Dominican Republic

Dominican Republic Experimental Study

An Evaluation of Fertility and Child Health Information

Office of Population Research
Princeton University

Demographic and Health Surveys
Institute for Resource Development/Macro Systems, Inc.

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This report presents the findings of the Dominican Republic Experimental Survey (1986). The survey was a collaborative effort by the Consejo Nacional de Población y Familia (CONAPOFA) in the Dominican Republic, the Office of Population Research at Princeton University, and the Institute for Resource Development/Macro Systems, Inc. The survey is part of the worldwide Demographic and Health Surveys (DHS) program, which is designed to collect data on fertility, family planning, and maternal and child health. Funding for the survey was provided by the U.S. Agency for International Development (Contract No. DPE-3023-C-00-4083-00) and the National Institute of Child Health and Human Development (Grant No. RO1-HD-22417).

Additional information about the Dominican Republic Experimental Survey can be obtained from the Office of Population Research, Princeton University, 21 Prospect Avenue, Princeton, NJ 08544, USA (Telephone: 609-452-5510; Fax: 609-258-1039). Information about the DHS program can be obtained by writing to: DHS Program, IRD/Macro, 8850 Stanford Boulevard, Suite 4000, Columbia, MD 21045, USA (Telephone: 301-290-2800; Telex: 87775; Fax: 301-290-2999).

CONTENTS

Page

CONTENTS iii

LIST OF TABLES vii

LIST OF FIGURES xi

ACKNOWLEDGMENTS xiii

CHAPTER 1 BACKGROUND AND OBJECTIVES 1

1.1 History of the Study 1

1.2 Site Selection 1

1.3 Sampling and Interviewing Procedures 2

1.4 Plan of the Report 2

CHAPTER 2 BASIC CHARACTERISTICS OF THE SAMPLES 5

2.1 Introduction 5

2.2 Sampling Errors 6

2.3 Comparability of the Samples 8

CHAPTER 3 FERTILITY 11

3.1 Introduction 11

3.2 Summary of Findings from the Peru Surveys 12

3.3 Results 13

3.4 Conclusions 17

CHAPTER 4 CONTRACEPTION 19

4.1 Introduction 19

4.2 Knowledge and Ever Use of Contraception 19

4.3 Acceptability and Availability of Contraception 21

Page

4.4 Current and Previous Use of Contraception 25

4.5 Estimates of Contraceptive Failure and Discontinuation 30

4.6 Completeness and Consistency of Information 34

CHAPTER 5 REPRODUCTIVE ATTITUDES 39

5.1 Introduction 39

5.2 Ideal Number of Children 39

5.3 Reproductive Intentions 40

5.4 Intentions to Use Contraception 41

5.5 Reasons for Nonuse 42

5.6 Sterilization Regret 43

CHAPTER 6 CHILD HEALTH VARIABLES 45

6.1 Introduction 45

6.2 Diarrhea 45

6.3 Immunization 48

6.4 Birthweight and Prematurity 50

CHAPTER 7 RELIABILITY 55

7.1 Introduction 55

7.2 Research Design and Data 55

7.3 Measures of Reliability 56

7.4 Fertility and Postpartum Variables 57

7.5 Contraceptive Measures 59

7.6 Reproductive Attitudes 61

Page

CHAPTER 8 SUMMARY AND CONCLUDING REMARKS 65

8.1 Objectives and Methods 65

8.2 Fertility 65

8.3 Contraception 65

8.4 Reproductive Attitudes 66

8.5 Child Health 67

8.6 Reliability 68

8.7 Concluding Remarks 68

APPENDIX A DOMINICAN REPUBLIC CORE QUESTIONNAIRE 71

APPENDIX B DOMINICAN REPUBLIC EXPERIMENTAL QUESTIONNAIRE 95

LIST OF TABLES

		Page
Table 2.1	Sample results for the core and experimental questionnaires	5
Table 2.2	Number of completed interviews, weighted and unweighted, by region, and sample weights, core and experimental questionnaires	6
Table 2.3.1	Sampling errors for selected variables, core sample	7
Table 2.3.2	Sampling errors for selected variables, experimental sample	8
Table 2.4	Background characteristics, core and experimental questionnaires	9
Table 3.1	Mean numbers of children ever born, by age group, core and experimental questionnaires	13
Table 3.2	Cumulative fertility rates through exact age 45 by calendar year, DHS and other surveys	14
Table 3.3	Age-specific fertility rates (per 1,000), 1980-82 and 1983-86, core and experimental questionnaires	16
Table 3.4	Mean numbers of children ever born, by five-year age group, reconstructed from the DHS core survey and reported in the 1975 and 1980 WFS surveys and the 1983 CPS survey	17
Table 4.1	Knowledge of contraception among all women, by method, core and experimental questionnaires	20
Table 4.2	Ever use of contraception among ever-married women, by method, core and experimental questionnaires	21
Table 4.3.1	Distribution of women's perception of the main problem with using specific methods, among women who ever heard of method, core questionnaire	22
Table 4.3.2	Distribution of whether women would advise others to use a specific method, and reasons for not advising, among women who ever heard of method, experimental questionnaire	23
Table 4.4	Knowledge of sources of supply for contraception, among women who ever heard of a specific method, core and experimental questionnaires	24
Table 4.5	Current use of contraception among currently married women, by method, core and experimental questionnaires	26
Table 4.6	Distribution of year of sterilization, ever-married women age 15-49, core and experimental questionnaires	27

Page

Table 4.7 Index of heaping on particular durations of contraceptive use and mean length of use, for current use and use of last method in closed intervals, ever-married women, core and experimental questionnaires 28

Table 4.8 Reconstruction of percent of ever-married women 15 years and older using contraception, by method, as of the date of the 1983 CPS survey 29

Table 4.9 Number of contraceptive use segments contributing to exposure during the first year of use, core and experimental questionnaires 31

Table 4.10 Percent of women who experience a contraceptive failure within one year of use, core and experimental questionnaires 32

Table 4.11 Percent of women who discontinue a method within one year of use, in order to become pregnant and for other reasons, core and experimental questionnaires 35

Table 5.1 Distribution of the ideal number of children, core and experimental questionnaires 40

Table 5.2 Distribution of reproductive intentions, percent currently using contraception, and mean number of children ever born, among currently married women (who are not pregnant or menopausal), by intention, core and experimental questionnaires 41

Table 5.3 Intention to use contraception in the future, among all women not currently using a method, core and experimental questionnaires, Dominican Republic and Peru 42

Table 5.4 Reasons for nonuse of contraception among currently married, sexually active nonusers who would be indifferent or unhappy if they became pregnant in the next few weeks, core questionnaire 43

