Interviewer Variance in the 1993 National Survey of College Graduates



Prepared by:

Danielle Ringstrom, Dedrick Owens, and Richard McGuinness Quality Assurance and Evaluation Branch Demographic Statistical Methods Division November 29, 1994

I. Summary

A. <u>Purpose</u>

This paper reports results of a study designed to measure levels of betweeninterviewer variance in CATI data collected for the National Survey of College Graduates (NSCG). We analyzed between-interview variance for those questions NSF considered important. We did not measure interviewer variance in field cases, and cases completed by mail are not affected by interviewer variance.

A measure of the impact of between-interviewer variance is an important component of an assessment of overall data quality. As a result of this study, we hope to:

- help improve the 1995 NSCG questionnaire.
- improve interviewer training and procedures for the 1995 NSCG.

B. <u>Major Findings</u>

- Although we didn't measure interviewer effects among field cases, we believe the effects in CATI represent lower bounds on the effects in the field. The CATI interviewers were more closely monitored and supervised than field representatives, and the CATI instrument promoted more uniformity.
- Interviewer effects occurred in 86 of the 180 response categories analyzed, but only 15 of these 86 response categories had substantial interviewer effects. We consider an interviewer effect to be substantial if it inflates the standard errors of data collected by CATI by 20% or more.
- The following five questions evaluated both in this survey and the National Survey of Recent College Graduates (NSRCG), conducted by Westat, had categories that showed relatively high interviewer effects in both surveys. The "Detailed Results" (III) section describes the criteria we used to compare our results with Westat's.
 - A3 Reasons for not working.
 - A8 Reasons for working part-time.
 - A12 Type of educational institution.
 - A22 Activities occupying 10% or more of time on the job.
 - C1 Years of full- or part-time professional work experience.

- An additional six questions showed relatively high interviewer effects only in NSCG. These were:
 - A2 If not employed, did respondent look for work?
 - A7 If working, was work full- or part-time?
 - A13 What was type of employer (if not educational inst.)?
 - A23 On which activities did respondent work most hours?
 - D23 Highest level of education for parents.
 - D24 Degree of difficulty doing certain activities.

The "Detailed Results" (III) section describes the criteria we used to define large interviewer effects as well as the criteria we used to compare our results with Westat's analysis of interviewer effects for the National Survey of Recent College Graduates (NSRCG). We analyzed ρ for a list of questions NSF considered important for interviewer effects. These questions were <u>not</u> necessarily common to NSCG and NSRCG.

Attachment A gives a complete listing of the results of the Census-DSMD analysis of the NSCG questions, and Attachment B contains a comparison of Westat's and Census's results.

C. <u>Recommendations</u>

We suggest using cognitive techniques — for example, tape recorded interviews and focus groups — to assess why certain questions exhibit high interviewer effects.

We will discuss our results with the Field Division so they can emphasize these questions in the training for the 1995 NSCG.

II. Methodology

A. <u>Background</u>

Interviewer effects, between-interviewer variance, intra-interviewer correlation and correlated response variance are all aspects of the same problem — the tendencies of different interviewers to administer interviews differently. Consistent with these concepts, interviewer effects are random — that is, we consider the interviewers to be a random sample from an infinite pool of possible interviewers.

When response errors in data collected by an interviewer tend to be in the same direction, the responses are correlated. We measure the impact of interviewer variance with the intra-interviewer correlation coefficient, ρ (rho). This coefficient represents the ratio of between-interviewer variance to total variance.

The intra-interviewer correlation increases total variance of survey estimates.

B. <u>Effect of ρ on Variances and Standard Errors of Estimate</u>

The presence of interviewer effects increases the estimated variance of the statistic of interest. This increase is based on ρ and the interviewer workload. If the size of the interviewer workload increases, the increase in the variance becomes greater. This increase, $(m - 1)\rho$, is called the variance inflation factor. The variance of the estimate (number of responses to a given category) is given by:

$$V(\overline{y}) = \frac{V(d_{ij})}{km} [1 + (m-1)\rho]$$

where

V(y)	is the "true" variance of the estimate of the mean;
d_{ij}	is the indicator denoting the j^{th} response to a given
·	category in interviewer <i>i</i> 's assignment (with a value
	of 0 if not in category, 1 if in category);
$V(d_{ij})/km$	is the usual form of the variance of the estimate of
	the mean (sampling variance plus simple response
	variance); this is equivalent to pq/n for categorical
	data;
ρ	is the intra-interviewer correlation coefficient for
	the category;
k	is the number of interviewers; and
т	is the average workload per interviewer.

In this analysis we assess the interviewer influence on the standard error (s.e.) of the estimate since the s.e.'s are published (vs. variances) with statistics for selected characteristics. The percent increase in s.e. caused by the interviewer is given by:

% increase = $100\sqrt{1 + (m-1)\rho}$ - 100

where	ρ	is the intra-interviewer correlation coefficient for the
		category and
	m	is the average workload per interviewer.

C. <u>Model Assumptions</u>

Modeling categorical survey data in an interviewer variance study prompts careful consideration of model assumptions. We defined the categorical response variable:

 $d_{ij} = 1$ if response j from interviewer i is in the category of interest

 $d_{ij} = 0$ if response j from interviewer i is not in the category of interest

The common interviewer effects model assumes that

• $\operatorname{Cov}(d_{ij}, d_{i'j'}) = 0$ for $i \neq i'$ for all j

i.e., responses taken by different interviewers are independent.

• $\operatorname{Cov}(d_{ij}, d_{i'j'}) = \rho^* \sigma^2$ for i = i' and $j \neq j'$

i.e., the covariance of responses taken by different interviewer may be different (ρ^* is the intra-interviewer correlation for a particular interviewer.

• $\operatorname{Cov}(d_{ij}, d_{i'j'}) = \sigma^2$ for i = i' and j = j'

i.e., the variance of responses across all subgroups, including interviewers, is constant.

When interviewer effects exist, the probability of obtaining a response in a given category varies across different interviewers. Since the mean and variance of the proportion in a category are a function of this probability, they too vary by interviewer. However, nonconstant variance violates an important model assumption of the usual ANOVA method of variance estimation. Therefore, we use Pannekoek's method based on the beta-binomial distribution, which allows for nonconstant variance across interviewers, to model the interviewer effect [1].

D. Limitations

Despite the limitations of the Westat and Census methods, the two analyses tended to agree on which questions had the greatest interviewer effects. (See IIIB,"Comparison of Census-DSMD and Westat Results," for details and [2] for a report on Westat's analysis.)

Regarding the Census analysis, the ρ 's that we estimated reflect only the CATI portion of the NSCG. We were unable to measure ρ in field assignments because the assignments are based on geography and are not random. Differences in data collected by field interviewers would be caused mainly by differences in the respondents they interviewed, not differences in how they carried out the interviews.

