Criterion | Intercept Only | Intercept and Covariates | Chi-Square for Covariates |
|-----------|-------------------|--------------------------------|------------------------------|
| AIC | 10572.123 | 9970.673 | |
| SC | 10579.850 | 10001.583 | • |
| -2 LOG L | 10570.123 | 9962.673 | 607.450 with 3 DF (p=0.0001) |
| Score | • | • | 662.926 with 3 DF (p=0.0001) |

Analysis of Maximum Likelihood Estimates

| Variable | DF | Parameter Estimate | | Wald Chi-Square | | Standardized Estimate | Odds Ratio |
|------------|----|-----------------------|-------------|--------------------|--------|--------------------------|---------------|
| THERMEDADE | | -2.8266 | 0.0408 | 4805.0310 | 0.0001 | • | 0.059 |
| INTERCPT | 1 | | • • • • • • | 382.4209 | | 0.235887 | 4.275 |
| AL | 1 | 1.4527 | 0.0743 | | | 0.050897 | 5.630 |
| ANL | 1 | 1.7280 | 0.3358 | 26.4783 | 0.0001 | • | |
| NAL | 1 | 1.2329 | 0.0598 | 424.7659 | 0.0001 | 0.282393 | 3.431 |

| Concordant = 47.1% | Somers' I |) = | 0.320 |
|--------------------|-----------|-----|-------|
| Discordant = 15.0% | Gamma | = | 0.516 |
| Tied = 37.9% | Tau-a | = | 0.055 |
| (24300738 pairs) | С | = | 0.660 |

DIST94=33

The LOGISTIC Procedure

Data Set: WORK.TEST

Response Variable: HANDICAP

Response Levels: 2

Number of Observations: 21960

Link Function: Logit

Response Profile

| Ordered | | |
|---------|----------|-------|
| Value | HANDICAP | Count |
| 1 | 1 | 1941 |
| . 2 | 0 | 20019 |

Criteria for Assessing Model Fit

| Criterion | Intercept Only | Intercept and Covariates | Chi-Square for Covariates |
|-----------|-------------------|--------------------------------|------------------------------|
| AIC | 13124.955 | 12634.936 | |
| SC | 13132.952 | 12666.924 | |
| -2 LOG L | 13122.955 | 12626.936 | 496.019 with 3 DF (p=0.0001) |
| Score | • | • | 563.804 with 3 DF (p=0.0001) |

| Variable | DE | Parameter Fstimate | | Wald Chi-Square | Pr > Chi-Square | Standardized Estimate | Odds Ratio |
|----------|-----|-----------------------|--------|--------------------|-----------------|--------------------------|---------------|
| Variable | ינכ | Doimage | 11101 | oni bquaro | J 2 q | <u></u> | |
| INTERCPT | 1 | -2.7197 | 0.0327 | 6932.3378 | 0.0001 | • | 0.066 |
| AL | 1 | 1.2479 | 0.0675 | 342.2471 | 0.0001 | 0.193007 | 3.483 |
| ANL | 1 | 1.5826 | 0.2806 | 31.8006 | 0.0001 | 0.049184 | 4.868 |
| NAL | 1 | 0.9769 | 0.0559 | 305.7362 | 0.0001 | 0.204582 | 2.656 |

Association of Predicted Probabilities and Observed Responses

| Concordant = 39.9% | Somers' D |) = | 0.250 |
|--------------------|-----------|-----|-------|
| Discordant = 14.9% | Gamma | = | 0.457 |
| Tied = 45.2% | Tau-a | = | 0.040 |
| (38856879 pairs) | С | = | 0.625 |

DIST94=34

The LOGISTIC Procedure

Data Set: WORK.TEST

Response Variable: HANDICAP

Response Levels: 2

Number of Observations: 11660

Link Function: Logit

Response Profile

| Ordered Value | HANDICAP | Count |
|------------------|----------|-------|
| 1 | 1 | 1157 |
| 2 | 0 | 10503 |

Criteria for Assessing Model Fit

| Criterion | Intercept Only | Intercept and Covariates | Chi-Square for Covariates |
|-----------|-------------------|--------------------------------|------------------------------|
| AIC | 7543.308 | 7259.418 | • |
| SC | 7550.671 | 7288.874 | • |
| -2 LOG L | 7541.308 | 7251.418 | 289.889 with 3 DF (p=0.0001) |
| Score | | • | 310.188 with 3 DF (p=0.0001) |

| Variable DF | Parameter Estimate | | Wald Chi-Square | | Standardized Estimate | Odds Ratio |
|-------------|-----------------------|--------|--------------------|--------|--------------------------|---------------|
| INTERCPT 1 | -2.6661 | 0.0460 | 3356.3324 | 0.0001 | | 0.070 |

| AL | 1 | 1.1809 | 0.0905 | 170.2977 | 0.0001 | 0.189853 | 3.257 |
|-----|---|--------|--------|----------|--------|----------|-------|
| ANL | 1 | 0.8744 | 0.5420 | 2.6023 | 0.1067 | 0.023596 | 2.397 |
| NAL | 1 | 1.0158 | 0.0692 | 215.4099 | 0.0001 | 0.238336 | 2.762 |

| Concordant = 43.0% | Somers' D | = 0.261 |
|--------------------|-----------|---------|
| Discordant = 16.8% | Gamma | = 0.437 |
| Tied = 40.2% | Tau-a | = 0.047 |
| (12151971 pairs) | С | = 0.631 |