Table 5.5 Percent of married nonusers citing different reasons for not intending to use a method, experimental questionnaire 44

Table 6.1 Percent of children under age five reported to have had diarrhea in a given reference period, core and experimental questionnaires 46

Table 6.2 Distribution of time since most recent episode of diarrhea, among children under age five with reported episode, experimental questionnaire 47

Table 6.3 Percent of children under age five with diarrhea during the past two weeks who received specified treatments, core and experimental questionnaires 47

Page

Table 6.4 Among children under age five, the percent distribution by source of information on whether the child was ever immunized, core questionnaire 49

Table 6.5 Percent of children under age five who have ever been immunized and, among these, the percent receiving specific vaccines, core and experimental questionnaires 49

Table 6.6 Distribution of reported birthweight (in grams) and maturity status among children born since January 1981, experimental questionnaire 51

Table 6.7 Percent distribution of births by reported birthweight and maturity status, experimental questionnaire 52

Table 6.8 Cumulative probability of dying by age one (per 1,000 births) by reported birthweight and maturity status, experimental questionnaire 52

Table 7.1 Reliability of fertility and postpartum variables, core and experimental questionnaires 58

Table 7.2 Reliability of contraceptive measures, core and experimental questionnaires 60

Table 7.3 Reliability of reproductive attitudes, core and experimental questionnaires 62

LIST OF FIGURES

Page

Figure 3.1 Cumulative Fertility Rates Through Exact Age 45, by Calendar Year 15

Figure 4.1 Distribution of Year of Sterilization 27

Figure 4.2 First-Year Failure Rates 33

Figure 4.3 First-Year Discontinuation Rates 36

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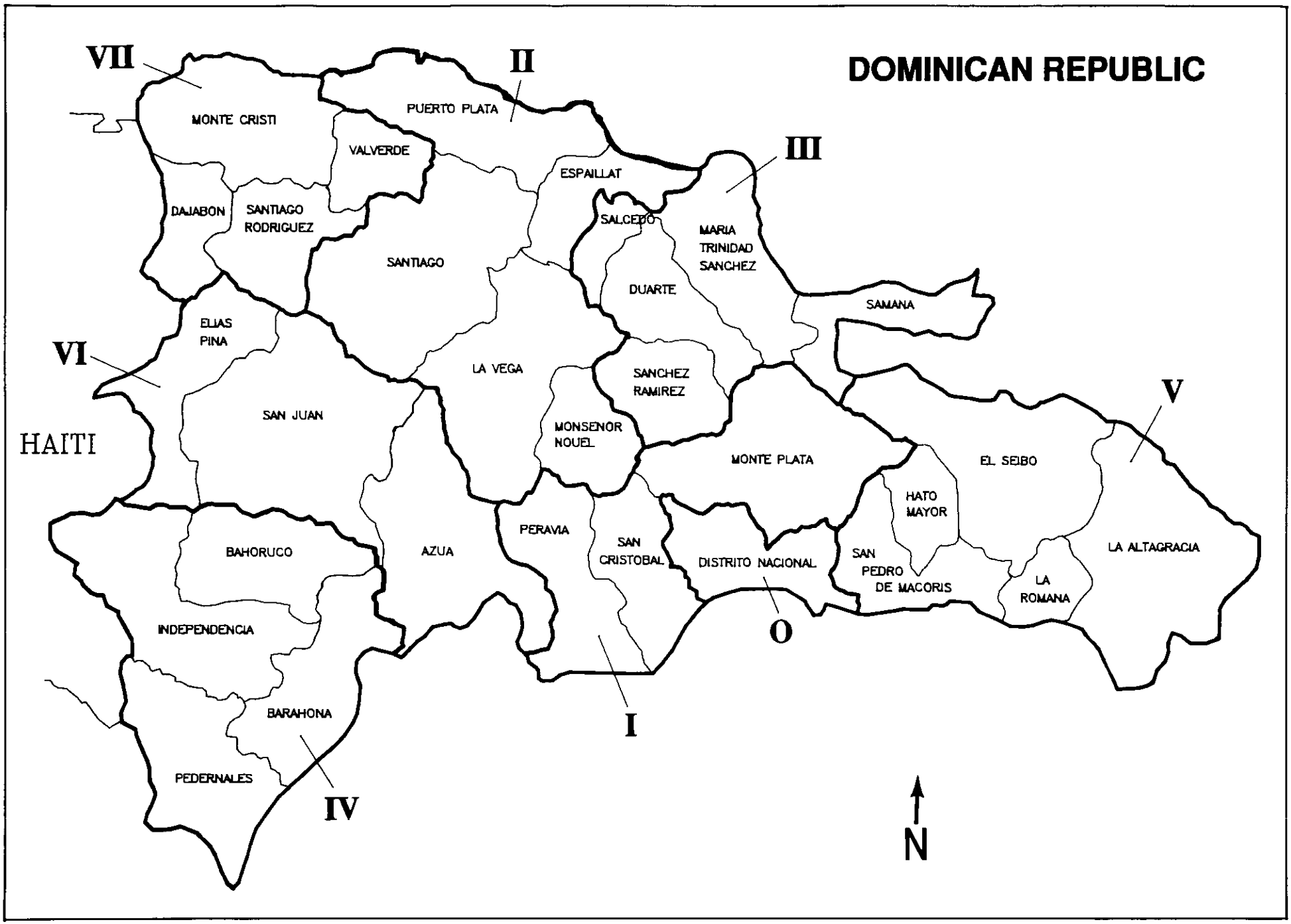
DOMINICAN REPUBLIC
VII
II
III
VI
V
I
IV
O
HAITI
N
MONTE CRISTI
PUERTO PLATA
VALVERDE
ESPAILLAT
DAJABON
SANTIAGO RODRIGUEZ
SALCEDO
MARIA TRINIDAD SANCHEZ
SANTIAGO
DUARTE
SAMANA
ELIAS PINA
LA VEGA
SANCHEZ RAMIREZ
SAN JUAN
MONSENOR NOUEL
MONTE PLATA
EL SEIBO
HATO MAYOR
PERAVIA
SAN CRISTOBAL
BAHORUCO
AZUA
DISTRITO NACIONAL
SAN PEDRO DE MACORIS
LA ROMANA
LA ALTAGRACIA
INDEPENDENCIA
BARAHONA
PEDERNALES

CHAPTER 1

BACKGROUND AND OBJECTIVES

1.1 History of the Study

The Demographic and Health Surveys (DHS) program began in 1984. A new questionnaire was designed for the project, based on the World Fertility Survey (WFS) questionnaire and the Contraceptive Prevalence Surveys (CPS) questionnaire. The early months of the DHS design process required considerable consultation and frequent revision of the model questionnaire. One reason for this was disagreement about some basic approaches to the collection of demographic and health data. Some of the points in question were: whether a truncated birth history could economically be substituted for the full birth history without reducing the quality of the resulting data; how to measure the availability and acceptability of family planning services, and collect information about reproductive attitudes; how to measure the incidence and treatment of childhood diseases; and, whether a detailed monthly retrospective calendar could be implemented to collect information about pregnancy, contraceptive use, the postpartum period, employment, and residence.