The CATI cases were not assigned perfectly randomly to the CATI interviewers. They were assigned to the site based on time zones, and to the interviewers based on shifts. Therefore, interviewers did not have equal probabilities of contacting specific respondents. The ρ 's that we calculated may have been inflated by these effects, which we are unable to effectively isolate. For example, there may be some variance due to differences in the site (Hagerstown or Tucson) where the

interview was conducted. This variance, as well as differences due to interviewers, may have contributed to ρ . We believe that the ρ 's Census produced tended to be higher than Westat's because Westat tried to account for and exclude fixed effects in their ANOVA analysis and the Census beta-binomial method did not.

Our analysis used unweighted data. This could confound our estimate of the impact of ρ on the standard error of NSCG estimates, which are weighted. However, this does not affect our determination of which questions have high between-interviewer variance.

Westat's ANOVA analysis of interviewer variance violates the homoscedasticity assumption slightly when used for categorical data.

E. <u>Estimation</u>

We used the beta-binomial distribution to model the correlated response caused by interviewers. The model assumes that F_i , the number of responses that interviewer *i* receives in a specific category, has a beta-binomial distribution.

We used the iterative method described by Stokes (1985) to compute the maximum quasi-likelihood estimate of ρ for each question category [3].

F. Model Fit

It is important to test the appropriateness of the beta-binomial model before making inferences about the presence of interviewer effects in the data.

We used the Wald-statistic to test the hypothesis that the beta-binomial model fits the NSCG data for a given response category. The statistic is given by:

$$W^{2} = (F - \hat{F})^{t} \hat{V}^{-1} (F - \hat{F})$$

where

F is the vector of observed frequencies,F is the vector of estimated frequencies using the betabinomial distribution, and

 \mathbf{V} is the estimated covariance matrix of \mathbf{F} .

 W^2 is checked against the chi-square (X²) critical value, with degrees of freedom equal to the total number of interviewers. If W^2 is greater than X², then we reject the null hypothesis and conclude that the beta-binomial model failed to fit the data in this particular question/category. If our analysis indicated a model failure, we denoted this with the uppercase letters "MF" (see Attachment A).

See Pannekoek [1] for a similar use of the Wald-statistic and the test of significance that follows.

G. <u>Statistical Significance of p</u>

In this section we introduce a test to determine if interviewer effects exist. This is merely testing the null hypothesis that ρ is not significantly different from zero.

We used a standard Z test to test for the presence of interviewer effects. The Z statistic is given by:

$$Z = \frac{(pq)^{-1} \sum_{i=1}^{I} (f_i - n_i p)^2 - \Sigma_{n_i}}{\sqrt{(2 \sum_{i=1}^{I} n_i (n_i - 1))}}$$

where

is the expected response category proportion,

q is 1-p,

p

- f_i is the number of interviewer *i* respondents in the category, and
- n_i is the number of respondents for interviewer *i*.

Z is then checked against the standard normal critical value at the $\alpha = 0.10$ significance level. If Z is greater than the critical value, we reject the null hypothesis and conclude that the interviewer effect is significant (nonzero). If our analysis indicated a ρ that was **not** significant, we denoted this with the lowercase letters "ns."

III. Detailed Results

A. <u>Census-DSMD Results</u>

We analyzed 21 questions with 203 separate response categories. Some response categories displayed large values of ρ (at least 0.015). Fortunately, due to skip patterns, few respondents were asked these questions, so the inflation factors were not unreasonably large.

- Twenty-three of the 203 response categories analyzed did not fit the model.
- Ninety-four of the 180 categories fitting the beta-binomial model showed no statistically significant interviewer effects.
- The 86 remaining categories exhibited statistically significant interviewer effects.
- Fourteen categories had large values of ρ (at least 0.015).
- Fifteen categories had substantial inflation factors (at least 20%).

• Twenty-six categories had a high value of ρ (11 categories), a substantial inflation factor (12 categories), or both (3 categories).

As described in "Methodology" above, ρ is a measure of the magnitude of between-interviewer variance for a particular response category. A high ρ indicates the question/response category has a large between-interviewer variance.

The standard error inflation factor that we calculated is based on ρ and on *m*, the average workload per interviewer. The inflation factor increases as *m* gets larger. The inflation factor can be used to isolate questions/response categories with interviewer effects likely to inflate the variance substantially.

The following table lists the question/response categories with large interviewer effects. The criteria for large effects were

- $\rho >= 0.015$ and/or
- inflation factor $\geq 20\%$

	NSCG Categories with High Interviewer	Effects	
	Question/Response	Rho	S.E. Inflation Factor
A2	Did you look for work during the preceding four weeks?		
	Yes	0.019	10%
	No	0.019	10%
A3	Reasons for not working		
	Retired	0.017	9%
	Student	0.018	10%
	Suitable job not available	0.023	12%
	Did not need/want to work	0.081	38%
	Other	0.033	17%
A7	Employed full- or part-time week of April 15		
	Full-time	0.008	21%
	Part-time	0.007	20%
A8	Reasons for working part-time		
	Retired	0.032	9%
	Student	0.065	18%
	Did not need/want to work full-time	0.108	28%
	Other	0.061	17%
A12	Was the educational institution -		
	4-vear college	0.020	13%
	Other	0.015	10%
A13	(If not educational institution) Was your employer -		
	Self-employed/not incorporated	0.010	21%
A22	Did these work activities occupy 10% or more of your time		
-	during a typical work week on this job?		
	Production, op's - yes	0.011	29%
	Production, op's - no	0.011	29%
	Professional services - yes	0.008	20%
	Professional services - no	0.008	20%
A23b	On which activity did you work the second most hours during		
-	a typical week on this job?		
	No activity with second most hours	0.016	43%
C1b	How many years of professional part-time work experience		
C = 0	have vou had?	0.008	23%
	0 (to one-half year)	- · -	-
D23	What is the highest level of education completed by your		
	parents?		
	At least some grad school - Father	0.010	29%
	At least some grad school - Mother	0.006	20%
D24a	What is usual degree of difficulty you have seeing newsprint?		-
	Slight	0.010	30%
D24b	What is usual degree of difficulty you have hearing		
22.0	conversation?	0.009	26%
	Slight	0.009	2070

Distribution of NS	SCG Inflation Factors
Range of Inflation Factors	Number Falling in Range
00/ 40/	1
0% - 4%	1
5% - 9%	31
10% - 14%	30
15% - 19%	9
20% - 29%	12
30% and over	3

The table below shows the distribution of the inflation factors for the 86 response categories that demonstrated significant interviewer effects.