TABLE 17. Logistic Regression in Districts, SES Only

DIST94=31

The LOGISTIC Procedure

Data Set: WORK.TEST

Response Variable: HANDICAP

Response Levels: 2

Number of Observations: 13089

Link Function: Logit

Response Profile

| Ordered Value | HANDICAP | Count |
|------------------|----------|-------|
| 1 | 1 | 1258 |
| 2 | 0 | 11831 |

Criteria for Assessing Model Fit

| Criterion | Intercept Only | Intercept and Covariates | Chi-Square for Covariates |
|-----------|-------------------|--------------------------------|------------------------------|
| AIC | 8286.119 | 7519.472 | |
| SC | 8293.599 | 7564.349 | • |
| -2 LOG L | 8284.119 | 7507.472 | 776.647 with 5 DF (p=0.0001) |
| Score | • | • | 923.064 with 5 DF (p=0.0001) |

Analysis of Maximum Likelihood Estimates

| Variable | DF | Parameter Estimate | Standard Error | Wald Chi-Square | Pr > Chi-Square | Standardized Estimate | Odds Ratio |
|----------|----|-----------------------|-------------------|--------------------|--------------------|--------------------------|---------------|
| INTERCPT | 1 | -2.9411 | 0.0489 | 3616.2632 | 0.0001 | • | 0.053 |
| AL | 1 | 1.5806 | 0.0955 | 273.9082 | 0.0001 | 0.220175 | 4.858 |
| ANL | 1 | 2.5842 | 0.5398 | 22.9193 | 0.0001 | 0.046573 | 13.253 |
| NAL | 1 | 1.3455 | 0.0756 | 317.1220 | 0.0001 | 0.275875 | 3.840 |
| BLACK | 1 | 0.4533 | 0.0714 | 40.3203 | 0.0001 | 0.116399 | 1.573 |
| OTHER | 1 | -0.4799 | 0.1999 | 5.7614 | 0.0164 | -0.052720 | 0.619 |

| Concordant = 59.5% | Somers' | D = 0.423 |
|--------------------|---------|-----------|
| Discordant = 17.2% | Gamma | = 0.551 |
| Tied = 23.3% | Tau-a | = 0.073 |
| (14883398 pairs) | С | = 0.711 |

DIST94=32

The LOGISTIC Procedure

Data Set: WORK.TEST

Response Variable: HANDICAP

Response Levels: 2

Number of Observations: 16771

Link Function: Logit

Response Profile

| Ordered Value | HANDICAP | Count |
|------------------|----------|-------|
| 1 | 1 | 1602 |
| 2 | 0 | 15169 |

Criteria for Assessing Model Fit

| Criterion | Intercept Only | Intercept and Covariates | Chi-Square for Covariates |
|-----------|-------------------|--------------------------------|------------------------------|
| AIC | 10572.123 | 9922.012 | • |
| SC | 10579.850 | 9968.377 | • |
| -2 LOG L | 10570.123 | 9910.012 | 660.110 with 5 DF (p=0.0001) |
| Score | • | • | 726.032 with 5 DF (p=0.0001) |

| Odds Ratio | Standardized Estimate | Pr > Chi-Square | Wald Chi-Square | Standard Error | Parameter Estimate | iable DF | Var |
|------------------------------|----------------------------------|--------------------------------------|--|--------------------------------------|---------------------------------------|-----------------|-------------------------|
| 0.056 | • | 0.0001 | 4219.3701 | 0.0443 | -2.8752 | ERCPT 1 | INT |
| 3.647 | 0.210086 | 0.0001 | 235.7715 | 0.0843 | 1.2938 | 1 | AL |
| 4.675 | 0.045427 | 0.0001 | 20.6361 | 0.3395 | 1.5423 | 1 | ANI |
| 3.102 | 0.259312 | 0.0001 | 272.2480 | 0.0686 | 1.1322 | 1 | NAI |
| 1.414 | 0.086400 | 0.0001 | 26.0883 | 0.0678 | 0.3464 | CK 1 | BL |
| 0.05 3.64 4.67 3.10 | 0.210086 0.045427 0.259312 | 0.0001 0.0001 0.0001 0.0001 | 4219.3701 235.7715 20.6361 272.2480 | 0.0443 0.0843 0.3395 0.0686 | -2.8752 1.2938 1.5423 1.1322 | ERCPT 1 1 1 1 1 | INT AL ANI NAI |