During the process of constructing the model questionnaire, it was decided to experiment with different approaches in order to evaluate alternative data collection strategies. A plan was developed for an experimental field survey. The aim was to compare the results of administering two different questionnaires at the same time to two national samples of women in the same country. The objective was not to evaluate which questionnaire was better, but rather to select the best components from each, with the goal of improving the model questionnaire for the second phase of the DHS project. This goal has been achieved.

1.2 Site Selection

Various considerations argued for the selection of a Latin-American country as the site of the experimental survey. Moderate levels of contraceptive use and a single language were the main considerations. Peru, Ecuador, and the Dominican Republic were the leading candidates because WFS and CPS surveys had been conducted in those countries, thus enabling cohort comparisons with DHS data. The earlier surveys also attested to the institutional capability of the countries to conduct such surveys. Peru was selected, but as preparations were underway, political problems in the country led to the selection of an alternate site—the Dominican Republic. In fact, the standard DHS survey in Peru continued as planned, along with the experimental survey, and rather than interrupt activities in the Dominican Republic, the decision was made to conduct experimental surveys in both countries.

This development was viewed as having two major advantages. First, there was the opportunity to replicate the experimental survey conducted in Peru and determine the extent to which the results of the two surveys are similar. In particular, replication would provide the opportunity to address specific anomalies, or problems, which became evident during the analysis of the Peru data.[1] It would also permit examination of the results of experimental variations in questions in a country with demographic conditions somewhat different from Peru—i.e., a lower level of infant mortality, lower fertility, and greater use of effective methods of contraception. Second, it would be possible to assess the consistency of responses at the individual level, for both questionnaires, by inclusion of a special reinterview feature in the Dominican Republic.

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[1] For example, as described in Chapter 3, the core and experimental questionnaires in Peru yielded significantly different estimates of recent fertility decline, but the same estimates of fertility in the six-year period prior to interview.

1.3 Sampling and Interviewing Procedures

The sampling design for the survey in the Dominican Republic was a national sample based on the sampling frame for the 1981 Census. It involved the selection of 12,688 households with the target of completing 12,000 interviews of women aged 15-49. The plan was to interview two-thirds of the sample with the core questionnaire and one-third with the experimental questionnaire; 7,648 women[2] were actually interviewed with the core questionnaire and 3,885 with the experimental questionnaire. The results of the standard DHS survey were published in 1987 (CONAPOFA and IRD, 1987).

Because of the government's interest in obtaining statistics for each of the country's eight health regions, separate samples of sufficient size were drawn within each region. These samples (shown in Table 2.2) range from 631 to 1,336 respondents for the core questionnaire and 338 to 658 for the experimental questionnaire. A two-stage stratified cluster design was used to obtain a self-weighted sample within each of the regions. The design also used stratification by urban and rural areas within region. Because of the need to obtain adequate samples by region, the final sample was not self-weighted. Weights for both the core and experimental survey are given in Chapter 2 (Table 2.2).

Since the goal of the study was to ascertain response differences resulting from the two sets of questions, field conditions for the experimental and standard surveys were held constant as much as possible. For example, the same interviewers administered the two questionnaires. In most cases, interviewers administered the experimental questionnaire on separate days from the core questionnaire.

Field operations began in June 1986. During the training period from June to August, supervisors and interviewers received two to three weeks of intensive training on the purpose, design, and implementation of the questionnaires; the course was followed by one week of local field practice. Final changes in the questionnaires were made at this time. The fieldwork took place from September to December 1986, with approximately 12,000 interviews completed.

The core and experimental questionnaires used in the Dominican Republic are very similar to those used in Peru; the main differences are found in the questions on immunization, birth weight, premature births, planning status of births, and women's employment. The core and experimental questionnaires for the Dominican Republic DHS surveys are reproduced in Appendix A and B.

1.4 Plan of the Report

As noted above, the experimental study in the Dominican Republic was intended in part as a replication of the Peru experimental study. The results reported here, therefore, are frequently compared with those in the Peru report (Goldman et. al., 1989). However, not all of the subjects in the Peru study are covered: some of the findings from Peru were conclusive with regard to the relative performance of the two questionnaires; in certain instances, no additional information was likely to be learned from replication; and, for several variables, the specific questions used in the Dominican Republic survey had been altered and comparison with the Peru survey would be difficult. The focus of this analysis is four topics: fertility, contraceptive use, reproductive attitudes, and child health.[3] In addition, a separate analysis is presented on the reliability of the core and experimental questionnaires, based on reinterviews with several hundred women.

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[2] In some tabulations, the total number of respondents appears as 7,649 because of weights.

[3] The Peru Experimental Study covered a number of topics which were not included in the Dominican Republic study: postpartum variables, women's employment, and place of residence.

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Consejo Nacional de Población y Familia (CONAPOFA) and Institute for Resource Development/Westinghouse. 1987. *República Dominicana Encuesta Demográfica y de Salud, DHS-1986*. Santo Domingo, Dominican Republic: CONAPOFA.

Goldman, Noreen, Lorenzo Moreno, and Charles F. Westoff. 1989. *Peru Experimental Study: An Evaluation of Fertility and Child Health Information.* Columbia, Maryland: Office of Population Research, Princeton University and Institute for Resource Development/Macro Systems, Inc.

CHAPTER 2

BASIC CHARACTERISTICS OF THE SAMPLES

2.1 Introduction

The initial stage of analysis involved an examination of the characteristics of the samples of women in the core and experimental surveys and an assessment of the comparability of the two samples.

Table 2.1 presents the sample results from the two surveys. The rate of completed individual interviews is virtually identical for both questionnaires—almost 93 percent—as are the number of visits needed before the final interview was achieved. The final sample size was 7,648 women interviewed with the core questionnaire and 3,885 women with the experimental questionnaire, roughly a ratio of 2 to 1.