Attachment A provides tables showing ρ , the standard error of ρ , the proportion of responses falling within each category (sample mean), the mean number of interviews per interviewer for each question, the total number of interviews for each question, and the inflation factor on the standard error for each category of the questions chosen for analysis.

B. Comparison of Census-DSMD and Westat Results

Census-DSMD and Westat had important interviewer effects for the same 10 categories involving 5 questions, as shown in the following table. Census considers a category to have an important interviewer effect if ρ is at least 0.015 and/or the s.e. inflation factor is at least 20%. Westat considers any significant interviewer effect (ρ at least 0.0027) to be important.

Westat's interviewer variance study of the NSRCG analyzed most of the same questions Census did for the NSCG. Westat used an ANOVA model that explicitly takes into account fixed (nonrandom) effects. As a result, their estimates of interviewer variance are generally lower than those produced by the Census study.

As stated in IIC, "Methodology," Census's beta-binomial method is more appropriate for these data, as it takes into account the differences in variances by interviewer that occur in categorical data, whereas the ANOVA method assumes constant variance. Unfortunately, we could not account for fixed effects using the beta-binomial approach.

Categories with High Interviewer Effects Found by Both Census and Westat							
Question/Response	Westat	Census					
Question/Response	Rho	Rho	S.E. Inflation Factor				
A3 Reason for not working	0.017	0.022	1001				
Suitable job not available	0.016	0.023	12%				
Other	0.010	0.081	30% 17%				
A8 Reasons for working part-time Student Did not need/want to work full-time Other	0.010 0.016 0.024	0.065 0.108 0.061	18% 28% 17%				
A12 Was the educational institution - 4-year college	0.052	0.020	13%				
A22 Did these work activities occupy 10% or more of your time during a typical work week on this job? Production, ops - yes Production, ops - no	0.017 0.017	0.011 0.011	29% 29%				
C1b ¹ How many years of part-time work experience have you had? 0 (to one-half year)	0.012	0.008	23%				

F

See Attachment B for a comparison of ρ 's for all matching categories from Westat's analysis of NSRCG and Census's analysis of NSCG.

 $^{^{1}}$ Westat and we used different methods to evaluate this question — we evaluated categories and Westat evaluated quantitative data. However, both analyses show evidence of high interviewer effects in question C1b.

References:

- [1] Pannekoek, Jeroen, "Interviewer Variance in a Telephone Survey, (1988) " Journal of Official Statistics, Vol 4. No. 4, pp. 375-384.
- [2] Westat, Inc., "1993 NSRCG Interviewer Variance Study," May 1994.
- [3] Stokes, S. Lynne and Hill, Joe R., (1985) "Modeling Interviewer Variability for Dichotomous Variables," <u>American Statistical Association, Proceedings of the Section on</u> <u>Survey Research Methods</u>, pp.344-348.

Measures of Correlated Response Variance for NSCG

+		+	+	+	+	+	++
	Question		SE	Sample	Mean # of	Total # of	SE inflation
i	number	Rho	of rho	mean	Interviews	Interviews	factor
+		, +	+	+	+	+	+
A1	Working for pay (or profit) April 15, 19	993?					
	Yes	1 MF		0 841	69	22690	
	No	NE	 	0.011	69	22690	
+	NO		 +			22090	
Ι <u></u> λ2	Did you look for work during preceding :	four weeks?	•	•	I		
1 72	Vog			0 100	10	2126	1 10%
	IES No.				1 12	2426	10%
	NO	0.019	0.000	0.798	1 12	3420	10.2
+	Descena for not working						
AS	Reasons for not working	0.017		0 201	1 10	2240	0.
	Recifed				1 12	3340	96
	LayoII	0.013	0.008	0.082	12	3340	/*
	Student	0.018	0.008	0.094	12	3340	10%
	Family Responsibilities	ns ns		0.204	12	3340	
	Illness/disability	ns		0.105	12	3340	
	Suitable job not available	0.023	0.009	0.110	12	3340	12%
	Did not need/want to work	0.081	0.015	0.126	12	3340	38%
	Other (specify)	0.033	0.010	0.151	12	3340	17%
+		+	+	+	+	+	+
A7	Employed full-time or part-time?						
	Full-time	0.008	0.002	0.895	60	19393	21%
	Part-time	0.007	0.002	0.104	60	19393	20%
+		+	+	+	+	+	+
A8	Reasons for working part-time						
	Retired	0.032	0.015	0.122	7	1882	98
	Student	0.065	0.020	0.181	7	1882	18%
	Family responsibilities	ns		0.307	7	1882	
1	Illness/disability	ns		0.026	7	1882	
i	Suitable f/t job not available	ns	i	0.186	7	1882	
i	Did not need/want to work f/t	0.108	0.024	0.235	7	1882	28%
i	Other (specify)	0.061	0.019	0.214	7	1882	17%
+		, +	, +	+	, +	, +	, +
A9	Previously retired?						
	Yes	0.003	0.001	0.032	54	17519	78
i	No	0.003	0.001	0.967	54	17519	78
+	·	+	+	+	+	+	, +,
A11	Was your employer an educational institu	ution?					
i	Yes	0.004	0.001	0.216	60	19370	11%
	No	0.004	0.001	0.784	60	19370	11%
1						1 22070	

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Measures of Correlated Response Variance for NSCG

	Question	+	+ 	+ Sample	Mean # of	+ Total # of	SE inflation
	number	Rho	of rho	mean	Interviews	Interviews	factor
A12	Was the educational institution -						
i	Elementary/middle/secondary school	0.011	0.006	0.489	15	4221	78
i	2-year college	ns	i	0.047	15	4221	
Í	4-year college	0.020	0.007	0.228	15	4221	13%
	Medical school	0.014	0.007	0.118	15	4221	98
	Univ. affiliated research institute	ns		0.038	15	4221	
	Other (specify)	0.015	0.007	0.080	15	4221	10%
+	(IF NOT EDUCATIONAL INSTITUTION) Was yo	our employer	+	+	+	+	+
i	Private for-profit	0.007	0.002	0.616	48	15171	16%
i	Private not-for-profit	ns	i	0.069	48	15171	
i	Self-employed/not incorporated	0.010	0.002	0.103	48	15171	21%
1	Self-employed/incorporated	0.004	0.002	0.043	48	15171	98
	Local government	0.004	0.002	0.040	48	15171	98
	State government	0.003	0.002	0.044	48	15171	78
	U.S. military	0.002	0.002	0.009	48	15171	58
	U.S. government (civilian)	ns		0.058	48	15171	
	Other (specify)	0.006	0.002	0.017	48	15171	14%
+	How closely related was your work on you	ur principal	job to you	ur highest	degree field	+ 1?	+
i	Closely related	ns		0.570	60	19363	
1	Somewhat related	ns		0.261	60	19363	
	Not related	ns		0.169	60	19363	
+	What is your most important reason for v	+ working in a	+ 1 area out:	+ side vour	+ highest degre	+ ee field?	+
i	Pay, promotion opportunities	ns ns		0.263	11	3207	
i	Working conditions	ns		0.065	11	3207	
i	Job location	ns	i	0.051	11	3207	
İ	Change in career/prof. interests	ns		0.202	11	3207	
i	Family-related reasons	ns		0.095	11	3207	
İ	Job in highest degree field not avail.	ns	i	0.199	11	3207	
1	Other reason (specify)	ns		0.121	11	3207	