OTHER 1 -0.2009 0.0934 4.6245 0.0315 -0.036289 0.818

Association of Predicted Probabilities and Observed Responses

| Concordant = 58.1% | Somers' I |) = | 0.360 |
|--------------------|-----------|-----|-------|
| Discordant = 22.0% | Gamma | = | 0.450 |
| Tied = 19.9% | Tau-a | = | 0.062 |
| (24300738 pairs) | С | = | 0.680 |

DIST94=33

The LOGISTIC Procedure

Data Set: WORK.TEST

Response Variable: HANDICAP

Response Levels: 2

Number of Observations: 21960

Link Function: Logit

Response Profile

| Ordered Value | HANDICAP | Count |
|------------------|----------|-------|
| 1 | 1 | 1941 |
| 2 | 0 | 20019 |

Criteria for Assessing Model Fit

| Criterion | Intercept Only | Intercept and Covariates | Chi-Square for Covariates |
|-----------|-------------------|--------------------------------|------------------------------|
| AIC | 13124.955 | 12606.856 | • |
| SC | 13132.952 | 12654.837 | • |
| -2 LOG L | 13122.955 | 12594.856 | 528.100 with 5 DF (p=0.0001) |
| Score | • | • | 596.731 with 5 DF (p=0.0001) |

| | Parameter | Standard | Wald | Pr > | Standardized | Odds |
|-------------|-----------|----------|------------|------------|--------------|-------|
| Variable DF | Estimate | Error | Chi-Square | Chi-Square | Estimate | Ratio |

| INTERCP | Т 1 | -2.7257 | 0.0351 | 6028.9481 | 0.0001 | • | 0.066 |
|---------|-----|---------|--------|-----------|--------|-----------|-------|
| AL | 1 | 1.1769 | 0.0751 | 245.7202 | 0.0001 | 0.182028 | 3.244 |
| ANL | 1 | 1.5043 | 0.2826 | 28.3300 | 0.0001 | 0.046751 | 4.501 |
| NAL | 1 | 0.9410 | 0.0608 | 239.7692 | 0.0001 | 0.197074 | 2.563 |
| BLACK | 1 | 0.1433 | 0.0575 | 6.2136 | 0.0127 | 0.035786 | 1.154 |
| OTHER | 1 | -0.4820 | 0.1192 | 16.3614 | 0.0001 | -0.064204 | 0.618 |

Association of Predicted Probabilities and Observed Responses

| Concordant = 50.7% | Somers' | D = | 0.283 |
|--------------------|---------|-----|-------|
| Discordant = 22.3% | Gamma | = | 0.388 |
| Tied = 27.0% | Tau-a | = | 0.046 |
| (38856879 pairs) | С | = | 0.642 |

DIST94=34

The LOGISTIC Procedure

Data Set: WORK.TEST

Response Variable: HANDICAP

Response Levels: 2

Number of Observations: 11660

Link Function: Logit

Response Profile

| Ordered Value | HANDICAP | Count |
|------------------|----------|-------|
| 1 | . 1 | 1157 |
| 2 | 0 | 10503 |

Criteria for Assessing Model Fit

| Criterion | Intercept Only | Intercept and Covariates | Chi-Square for Covariates |
|-----------|-------------------|--------------------------------|------------------------------|
| AIC | 7543.308 | 7255.186 | • |
| SC | 7550.671 | 7299.370 | • |
| -2 LOG L | 7541.308 | 7243.186 | 298.121 with 5 DF (p=0.0001) |
| Score | • | | 318.605 with 5 DF (p=0.0001) |

Analysis of Maximum Likelihood Estimates

| Variable | DF | Parameter Estimate | Standard Error | Wald Chi-Square | Pr > Chi-Square | Standardized Estimate | Odds Ratio |
|----------|----|-----------------------|-------------------|--------------------|--------------------|--------------------------|---------------|
| INTERCPT | 1 | -2.6696 | 0.0492 | 2947.0397 | 0.0001 | • | 0.069 |
| AL | 1 | 1.1529 | 0.0965 | 142.6925 | 0.0001 | 0.185354 | 3.168 |
| ANL | 1 | 0.8493 | 0.5429 | 2.4471 | 0.1177 | 0.022920 | 2.338 |
| NAL | 1 | 1.0074 | 0.0736 | 187.1972 | 0.0001 | 0.236368 | 2.739 |
| BLACK | 1 | 0.0665 | 0.0704 | 0.8921 | 0.3449 | 0.017333 | 1.069 |
| OTHER | 1 | -0.4078 | 0.1753 | 5.4120 | 0.0200 | -0.045465 | 0.665 |

Association of Predicted Probabilities and Observed Responses

| Concordant = 52.5% | Somers' D |) = | 0.277 |
|--------------------|-----------|-----|-------|
| Discordant = 24.7% | Gamma | = | 0.359 |
| Tied = 22.8% | Tau-a | = | 0.050 |
| (12151971 pairs) | С | = | 0.639 |

Table 18. Logistic Regression in Districts, Race and SES

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