Table 2.1 Sample results for the core and experimental questionnaires

	Core	Experimental
Response Rate		
Completed	93.4	93.1
Absent	2.9	3.2
Refused	1.0	0.6
Partial	0.5	0.4
Other	2.6	2.3
Total	100.0	100.0
Number of Visits		
1	93.4	91.0
2	5.5	6.7
3	1.1	2.3
4	0.0	0.0
Total	100.0	100.0
Duration of Interview (Minutes)		
Mean	25.1	21.9
Median	22.1	21.5
Number of Women Interviewed	7648	3885

Because the two surveys used such different questionnaires, it is of particular interest to compare the lengths of interview. The core questionnaire collected a completed birth history, while the experimental questionnaire used a truncated one. However, the latter survey collected several pieces of information (e.g., marriage, residence, and employment histories) not included in the core. The mean duration of interview for the core questionnaire (25.1 minutes) was higher than that for the experimental questionnaire (21.9); the difference between the medians was smaller (22.1 and 21.5, respectively). This suggests that the time saved by collecting a truncated birth history roughly equaled the time used to obtain additional calendar information. Although the interviewing times for specific sections of the questionnaire are not available, it appears that the results from the Dominican Republic are similar to

those from Peru, and indicate that the inclusion of the calendar in the experimental questionnaire did not substantially increase the length of interview.

A more difficult comparison involves ascertaining the extent to which interviewers preferred one questionnaire over the other. Our experience in the training of supervisors and interviewers indicated that their initial preference was for the core questionnaire, because its complete specification of questions required less training. However, the majority of interviewers eventually preferred the experimental questionnaire because it more naturally allows for the probing of information and it permits interviewers to check the consistency of one type of data against another. In particular, interviewers could easily determine if reported dates of pregnancy and birth were consistent with reported dates of contraceptive use. In contrast, there was no method for reconciling these two types of data in the core questionnaire. One consequence of this preference for the experimental questionnaire—noted in the Peru study—was that interviewers attempted to use calendar-type probes in the core questionnaire; this practice may have compromised the comparison to some degree.

2.2 Sampling Errors

Since the objective of the core survey in the Dominican Republic was to obtain reliable estimates for each of the eight health regions of the country, a weighted sample design was adopted. Table 2.2 presents the number of completed interviews, weighted and unweighted, for each region, as well as the sample weight for each region. Note that, although the core and experimental samples are derived from a single larger sample, there are slight differences in the final weights for the two surveys due to different regional response rates. All estimates presented in this report are weighted, unless otherwise noted.

Table 2.2 Number of completed interviews, weighted and unweighted, by region, and sample weights, core and experimental questionnaires

	Core			Experimental		
Region	Weighted Interviews	Unweighted Interviews	Weight	Weighted Interviews	Unweighted Interviews	Weight
0	2785	1336	2.0849	1344	653	2.0588
I	445	631	0.7053	244	338	0.7226
II	1803	1302	1.3847	951	658	1.4460
III	808	891	0.9070	422	459	0.9187
IV	394	926	0.4255	197	464	0.4249
V	503	758	0.6629	252	383	0.6569
VI	555	1016	0.5464	280	519	0.5402
VII	355	788	0.4511	194	411	0.4721
Total	7648			3885		

Region 0: Distrito Nacional
Region I: San Cristóbal
Region II: Santiago
Region III: San Pedro de Macoris
Region IV: Barahona
Region V: La Romana
Region VI: San Juan
Region VII: Monte Cristi

In order to determine whether estimates derived from the results of the two surveys are significantly different, calculation of sampling errors is required. Sampling errors were computed for a list of variables proposed by DHS staff (Institute for Resource Development, 1988), as well as for several other variables included in this evaluation. The sampling errors were computed on the basis of the actual multi-stage cluster sample design used in the survey and were calculated with an updated version of the WFS CLUSTERS program (Verma and Pierce, 1987). In several cases in the following chapters, sampling errors are calculated on the assumption of simple random samples—the required calculation based on the actual sample design would have been very complicated. These cases are noted in the text or in footnotes.

Sampling errors for some of the variables used in this report are shown in Table 2.3.1 and 2.3.2. The tables present several measures of fertility, including parity and the general fertility rate, mean age at first union, current and ever-use of contraception, and sex ratios at birth. The following measures are presented for each variable: the base population for each estimator, the estimated value, the standard error, the number of cases used in the calculation (weighted and unweighted), the design effect (i.e., the ratio between the standard error from the actual sample design and the standard error from a simple random sample), the rate of homogeneity (roh, which is a function of the nature and size of the clusters) and, finally, the relative error (the standard error divided by the estimate in percentage terms).

Table 2.3.1 Sampling errors for selected variables, core sample

Variable	Base Population	Estimated Value	Standard Error	Number of Cases		Design Effect	roh	Relative Error
				Weighted	Unweighted			
Percent ever married	All	0.687	0.008	7648	7648	1.597	0.132	1.2
Mean age at first union	Ever married	17.870	0.077	5251	5409	1.485	0.151	0.4
Mean age at first sex	Ever had sex	17.571	0.073	5372	5500	1.436	0.131	0.4
% currently married	All	0.540	0.008	7648	7648	1.431	0.089	1.5
Mean no. children ever born	All	2.397	0.044	7648	7648	1.330	0.066	1.8
Sex ratio at birth 1980-82	All	1.083	0.052	7648	7648	1.233	0.042	4.8
Sex ratio at birth 1983-86	All	0.960	0.039	7648	7648	1.160	0.030	4.1
GFR 1980-82	All	0.155	0.004	7648	7648	1.381	0.077	2.7
GFR 1983-86	All	0.127	0.003	7648	7648	1.450	0.094	2.6
% ever used contraception	Ever married	0.702	0.009	5251	5409	1.386	0.115	1.2
% currently using	Currently married	0.498	0.010	4134	4334	1.305	0.114	2.0

Table 2.3.2 Sampling errors for selected variables, experimental sample

Variable	Base Population	Estimated Value	Standard Error	Number of Cases Weighted	Number of Cases Unweighted	Design Effect	roh	Relative Error
Percent ever married	All	0.696	0.010	3885	3885	1.385	0.166	1.5
Mean age at first union	Ever married	17.847	0.111	2703	2758	1.529	*	0.6
Mean age at first sex	Ever had sex	17.497	0.110	2751	2800	1.570	*	0.6
% currently married	All	0.549	0.012	3885	3885	1.458	0.203	2.1
Mean no. children ever born	All	2.472	0.053	3885	3885	1.140	0.054	2.2
Sex ratio at birth 1980-82	All	1.232	0.077	3885	3885	1.120	0.038	6.2
Sex ratio at birth 1983-86	All	1.089	0.059	3885	3885	1.110	0.036	5.4
GFR 1980-82	All	0.160	0.005	3885	3885	1.237	0.096	3.3
GFR 1983-86	All	0.121	0.004	3885	3885	1.110	0.036	5.4
% ever used contraception	Ever married	0.718	0.010	2703	2758	1.196	*	1.4
% currently using	Currently married	0.529	0.014	2131	2223	1.315	*	2.6

* Not calculated because the average size per cluster is less than 6 for the denominator.