Measures of Correlated Response Variance for NSCG

Question number		Rho	SE of rho	Sample mean	Mean # of Interviews	Total # of Interviews	SE inflation factor
A22 Did these work activities occu		e of your	time dur:	+ ing a typ:	+ ical work wee	on this job	+
Accounting, finance, contracts	- yes	MF		0.311	60	19361	
Accounting, finance, contracts	- no	MF		0.689	60	19361	
Applied research - yes	ĺ	0.002	0.001	0.274	60	19361	6%
Applied research - no		0.002	0.001	0.725	60	19361	6%
Basic research - yes		ns		0.169	60	19361	
Basic research - no		ns		0.831	60	19361	
Computer applications - yes		0.005	0.002	0.394	60	19361	14%
Computer applications - no		0.005	0.002	0.605	60	19361	14%
Development - yes		0.005	0.002	0.298	60	19361	13%
Development - no	l l	0.005	0.002	0.701	60	19361	13%
Design of equipment yes		0.003	0.001	0.266	60	19361	98
Design of equipment no		0.003	0.001	0.734	60	19361	98
Employee relations - yes		ns		0.365	60	19361	
Employee relations - no		ns		0.634	60	19361	
Management and administration	yes	ns		0.538	60	19361	
Management and administration	no	ns		0.462	60	19361	
Production, operations ye	s	0.011	0.002	0.102	60	19361	29%
Production, operations no		0.011	0.002	0.897	60	19361	29%
Professional services - yes		0.008	0.002	0.287	60	19361	20%
Professional services - no		0.008	0.002	0.712	60	19361	20%
Sales, purchasing, marketing	yes	ns		0.248	60	19361	
Sales, purchasing, marketing	no	ns		0.752	60	19361	
Quality/productivity management	t-yes	ns		0.305	60	19361	
Quality/productivity management	t-no	ns		0.694	60	19361	
Teaching - yes		0.004	0.002	0.292	60	19361	11%
Teaching - no		0.004	0.001	0.708	60	19361	11%
Other (specify) - yes		MF		0.103	60	19361	
Other (specify) - no		MF		0.896	60	19361	
A23a On which activity did you work	the most hour	rs during	, g a typica:	' l week on	this job?		
Accounting, finance, contract:		0.002	0.001	0.047	69	22690	7%
Applied research		ns		0.046	69	22690	
Basic research		ns		0.016	69	22690	
Computer applications		ns		0.088	69	22690	
Development		ns		0.028	69	22690	
Design of equipment		ns		0.037	69	22690	
Employee relations		ns		0.024	69	22690	
Management and administration		0.003	0.001	0.119	69	22690	10%
Production, operations		0.005	0.001	0.032	69	22690	15%
Professional services	ļ	0.002	0.001	0.122	69	22690	7%
Sales, purchasing, marketing	ļ	ns		0.077	69	22690	
Quality/productivity management	t	MF		0.029	69	22690	
Teaching		0.004	0.001	0.117	69	22690	13%
Other (specify)		0.005	0.001	0.045	69	22690	16%

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Measures of Correlated Response Variance for NSCG

+	++	+	+	+	+	++
Question		SE	Sample	Mean # of	Total # of	SE inflation
number	Rho	of rho	mean	Interviews	Interviews	factor
+	++		+	+	, +	, ++
A23b On which activity did you work the second	nd most hours	s during a	typical	week on this ;	job?	
Accounting, finance, contracts	ns		0.051	69	22690	
Applied research	0.002	0.001	0.052	69	22690	5%
Basic research	ns		0.030	69	22690	
Computer applications	0.004	0.001	0.079	69	22690	12%
Development	0.002	0.001	0.046	69	22690	78
Design of equipment	ns		0.031	69	22690	
Employee relations	ns		0.057	69	22690	
Management and administration	ns		0.151	69	22690	
Production, operations	0.002	0.001	0.018	69	22690	88
Professional services	ns		0.034	69	22690	
Sales, purchasing, marketing	ns		0.040	69	22690	
Quality/productivity management	ns		0.048	69	22690	
Teaching	ns		0.050	69	22690	
Other (specify)	0.006	0.002	0.017	69	22690	19%
No second most	0.016	0.003	0.292	69	22690	43%
+	++	+	+	+	+	++
A26 What was your hourly salary on this job	?					
\$0 - \$5	0.006	0.002	0.050	47	15113	12%
\$6 - \$10	0.005	0.002	0.114	47	15113	10%
\$11 - \$15	ns		0.185	47	15113	i
\$16 - \$20	ns		0.211	47	15113	
\$21 - \$25	ns		0.169	47	15113	
\$26 - \$30	ns		0.091	47	15113	
\$31 - \$35	0.003	0.002	0.061	47	15113	6%
\$36 - \$40	ns		0.033	47	15113	
\$41 - \$45	ns		0.015	47	15113	
\$46 - \$50	ns		0.021	47	15113	
\$51 and up	ns		0.051	47	15113	
+	++		+	, +	+	, ++