The reported values show that the (relative) standard errors are under 5 percent for most of the variables in both samples. Those for the experimental sample are predictably larger than those for the core. The following summary statistics provide a general sense of the magnitude of the sampling errors: the average relative error is 2.1 percent in the core and 2.8 percent in the experimental sample; the mean design effect is 1.37 in the core and 1.30 in the experimental sample; roh averages 0.095 and 0.090 in the two samples, respectively. A comparison with the corresponding estimates from Peru indicates that the design effects are substantially larger for the Dominican Republic surveys (due in large part to the weighted design), but that the overall relative errors are smaller because of larger sample size.

2.3 Comparability of the Samples

In order to assess the degree to which the two samples are comparable, several pieces of information collected with the same questions in both surveys were compared: age, marital status, years since first union, and woman's education. The results, presented in Table 2.4, indicate similar distributions for the two surveys, with the exception of duration since first union, for which the experimental survey has slightly more cases with a short duration than the core; however, the differences are not statistically significant. A comparison of mean parity by age of the woman (presented in

Chapter 3) also shows similar values for both surveys. These comparisons suggest that the core and experimental samples are statistically comparable.

Table 2.4 Background characteristics, core and experimental questionnaires

	Age*	
	Core	Exper.
15-19	25.8	26.2
20-24	21.7	21.2
25-29	16.2	15.8
30-34	12.6	12.4
35-39	10.0	10.7
40-44	7.4	7.6
45-49	6.3	6.1
Don't Know	0.0	0.0
Missing	0.0	0.0
Total	100	100

	Education	
	Core	Exper.
< 4 yrs.	26.7	27.0
4-6 yrs.	24.7	24.7
1-4 sec.	27.0	25.8
5-6 sec.	13.1	14.3
Higher	8.5	8.2
Total	100	100

	Marital Status	
	Core	Exper.
Never married	33.9	34.4
Married	20.2	20.5
Living together	1.2	1.1
Widowed	1.7	2.3
Divorced	11.7	11.3
Separated	31.3	30.4
Total	100	100

	Years Since First Union	
	Core	Exper.
0-4	23.3	26.6
5-9	21.2	23.5
10-14	16.9	16.6
15-19	13.5	12.0
20-24	11.6	12.1
25+	13.6	9.2
Total	100	100

* Completed years

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CHAPTER 3

FERTILITY

3.1 Introduction

One of the objectives of the experimental survey is to assess the accuracy of data collected in a truncated birth history. Although many surveys have collected information on the most recent one or two births, there has been little experience with collecting birth histories for a specific period (e.g., the most recent five years).

The truncated birth history has several advantages over the full birth history: it saves considerable time and money and, since only recent events are recorded, the quality of date-reporting is generally higher. There are several limitations as well. In particular, demographers have expressed concern that interviewers might consciously shift birth dates backward from the reference boundary (i.e., the starting date of the truncated history), so as to minimize their workload. In addition, truncated histories do not provide as rich a data set for the analysis of fertility trends and differentials as do complete histories, nor do they give the analyst much scope for assessing the internal consistency of the data.

In both the core and the experimental questionnaires, the first questions pertaining to fertility are the standard set of questions on children ever born (Brass, 1964), with separate questions for living children, children who died, and children who no longer live at home. The remainder of the fertility section differs in the two questionnaires, since the core survey is based on a full birth history and the experimental survey incorporates a truncated history (with an additional component for fetal deaths).

The full birth history design is similar to that used in the World Fertility Survey. Specifically, interviewers are instructed to record the name, sex, survival status, date of birth, age at death (where applicable), current age, and living arrangement of each child born, beginning with the first birth. The truncated history in the experimental questionnaire proceeds as follows: interviewers are instructed to record the date of birth, name, sex, survival status, and age at death (where applicable), for all births since January 1981 *and* for one prior birth, beginning with the most recent birth. Since the interviews took place during fall 1986, interviewers were actually recording all births during a period just under six years in length (five years and ten months, on average). The inclusion of the birth preceding January 1981 effectively extends the reference period to almost seven years. In particular, this additional information allows for the estimation of fertility rates for the year preceding the boundary date—namely, 1980. Because of the importance for demographic analysis of the woman's age at first birth, an additional question on date of first birth follows the truncated history.

Calculations from the core surveys in Peru and the Dominican Republic indicate that births between January 1981 and the interview date constitute 29 percent and 28 percent, respectively, of all of the births collected in the full history. These are the births for which extensive information is collected in the truncated history. Taken together with information on the date of the most recent birth prior to 1981 and of the first birth, 62 and 60 percent, respectively, of the births in the full history are represented in the truncated history. These estimates suggest that the truncated history takes about half as long to collect as the full history. This may be overestimated, however, since respondents are apt to supply information about recent events more readily than about events further in the past.

Following the truncated history in the experimental questionnaire, interviewers collected data on "other pregnancies": pregnancies which ended in miscarriage, abortion, or stillbirth. Interviewers recorded the dates and durations of those which ended after January 1981 and determined whether those

of duration seven months or more showed life signs. The objective of these questions is twofold: to improve estimates of contraceptive failure and exposure to pregnancy, and to evaluate the resulting impact on estimates of fertility and infant (neonatal) mortality—i.e., to determine the frequency with which pregnancies are initially characterized as miscarriages or stillbirths but are subsequently acknowledged to have exhibited signs of life. No questions with regard to "other pregnancies" are included in the core questionnaire.

There is another important difference between the birth histories collected in the two questionnaires. Following the truncated birth history and the "other pregnancy" history in the experimental survey, the interviewer codes months of pregnancy in the first column of the calendar.[1] This is the first type of information entered on the calendar. Although it is possible that recording dates on the calendar improved the accuracy of the dates (i.e., interviewers might have checked the reported pregnancy dates with the respondent, particularly if pregnancy intervals appeared to be short), it is likely that recording dates in this manner improved the accuracy of subsequent information such as reported periods of contraceptive use, marriage, and employment; indeed, this is one of the rationales for implementation of a calendar.