Measures of Correlated Response Variance for NSCG

+		+	+	+	+	+	+
	Question		SE	Sample	Mean # of	Total # of	SE inflation
	number	Rho	of rho	mean	Interviews	Interviews	factor
+		+	+	+	+	+	+
I BI	were you working for pay (or profit) any	y part of Ap:	rii 1988?	0.040		1 22624	
	ies			0.842	69	22034	
	NO	MP		0.154	09	22034	
+	Did these factors influence your decision	on to change	employer/	occupation	n in last 5 v	parg?	,
Dit	Pay, promotion opportunities - yes	l ns		0 592		8444	
	Pay, promotion opportunities - no	ns		0.407	27	8444	
ĺ	Working conditions - yes	ns		0.417	27	8444	
ĺ	Working conditions - no	ns		0.582	27	8444	
ĺ	Job location - yes	ns		0.279	27	8444	
Í	Job location - no	ns	j	0.720	27	8444	
İ	Change in career/prof. interests - yes	ns	j	0.402	27	8444	
İ	Change in career/prof. interests - no	ns	j	0.597	27	8444	
ĺ	Family-related reasons - yes	ns		0.197	27	8444	
	Family-related reasons - no	ns		0.803	27	8444	
	School-related reasons - yes	ns		0.193	27	8444	
	School-related reasons - no	ns		0.806	27	8444	
	Laid off/Terminated - yes	0.006	0.003	0.153	27	8444	88
	Laid off/Terminated - no	0.006	0.003	0.846	27	8444	88
	Retired - yes	ns		0.035	27	8444	
	Retired - no	ns		0.964	27	8444	
	Other reason (specify) - yes	0.010	0.004	0.154	27	8444	12%
	Other reason (specify) - no	0.010	0.004	0.845	27	8444	12%
+		+	+	+	+	+	+
Cia	How many years of professional full-time	e work exper	lence nave	you nad?	60	1 22622	
	0 - 5 6 10				69	22033	
	8 - IU 11 15		0 001		09	22033	
	11 - 15	0.002	0.001		69	22033	06
	10 - 20 21 - 25	115 ne		0.140	69	22033	
	26 - 30	113 ne			69	22033	
	31 - 35	115 ng			69	22633	
	36 or more	0.003	0.001	0.048	69	22633	88
+		+	+	+	+	+	+
C1b	How many years of professional part-time	e work exper	ience have	vou had?			
	0	0.008	0.002	0.468	69	22633	23%
i	1	0.003	0.001	0.060	69	22633	11%
İ	2	ns		0.085	69	22633	
	3	ns		0.067	69	22633	
Ì	4	ns		0.051	69	22633	
	5	ns		0.071	69	22633	
	6 - 10	0.004	0.001	0.123	69	22633	13%
	11 or more	ns		0.068	69	22633	
+		+	+	+	+	+	+

Measures of Correlated Response Variance for NSCG

	+	+	+	+	+	+
Question		SE	Sample	Mean # of	Total # of	SE inflation
number	Rho	of rho	mean	Interviews	Interviews	factor
	+	+	+	+	+	+
D13 During the week of April 1 were you -						
Married	0.002	0.001	0.686	69	22684	68
Widowed	0.003	0.001	0.020	69	22684	98
Separated	ns		0.014	69	22684	
Divorced	ns		0.081	69	22684	
Never married	ns		0.193	69	22684	
D17a How many children living with you as pa	rt of your fa	amily were	under the	+ e age of 6?	+	+
0	ns		0.548	37	11790	
1	ns	j	0.278	37	11790	
2 or more	ns		0.173	37	11790	
D17b How many ghildren living with you as no	+	+	+	+	+	+ I
now many children riving with you as pa	l your re	amily were		37	11790	
1	113 ne		0.000	37	11790	
2 or more	113 ng		0.271	37	11790	
2 01 more	+	 +	+	+	+	 +
D17c How many children living with you as part	rt of your fa	amily were	aged 12	to 17?		1
0	ns		0.662	37	11790	
1	ns	j	0.229	37	11790	i
2 or more	ns	j	0.108	37	11790	
D17d Hay many shildwan living with you as no	+	+	+	+	+	+ I
o o			ageu 16 1	01 010er?	11700	7%
1	0.004		0.752	37	11790	/°
2 or more	0.005	0.002	0.100	37	11790	
2 01 11010	+	 +	+	+	+	 +
D23 What is the highest level of education	completed by	your pare	nts?			
< High school diploma - Father	0.001	0.001	0.212	69	22677	48
< High school diploma - Mother	ns		0.177	69	22677	
High school diploma - Father	0.001	0.001	0.262	69	22677	5%
High school diploma - Mother	0.004	0.001	0.390	69	22677	13%
Some college - Father	0.003	0.001	0.157	69	22677	10%
Some college - Mother	0.003	0.001	0.180	69	22677	10%
Graduated from 4 yr college - Father	0.006	0.002	0.188	69	22677	18%
Graduated from 4 yr college - Mother	0.005	0.001	0.155	69	22677	15%
At least some grad school - Father	0.010	0.002	0.156	69	22677	29%
At least some grad school - Mother	0.006	0.002	0.076	69	22677	20%
Don't know - Father	0.003	0.001	0.022	69	22677	11%
Don't know - Mother	0.004	0.001	0.017	69	22677	12%
	+	+	+	+	+	+

Attachment A-7 October 31, 1994

Measures of Correlated Response Variance for NSCG

+		+	+	+	+	+	++
	Question		SE	Sample	Mean # of	Total # of	SE inflation
	number	Rho	of rho	mean	Interviews	Interviews	factor
+ D24a	What is the degree of difficulty you have	ve seeing new	vsprint?	+	+	+	+
ĺ	None	MF		0.751	69	22672	
	Slight	0.010	0.002	0.096	69	22672	30%
	Moderate	MF		0.029	69	22672	
	Severe	MF		0.004	69	22672	
	Unable to do	MF		0.002	69	22672	
+ D24b	What is the degree of difficulty you have	ve hearing co	nversation	+: n?	+	+	++
i i	None	MF		0.788	69	22672	
i	Slight	0.009	0.002	0.068	69	22672	26%
i	Moderate	0.003	0.001	0.018	69	22672	11%
İ	Severe	MF		0.002	69	22672	
İ	Unable to do	MF		0.000	69	22672	
+ D24c	What is the degree of difficulty you have	/valking w:	thout ass	+· istance?	+	+	++
i i	None	MF		0.821	69	22672	
i	Slight	MF		0.026	69	22672	i i
İ	Moderate	MF		0.014	69	22672	
i	Severe	ns		0.005	69	22672	
	Unable to do	MF		0.003	69	22672	
+ D24d	What is the degree of difficulty you li:	+ Eting 10 pour	+ 1ds?	+	+	+	+4
i	None	 		0.816	69	22672	
i	Slight	MF		0.029	69	22672	
İ	Moderate	0.003	0.001	0.014	69	22672	88
İ	Severe	MF		0.007	69	22672	
İ	Unable to do	ns		0.004	69	22672	i i
+		+		+	+	+	+