As mentioned earlier, there was some initial concern with using the truncated birth history because of fears that interviewers would minimize their workload by intentionally recording births with reported birth dates of 1981 (or perhaps even 1982) as having occurred in 1980 or earlier. This would relieve the interviewers of having to collect certain types of information (e.g., health) for these births since the births would no longer fall within the specified calendar period. It is important to note, however, that interviewers using the core questionnaire would be similarly motivated to displace birth dates. Although the core questionnaire contains a full birth history, certain sections of the questionnaire are restricted to births occurring in 1981 or later—i.e., the same period as that covered by the calendar in the experimental questionnaire. In fact, there is probably greater likelihood of such dates being misreported in the core questionnaire than in the experimental, because the existence of a calendar in the experimental questionnaire may act as a deterrent to deliberate misreporting.[2]

3.2 Summary of Findings from the Peru Surveys

Several important findings emerged from the analysis of fertility information in the Peru core and experimental surveys (Goldman et al., 1989). First, the analysis did not reveal any apparent shortcoming of the truncated history: total fertility rates for the period 1980-86 were virtually identical in both surveys. In particular, there was no indication that interviewers displaced birth dates across the reference boundary (January 1981) in the truncated history. Interviewers administering the *core* questionnaire, on the other hand, may have displaced births from 1981 to 1980.[3] This finding is consistent with the hypothesis stated above that interviewers administering the core questionnaire would be more likely to displace birth dates across the reference boundary than those required to use a calendar. However, the fact that the year preceding the beginning of the truncated history (1980) is a rounded year makes it difficult to distinguish such intentional displacement from heaping on years divisible by five or ten.

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[1] All pregnancies that resulted in a live birth were recorded in the calendar as eight months of pregnancy followed by a month in which a birth occurred.

[2] For example, interviewers have to fill out every month of the first column of the calendar with either a code for pregnancy, a code for nonuse of contraception, or a code for use of a particular method. Intentional fabrication of dates of pregnancy would require subsequent fabrication of contraceptive status for the relevant months.

[3] A similar type of displacement of birth dates in the standard DHS questionnaire appears to have occurred in a number of other countries, particularly those in Africa (Arnold, 1989).

Second, in spite of similar estimates of fertility for the period 1980-86 in Peru, the two questionnaires yielded significantly different estimates of the extent of recent fertility decline. Specifically, the core and experimental surveys indicated declines in the total fertility rate from the period 1980-82 to 1983-86 of 20 and 10 percent, respectively. Since there was virtually no change in age at marriage and breastfeeding and only modest changes in contraceptive use between the two periods, the larger estimate was regarded as suspect.[4] One hypothesis is that intentional backward displacement of recent birth dates by interviewers may account for the larger estimate of fertility decline. This hypothesis is consistent with the fact that estimates of cumulative fertility reconstructed from the core survey for the dates of two earlier surveys (1975 and 1977) exceed the parities reported in the earlier surveys.

A third important finding concerned the fetal death history collected in the experimental questionnaire. In the case of Peru, this addition to the maternity history had no impact on the estimated count of births. Although 8 percent of pregnancies occurring during the period 1981-86 were reported as part of the "other pregnancy" history, *none* of these was acknowledged to have shown signs of life.

3.3 Results

Table 3.1 presents average numbers of children ever born by five-year age group, as estimated from the parity questions in the two surveys. The comparison indicates close agreement between the two samples: the only statistically significant difference is the higher parity estimate for age group 25-29 in the experimental survey.[5]

Table 3.1 Mean numbers of children ever born, by age group, core and experimental questionnaires

Age Group	Core	Experimental
15-19	0.20	0.18
20-24	1.05	1.08
25-29	2.25	2.51
30-34	3.46	3.37
35-39	4.60	4.74
40-44	5.51	5.84
45-49	7.03	6.97
15-49	2.40	2.47

[4] Use of the Bongaarts indices to partition the change in total fertility over the period indicated that the changes in contraceptive use, marriage, and breastfeeding could not account for the reported fertility decline. It is possible, however, that a substantial increase in the abortion rate could explain the change in fertility (Goldman et al., 1989).

[5] Tests for significant differences between the two questionnaires are reported at the 5 percent level.

Of particular interest is the comparison of fertility estimates for the recent past. Table 3.2 presents total fertility rates[6] for the period 1980-86 by calendar year and by aggregated periods. Overall, the core and experimental surveys yield similar estimates of total fertility for the period 1980-86: 3.9 and 3.8, respectively.[7] As in the case of Peru, there is no evidence of overall omission of births from the truncated history. In addition, single calendar year estimates of total fertility (from both the core and experimental DHS surveys) for 1980 and 1983 are in close agreement with estimates derived from the 1980 WFS and 1983 CPS surveys for the year preceding each survey.

Table 3.2 Cumulative fertility rates through exact age 45 by calendar year, DHS and other surveys

Year	DHS Surveys		Other Surveys
	Core	Experimental	
1980	4.47	4.35	4.4[1]
1981	4.32	4.36	
1982	4.19	4.44	
1983	4.03	3.98	4.0[2]
1984	3.39	3.48	
1985	3.71	3.22	
1986[3]	3.47	3.16	
1980-82	4.31	4.37	
1983-86	3.65	3.46	
1980-86	3.92	3.82	

[1] Derived from the 1980 WFS survey for the year preceding survey *(Consejo Nacional de Población y Familia 1984,* p. 63).

[2] Derived from the 1983 CPS survey for the year preceding survey *(Consejo Nacional de Población y Familia 1984,* p. 63).

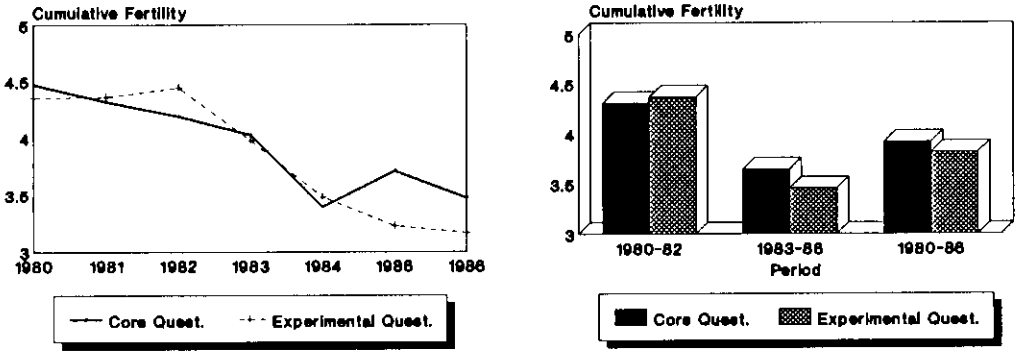
[3] Includes exposure through the month of interview.

[6] Since no women over age 49 are interviewed, the fertility calculation for the period 1980 to 1986 is truncated at age 45. Thus, the estimates presented are actually cumulative fertility rates through exact age 45 rather than total fertility rates. However, the estimated fertility rate for women 45-49 (from the core) is only 6.4 per 1,000 births for the most recent three-year period (1984-86); thus, the net effect of omitting women 45-49 from the calculation is small. Note that estimates for the calendar year 1986 are based on information up to the month of interview; on average, 10 months of the year are included in the calculation.

[7] For the period 1980-86, there were 5,964 births in the core survey and 2,982 births in the experimental.

Single-year total fertility rates are shown graphically in the left panel of Figure 3.1. In general, both surveys show a similar picture: total fertility rates of about 4.4 to 4.5 in 1980 with a more or less steady decline through the 1980s. The differences in estimates between the two surveys are statistically significant only for 1985.[8]

Figure 3.1
Cumulative Fertility Rates Through Exact Age 45
By Calendar Year



Fertility estimates for the periods 1980-82 and 1983-86 are shown in Table 3.2 and the right panel of Figure 3.1. The two questionnaires yield similar estimates for the earlier period but differ by 0.2 for the more recent period; however, these differences are not statistically significant. The estimated age-specific fertility rates for these periods, shown in Table 3.3, indicate that the minor discrepancies for the more recent period are concentrated in the older age groups.

The impact of these differences is that the two questionnaires provide a somewhat different impression of the magnitude of fertility decline over the period 1980-86: the estimated decline based on the core is 15 percent, while that for the experimental survey is 21 percent. Although this difference may appear important, the estimated fertility decline derived from the core questionnaire is *not* significantly different from that derived from the experimental questionnaire.[9]

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[8] We have used an approximation suggested by Little (1982) to estimate the sampling error of the total fertility rate. This approximation is based on the estimated design effect of the general fertility rate applied to the estimated standard error of the TFR for a simple random sample.

[9] The 95 percent confidence interval for the estimated percent of fertility decline derived from the core questionnaire equals [10.3, 20.3] and the corresponding interval derived from the experimental questionnaire is [14.6, 27.0]. Although demographers are often interested in estimating the extent of fertility decline within a recent period (such as five or six years), this calculation indicates that such estimates are characterized by large sampling errors—even when each sub-period is based on three years of exposure.

Table 3.3 Age-specific fertility rates (per 1,000), 1980-82 and 1983-86, core and experimental questionnaires

Age Group	1980-82		1983-86	
	Core	Experimental	Core	Experimental
15-19	112.9	116.8	100.5	90.0
20-24	225.7	232.8	205.0	210.8
25-29	208.0	204.9	190.8	200.4
30-34	147.7	146.7	128.0	111.5
35-39	104.5	124.5	74.6	60.8
40-44	63.7	49.0	31.9	18.7

It is interesting to note that the difference in estimated fertility decline between the two questionnaires is in the *reverse* direction from that found in Peru. In Peru, the full birth histories in the core questionnaire yielded an estimated fertility decline twice as large as that resulting from the experimental questionnaire.[10] Thus, the analysis of fertility information in the Dominican Republic does not support the earlier contention that the core questionnaire leads to a greater distortion in estimates of fertility because of interviewer error. In addition, the agreement of both DHS surveys in the Dominican Republic with previous surveys suggests that, for both the experimental and core questionnaires, transfer of birth dates across the reference boundary occurs infrequently.

Further confirmation of the high quality of fertility data from the core questionnaire in the Dominican Republic comes from estimates of the mean number of children ever born reconstructed from the full birth history in the DHS core questionnaire for the dates of the 1975 and 1980 WFS surveys and the 1983 CPS survey. These values are compared with parities reported in each of the three earlier surveys and are shown in Table 3.4. In each case, the two sets of estimates are in close agreement. The largest differences (between 0.2 and 0.3) occur for women over 35, and generally result from higher values in the core survey. Thus, there is no evidence of omission of births in the full maternity histories.

One final issue concerns the usefulness of the "other pregnancy" history. In the experimental questionnaire, a total of 340 fetal deaths were reported for the period 1981-86; these constitute 11 percent of all pregnancies in this period. This figure exceeds the corresponding estimate of 8 percent for Peru and may be the consequence of a higher rate of induced abortion in the Dominican Republic. Among these fetal deaths, approximately 10 percent occurred at seven months or later; however, as in the case of Peru, *none* of the fetal deaths was reported to have shown signs of life. Thus, there appears to be little value in incorporating such a pregnancy history, if the purpose is to improve estimates of fertility and estimates of infant or neonatal mortality.

[10] This difference was statistically significant at the 5 percent level.

Table 3.4 Mean numbers of children ever born, by five-year age group, reconstructed from the DHS core survey and reported in the 1975 and 1980 WFS surveys and the 1983 CPS survey

	1975[1]		1980[2]		1983[3]	
Age Group	DHS	WFS	DHS	WFS	DHS	CPS
15-19	0.3	0.2	0.2	0.2	0.2	0.2
20-24	1.5	1.4	1.3	1.2	1.2	1.2
25-29	3.1	3.1	2.8	2.8	2.5	2.5
30-34	4.8	4.6	4.3	4.1	3.8	3.7
35-39	6.2	6.4	5.8	5.5	5.0	5.3
40-44			6.8	6.5	6.5	6.2

[1] The estimates for the 1975 survey are taken from Guzmán (1980), p. 38. The 1975 survey took place between April and July. The corresponding estimates from the DHS survey are derived for June 1975.

[2] The estimates from the 1980 WFS survey are calculated as of the end of 1979 rather than the survey dates, February through May 1980 (Hobcraft and Rodríguez, 1982, p.13). The corresponding estimates from the DHS survey are derived for December 1979.

[3] The estimates for the 1983 CPS survey are taken from Consejo Nacional de Población y Familia (1984, p. 59). The CPS survey took place between April and July 1983. The corresponding estimates from DHS survey are derived for June 1983.

3.4 Conclusions

The analysis of the maternity history data collected in the DHS surveys in the Dominican Republic reveals that the data are of high quality in both the core and the experimental surveys. This finding is based on consistency checks between the two questionnaires, as well as on comparisons with data from three previous surveys. The results do not support the finding of the Peru experimental survey and other surveys, that interviewers may have intentionally transferred birth dates across the reference boundary (i.e., a date five or six years prior to interview) so as to minimize their workload.[11] The findings also indicate that collection of a fetal death history does not improve estimates of fertility or infant mortality.

[11] This does not cast doubt on the findings of the earlier surveys, however. There may be substantial variation among countries regarding the extent of displacement error, which may reflect the quality of interviewers or the extent to which respondents are able to report dates.

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CHAPTER 4

CONTRACEPTION

4.1 Introduction

The subject of contraception has been a major issue in the development and analysis of the experimental questionnaire. One set of concerns is related to whether alternative wordings or orderings of questions can affect estimates of contraceptive knowledge, ever-use, availability, acceptability, and current use. The other major question has been whether use of the six-year calendar can improve the collection of information on contraceptive behavior and, thus, have a substantial impact on estimates of contraceptive prevalence (in the recent past), as well as on contraceptive failure and discontinuation.