		Intra-Inter	viewer Co	orrelatio Sorted b	ns∶ ⊳y F	for NS Rho	RCG and NSCG		
NSCG	NSRCG	DESCRIPTION (^M indicates a multicategory question that Westat treated as one category)	NSRCG SAMPLE	NSRCG RHO		NSCG	DESCRIPTION	NSCG SAMPLE	NSCG RHO
A12	QB14_5	TYPE OF EDUC INST: RESEARCH INST	3,945	0.113		A8	WORKING PARTTIME WK APR 15 NO NEED FULL	1,882	0.108
A12	QB14_3	TYPE OF EDUC INST: 4-YR COLLEGE	3,945	0.052		A3	NOT WORKING WK APR 15 NO NEED	3,340	0.081
A12	QB14_4	TYPE OF EDUC INST: MEDICAL SCH	3,945	0.037		A8	WORKING PARTTIME WK APR 15 STUDENT	1,882	0.065
A8	B11G	WORKING PARTTIME WK APR 15 OTHER	2,848	0.024		A8	WORKING PARTTIME WK APR 15 OTHER	1,882	0.061
A22	B24I	10% PRODUCTION, OPERATIONS, MAINTENANCE	15,274	0.017		A3	NOT WORKING WK APR 15 OTHER	3,340	0.033
A8	B11F	WORKING PARTTIME WK APR 15 NO NEED FULL	2,817	0.016		A8	WORKING PARTTIME WK APR 15 RETIRED	1,882	0.032
A3	B6F	NOT WORKING WK APR 15 NO SUITABLE JOB	2,240	0.016		A3	NOT WORKING WK APR 15 NO SUIT JOB	3,340	0.023
A3	B6H	NOT WORKING WK APR 15 OTHER	2,268	0.015		A12	TYPE OF EDUC INST: 4-YR COLLEGE	4,221	0.020
A22	B24N	10% OTHER	15,307	0.012		A2	LOOK FOR WORK WEEK APRIL 15	3,426	0.019
C1	C1B	YEARS EXPERIENCE WORKING PARTTIME	17,416	0.012		A3	NOT WORKING WK APR 15 STUDENT	3,340	0.018
A8	B11B	WORKING PARTTIME WK APR 15 STUDENT	2,744	0.010		A3	NOT WORKING WK APR 15 RETIRED	3,340	0.017
A3	B6G	NOT WORKING WK APR 15 NO NEED	2,250	0.010		A12	TYPE OF EDUC INST: OTHER	4,221	0.015
A3	B6B	NOT WORKING WK APR 15 LAYOFF	2,261	0.007		A12	TYPE OF EDUC INST: MEDICAL SCH	4,221	0.014

Attachment B-2 October 31, 1994

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		Intra-Interv	viewer Co	orrelatio Sorted b	ns∶ ∘y F	for NS Rho	RCG and NSCG		
NSCG	NSRCG	DESCRIPTION (^M indicates a multicategory question that Westat treated as one category)	NSRCG SAMPLE	NSRCG RHO		NSCG	DESCRIPTION	NSCG SAMPLE	NSCG RHO
A3	B6D	NOT WORKING WK APR 15 FAMILY RESP	2,257	0.007		A3	NOT WORKING WK APR 15 LAYOFF	3,340	0.013
A8	B11C	WORKING PARTTIME WK APR 15 FAMILY RES	2,843	0.006		A12	TYPE OF EDUC INST: ELEM/SECOND	4,221	0.011
A12	QB14_2	TYPE OF EDUC INST: 2-YR COLLEGE	3,945	0.004		A22	10% PRODUCTION, OPERATIONS, MAINTENCE	19,361	0.011
A22	B24F	10% DESIGN EQUIP, PROCESSES, STRUCTURE	15,270	0.004		A13	TYPE OF EMPLOYER: SELF-EMPLOY NOT INC	15,171	0.010
A22	B24E	10% DEVELOPMENT	15,275	0.003		D23	DAD'S HIGHEST ED LEV_SOME GRADUATE	22,677	0.010
A8	B11E	WORKING PARTTIME WK APR 15 NO FULLTIME	2,812	0.003		D24A	DEGREE OF DIFFICULTY SEEING SLIGHT	22,672	0.010
A13	QB15_1	TYPE OF EMPLOYER: PRIVATE PROFIT	11,316	0.003		D24B	DEGREE OF DIFFICULTY HEARING SLIGHT	22,672	0.009
A22	B24G	10% EMPLOYEE RELATIONS	15,282	0.003		A22	10% PROFESSIONAL SERVICES	19,361	0.008
D24	D18A	^M DEGREE OF DIFFICULTY SEEING	17,570	0.003		A7	EMPLOYED FULL OR PARTTIME WK APR 15	19,393	0.008
A8	B11A	WORKING PARTTIME WK APR 15 RETIRED	2,851	0.002		C1B	YEARS EXPER WORKING PARTTIME 0	22,633	0.008
A22	B24D	10% COMPUTER APPLICATIONS	15,282	0.002		A13	TYPE OF EMPLOYER: PRIVATE PROFIT	15,171	0.007
A3	B6C	NOT WORKING WK APR 15 STUDENT	2,227	0.002		A26	PRINCIPAL JOB SALARY 0 TO 5	15,113	0.006

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Attachment B-3 October 31, 1994

		Intra-Interv	viewer Co	orrelatio Sorted b	ns i oy F	for NS Rho	RCG and NSCG		
NSCG	NSRCG	DESCRIPTION (^M indicates a multicategory question that Westat treated as one category)	NSRCG SAMPLE	NSRCG RHO		NSCG	DESCRIPTION	NSCG SAMPLE	NSCG RHO
A7	B10	EMPLOYED FULL OR PARTTIME WK APR 15	15,311	0.002		D23	MOM'S HIGHEST EDUC LEVEL-SOME GRAD	22,677	0.006
A19	QB21_2	WORK AND EDUCATION: SOMEWHAT RELATED	15,307	0.002		D23	DAD'S HIGHEST EDUC LEVEL-BACHELORS	22,677	0.006
A22	B24B	10% APPLIED RESEARCH	15,285	0.002		A22	10% DEVELOPMENT	19,361	0.005
A26	QB28	MPRINCIPAL JOB SALARY	11,450	0.002		A22	10% COMPUTER APPLICATIONS	19,361	0.005
A22	B24C	10% BASIC RESEARCH	15,291	0.002		A26	PRINCIPAL JOB SALARY 6 TO 10	15,113	0.005
A13	QB15_3	TYPE OF EMPLOYER: SELF-EMPLOY NOT INCORP	11,316	0.001		D23	MOM'S HIGHEST EDUC LEVEL-BACHELORS	22,677	0.005
A19	QB21_1	WORK AND EDUCATION: CLOSELY RELATED	15,307	0.001		A11	WAS EMPLOYER AN EDUCATIONAL INST	19,370	0.004
A22	B24A	10% ACCOUNTING, FINANCE, CONTRACTS	15,294	0.001		A13	TYPE OF EMPLOYER: SELF-EMPLOY INCORP	15,171	0.004
A13	QB15_7	TYPE OF EMPLOYER: US MILITARY	11,316	0.001		A13	TYPE OF EMPLOYER: LOCAL GOVT	15,171	0.004
D23	QMOM_ 3	MOM'S HIGHEST EDUC LEVEL-SOME COLLEGE	17,459	0.001		A22	10% TEACHING	19,361	0.004
D24D	D18D	^M DEGREE OF DIFFICULTY LIFTING	17,571	0.001		C1B	YEARS EXPER WORKING PARTTIME 6-10	22,633	0.004
A13	QB15_8	TYPE OF EMPLOYER: US GOVERNMENT	11,316	0.001		D17D	NUMBER OF CHILDREN 18 OR OLDER 0	11,790	0.004
A22	B24K	10% SALES, PURCHASING, MARKETING	15,206	0.001		D23	MOM'S HIGHEST ED LEV-HS DIPLOMA	22,677	0.004

Attachment B-4 October 31, 1994

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		Intra-Inter	viewer Co	orrelatio Sorted b	ns∶ ∘y F	for NS Rho	RCG and NSCG		
NSCG	NSRCG	DESCRIPTION (^M indicates a multicategory question that Westat treated as one category)	NSRCG SAMPLE	NSRCG RHO		NSCG	DESCRIPTION	NSCG SAMPLE	NSCG RHO
A8	B11D	WORKING PARTTIME WK APR 15 ILLNESS/DISAB	2,848	0.001		A13	TYPE OF EMPLOYER: STATE GOVT	15,171	0.003
A11	B13	WAS EMPLOYER AN EDUCATIONAL INST	15,306	0.001		A22	10% DESIGN EQUIP, PROCESSES, STRUCTURES	19,361	0.003
D23	QDAD_3	DAD'S HIGHEST EDUC LEVEL-SOME COLLEGE	17,404	0.001		A26	PRINCIPAL JOB SALARY 31 TO 35	15,113	0.003
A22	B24M	10% TEACHING	15,294	0.001		C1A	YEARS EXPER WORKING FULLTIME >35	22,633	0.003
A22	B24L	10% QUALITY OR PRODUCTIVITY MANAGEMENT	15,272	0.001		C1B	YEARS EXPER WORKING PARTTIME 1	22,633	0.003
D23	QDAD_4	DAD'S HIGHEST EDUC LEVEL-BACHELORS	17,404	0.001		D13	MARITAL STATUS-WIDOWED	22,684	0.003
A12	QB1491	TYPE OF EDUC INST: OTHER	3,945	0.000		D23	MOM'S HIGHEST EDUC LEVEL-SOME COLL	22,677	0.003
A19	QB21_3	WORK AND EDUCATION: NOT RELATED	15,307	0.000		D23	DAD'S HIGHEST EDUC LEVEL-SOME COLL	22,677	0.003
A12	QB14_1	TYPE OF EDUC INST: ELEM/SECOND	3,876	0.000		D24B	DEGREE OF DIFFICULTY HEARING MODERATE	22,672	0.003
A3	B6E	NOT WORKING WK APR 15 ILLNESS/DISAB	2,261	0.000		D24D	DEGREE OF DIFFICULTY LIFTING MODERATE	22,672	0.003
A22	B24J	10% PROFESSIONAL SERVICES	15,173	0.000		A13	TYPE OF EMPLOYER: US MILITARY	15,171	0.002
A13	QB15_2	TYPE OF EMPLOYER: NOT PROFIT	11,316	0.000		A22	10% APPLIED RESEARCH	19,361	0.002
A13	QB15_6	TYPE OF EMPLOYER: STATE GOVT	11,316	0.000		C1A	YEARS EXPER WORKING FULLTIME 11-15	22,633	0.002

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Attachment B-5 October 31, 1994

		Intra-Inter	viewer Co	orrelatio Sorted b	ns∶ ⊳y F	for NS Rho	RCG and NSCG		
NSCG	NSRCG	DESCRIPTION (^M indicates a multicategory question that Westat treated as one category)	NSRCG SAMPLE	NSRCG RHO		NSCG	DESCRIPTION	NSCG SAMPLE	NSCG RHO
A13	QB15_5	TYPE OF EMPLOYER: LOCAL GOVT	11,316	0.000		D13	MARITAL STATUS-MARRIED	22,684	0.002
D24C	D18C	^M DEGREE OF DIFFICULTY WALKING	17,571	0.000		D23	DAD'S HIGHEST EDUC LEVEL-HS DIPLOMA	22,677	0.001
D24B	D18B	^M DEGREE OF DIFFICULTY HEARING	17,572	0.000		D23	DAD'S HIGHEST ED LEV-LESS THAN HS	22,677	0.001
A3	B6A	NOT WORKING WK APR 15 RETIRED	2,270	0.000		A12	TYPE OF EDUC INST: 2-YR COLLEGE	4,221	ns
C1	C1A	YEARS EXPERIENCE WORKING FULLTIME	17,429	0.000		A12	TYPE OF EDUC INST: RESEARCH INST	4,221	ns
A2	B5	LOOK FOR WORK WEEK APRIL 15	2,275	0.000		A13	TYPE OF EMPLOYER: US GOVERNMENT	15,171	ns
D13	QD13_1	MARITAL STATUS-MARRIED	17,560	0.000		A13	TYPE OF EMPLOYER: NOT PROFIT	15,171	ns
D13	QD13_2	MARITAL STATUS-WIDOWED	17,560	0.000		A19	WORK AND EDUCATION: NOT RELATED	19,363	ns
D13	QD13_3	MARITAL STATUS_SEPARATED	17,560	0.000		A19	WORK AND EDUCATION: SOMEWHAT RELATED	19,363	ns
D13	QD13_4	MARITAL STATUS_DIVORCED	17,560	0.000		A19	WORK AND EDUCATION:CLOSELY RELATED	19,363	ns
D13	QD13_5	MARITAL STATUS-NEVER MARRIED	17,560	0.000		A22	10% BASIC RESEARCH	19,361	ns
A1	B4	WORKING FOR PAY WK APR 15	17,586	0.000		A22	10% QUALITY OR PRODUCTIVITY MANAGEMENT	19,361	ns
D23	QMOM_ 5	MOM'S HIGHEST EDUC LEVEL-SOME GRADUATE	17,459	0.000		A22	10% EMPLOYEE RELATIONS	19,361	ns
D23	QMOM_ 4	MOM'S HIGHEST EDUC LEVEL-BACHELORS	17,459	0.000		A22	10% SALES, PURCHASING, MARKETING	19,361	ns

Attachment B-6 October 31, 1994

		Intra-Inter	viewer Co	orrelation Sorted b	ns t y F	for NS Rho	RCG and NSCG		
NSCG	NSRCG	DESCRIPTION (^M indicates a multicategory question that Westat treated as one category)	NSRCG SAMPLE	NSRCG RHO		NSCG	DESCRIPTION	NSCG SAMPLE	NSCG RHO
D23	QMOM_ 2	MOM'S HIGHEST EDUC LEVEL-HS DIPLOMA	17,459	0.000		A22	10% MANAGEMENT & ADMINISTRATION	19,361	ns
D23	QMOM_ 1	MOM'S HIGHEST EDUC LEVEL-LESS THAN HS	17,459	0.000		A26	PRINCIPAL JOB SALARY 11 TO 15	15,113	ns
A22	B24H	10% MANAGEMENT & ADMINISTRATION	15,266	0.000		A26	PRINCIPAL JOB SALARY 26 TO 30	15,113	ns
D23	QDAD_1	DAD'S HIGHEST EDUC LEVEL-LESS THAN HS	17,404	0.000		A26	PRINCIPAL JOB SALARY 41 TO 45	15,113	ns
D23	QDAD_2	DAD'S HIGHEST EDUC LEVEL-HS DIPLOMA	17,404	0.000		A26	PRINCIPAL JOB SALARY 36 TO 40	15,113	ns
A13	QB15_4	TYPE OF EMPLOYER:SELF-EMPLOY INCORP	11,316	0.000		A26	PRINCIPAL JOB SALARY > 50	15,113	ns
D23	QDAD_5	DAD'S HIGHEST EDUC LEVEL-SOME GRADUATE	17,404	0.000		A26	PRINCIPAL JOB SALARY 21 TO 25	15,113	ns
-	-	-	-	-		A26	PRINCIPAL JOB SALARY 16 TO 20	15,113	ns
-	-	-	-	-		A26	PRINCIPAL JOB SALARY 46 TO 50	15,113	ns
-	-	-	-	-		A3	NOT WORKING WK APR 15 ILL/DISAB	3,340	ns
-	-	-	-	-		A3	NOT WORKING WK APR 15 FAMILY RESP	3,340	ns
-	-	-	-	-		A8	WORKING PARTTIME WK APR 15 FAMILY RES	1,882	ns
-	-	-	_	-		A8	WORKING PARTTIME WK APR 15 ILL/DISAB	1,882	ns

Attachment B-7 October 31, 1994

		Intra-Inter	viewer Co	orrelation	ns f vy F	for NS Rho	RCG and NSCG		
NSCG	NSRCG	DESCRIPTION (^M indicates a multicategory question that Westat treated as one category)	NSRCG SAMPLE	NSRCG RHO		NSCG	DESCRIPTION	NSCG SAMPLE	NSCG RHO
-	-	-	-	-		A8	WORKING PARTTIME WK APR 15 NO FULL TIME	1,882	ns
-	-	-	-	-		C1A	YEARS EXPER WORKING FULLTIME 16-20	22,633	ns
-	_	-		-		C1A	YEARS EXPER WORKING FULLTIME 6-10	22,633	ns
_	-	-	-	-		C1A	YEARS EXPER WORKING FULLTIME 31-35	22,633	ns
-	-	-	-	_		C1A	YEARS EXPER WORKING FULLTIME 21-25	22,633	ns
-	-	-	-	_		C1A	YEARS EXPER WORKING FULLTIME 26-30	22,633	ns
_	-			-		C1A	YEARS EXPER WORKING FULLTIME 0-5	22,633	ns
_	-			-		C1B	YEARS EXPER WORKING PARTTIME 5	22,633	ns
-	_	-		-		C1B	YEARS EXPER WORKING PARTTIME 2	22,633	ns
_				_		C1B	YEARS EXPER WORKING PARTTIME 3	22,633	ns
-	_	-		-		C1B	YEARS EXPER WORKING PARTTIME 4	22,633	ns
_				_		C1B	YEARS EXPER WORKING PARTTIME >10	22,633	ns
-	-	-	_	-		D13	MARITAL STATUS-NEVER MARRIED	22,684	ns
-	-	-		-		D13	MARITAL STATUS-SEPARATED	22,684	ns
-				-		D13	MARITAL STATUS-DIVORCED	22,684	ns
-	_		_	_		D23	MOM'S HIGHEST ED LEV-LESS THAN HS	22,677	ns

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		Intra-Inter	viewer Co	orrelation Sorted b	ns f y F	for NS Rho	RCG and NSCG		
NSCG	NSRCG	DESCRIPTION (^M indicates a multicategory question that Westat treated as one category)	NSRCG SAMPLE	NSRCG RHO		NSCG	DESCRIPTION	NSCG SAMPLE	NSCG RHO
-	-	-	-	-		D24C	DEGREE OF DIFFICULTY WALKING SEVERE	22,672	ns
-	-	-	-	-		D24D	DEGREE OF DIFFICULTY LIFTING CAN'T DO	22,672	ns
-	-	-	-	-		A1	WORKING FOR PAY DURING WK APR 15	22,690	MF
-	-	-	-	-		A22	10% ACCOUNTING, FINANCE, CONTRACTS	19,361	MF
-	-	-	-	-		A22	10% OTHER	19,361	MF
-	-	-	-	-		D24A	DEGREE OF DIFFICULTY SEEING NONE	22,672	MF
-	-	-	-	-		D24A	DEGREE OF DIFFICULTY SEEING SEVERE	22,672	MF
-	-	-	-	-		D24A	DEGREE OF DIFFICULTY SEEING MODERATE	22,672	MF
-	-	-	-	-		D24A	DEGREE OF DIFFICULTY SEEING CAN'T DO	22,672	MF
-	-	-	-	-		D24B	DEGREE OF DIFFICULTY HEARING CAN'T DO	22,672	MF
-	-	-	-	-		D24B	DEGREE OF DIFFICULTY HEARING SEVERE	22,672	MF
-	-	-	-	-		D24B	DEGREE OF DIFFICULTY HEARING NONE	22,672	MF
-	-	-	-	-		D24C	DEGREE OF DIFFICULTY WALKING SLIGHT	22,672	MF

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	Intra-Interviewer Correlations for NSRCG and NSCG Sorted by Rho												
NSCG	NSRCG	DESCRIPTION (^M indicates a multicategory question that Westat treated as one category)	NSRCG SAMPLE	NSRCG RHO		NSCG	DESCRIPTION	NSCG SAMPLE	NSCG RHO				
-	-	-	-	-		D24C	DEGREE OF DIFFICULTY WALKING NONE	22,672	MF				
-	-	-	-	-		D24C	DEGREE OF DIFFICULTY WALKING CAN'T DO	22,672	MF				
-	-	-	-	-		D24C	DEGREE OF DIFFICULTY WALKING MODERATE	22,672	MF				
-	-	-	-	-		D24D	DEGREE OF DIFFICULTY LIFTING NONE	22,672	MF				
-	-	-	-	-		D24D	DEGREE OF DIFFICULTY LIFTING SLIGHT	22,672	MF				
-	-	-	-	-		D24D	DEGREE OF DIFFICULTY LIFTING SEVERE	22,672	MF				