The analysis of the Peru surveys demonstrated that, although reports of knowledge, ever-use, and current use are largely unaffected by the variations between the core and experimental questionnaires, estimates of past use depend on the survey instrument. Several comparisons suggest that the reporting of information on contraceptive behavior obtained from the calendar is superior to comparable information obtained from the core questionnaire (Goldman et al., 1989). An important issue is the extent to which these findings can be generalized to other countries. Of particular interest is whether a questionnaire with a calendar is superior to the core questionnaire in countries which rely on modern methods of contraception. Since women in the Dominican Republic primarily use sterilization and the pill—in contrast to Peru, where the dominant method is rhythm—this issue will be addressed in the analysis below.

4.2 Knowledge and Ever Use of Contraception

The third section of each questionnaire is devoted to the collection of information on contraception. In the first part of this section, data are collected on contraceptive knowledge, ever use, availability, and acceptability. Questions on knowledge and ever-use are essentially the same in the core and experimental questionnaires: the respondent is first asked (Q. 302) to mention spontaneously any method she knows; the interviewer subsequently reads a description of each method and asks the respondent if she has heard about the method (Q. 303) and if she has ever used it (Q. 304). The questionnaires differ, however, with regard to the order of the methods. In the core questionnaire, the order proceeds from more to less effective methods: pill, implant, IUD, injection, vaginal methods, condom, sterilization, rhythm, and withdrawal. In the experimental questionnaire, the order is basically reversed: rhythm, withdrawal, condom, sterilization, injection, vaginal methods, IUD, implant, and pill. There is one additional difference: in the experimental questionnaire (but not the core), there is a probe (Q. 308) to determine if a woman who did not acknowledge using any of the specified methods did something to delay or avoid getting pregnant.

Estimates of knowledge of each of the methods are presented in Table 4.1. The estimates are the percentages of women who know about each method, both spontaneously and after hearing the description read by the interviewer. Estimates derived from the core and the experimental questionnaires are similar, but several of the differences are statistically significant. As expected, these differences relate to recognition of methods following the interviewer's description; significant differences occur for both effective methods (IUD, injection, vaginal methods, and male sterilization) and for rhythm and withdrawal. In four of the six cases, higher values resulted using the experimental questionnaire; the reverse occurred with regard to the two traditional methods.

Table 4.1 Knowledge of contraception among all women, by method, core and experimental questionnaires

Method	Percent Who Heard of Method: Yes (Spontaneous) Core	Yes (Spontaneous) Experimental	Yes (Probed) Core	Yes (Probed) Experimental
Pill	84.0	83.9	12.6	13.5
Implant	7.8	8.3	23.0	24.5
IUD	49.2	46.7	35.3	39.9*
Injection	16.7	14.9	53.1	61.8*
Diaphragm, Foam, Jelly	28.1	28.3	29.3	36.3*
Condom	33.3	34.8	50.1	48.6
Female Sterilization	19.6	19.5	76.9	77.3
Male Sterilization	2.3	2.6	43.0	50.0*
Rhythm	13.3	14.7	36.3	28.5*
Withdrawal	2.3	2.2	51.2	46.1*
Number of Women	7648	3885		

Note: The order of methods in the core questionnaire is as listed in the table above. The order in the experimental questionnaire is as follows: rhythm, withdrawal, condom, male sterilization, female sterilization, injection, diaphragm, IUD, implant, and pill.

* Differences between the core and experimental questionnaires are significant at the 5 percent level.

These results suggest that, in general, the experimental questionnaire produces higher estimates of knowledge for modern effective methods and lower estimates for traditional methods. This finding is consistent with the different order of methods in the two questionnaires and suggests greater acknowledgment of methods which appear towards the *end* of the list in the respective questionnaire. Perhaps this pattern results from a reluctance on the part of the respondent to repeatedly admit ignorance of methods to the interviewer. It is interesting to note the contrast between these findings and those of the Peru study: in Peru, the magnitude of the differences in estimates of knowledge between the two questionnaires is smaller and generally not statistically significant.

Estimates of the percent of ever-married women who have ever used each of the contraceptive methods are presented in Table 4.2. Overall, the two surveys yield similar results: 70.2 percent of ever-married women who received the core questionnaire and 71.8 percent of those who received the experimental questionnaire have used a method of contraception at some time. The estimates are similar for each of the methods, although the percentage ever using vaginal methods or withdrawal is significantly higher for the experimental questionnaire.

It is interesting to note that all women responded negatively to the probe (Q. 308, in the experimental questionnaire) which was designed to determine whether women who did not acknowledge

Table 4.2 Ever use of contraception among ever-married women, by method, core and experimental questionnaires

Method	Percent Ever Using Method	
	Core	Experimental
Pill	44.4	44.1
Implant	0.3	0.6
IUD	11.4	11.6
Injection	1.5	1.1
Diaphragm, Foam, Jelly	6.5	8.8*
Condom	16.0	16.7
Female Sterilization	30.2	31.3
Male Sterilization	0.1	0.2
Rhythm	8.8	9.7
Withdrawal	13.4	15.9*
Any Method	70.2	71.8
Number of Women	5251	2703

Note: The order of methods in the core questionnaire is as listed in the table above. The order in the experimental questionnaire is as follows: rhythm, withdrawal, condom, male sterilization, female sterilization, injection, diaphragm, IUD, implant, and pill.

* Differences between the core and experimental questionnaires are significant at the 5 percent level.

use of any specified method had in fact used some form of contraception.[1] In contrast, nearly 4.4 percent of the designated respondents in Peru answered positively to the probe.

4.3 Acceptability and Availability of Contraception

Different approaches were used to assess the acceptability and reputation of specific contraceptive methods in the two questionnaires. The relevant question in the core questionnaire (Q. 307), addressed to all women who ever heard of the method, determined what the respondent thought was the *main problem* with using the method. In the experimental questionnaire, the respondent was cast in the role of advisor and asked (Q. 304a): "If a woman did not want to become pregnant, would you advise her to use this method? If no, why not?" Both questions were accompanied by a list of pre-coded responses, although the specific items on the list differed. In particular, the core questionnaire contained many more codes (20) than the experimental questionnaire (8).

[1] The absence of any positive response to the probe may be a result of editing during the fieldwork.

The results, shown in Tables 4.3.1 and 4.3.2 for the core and experimental questionnaires, respectively, suggest that the two approaches are measuring somewhat different dimensions. Consider, for example, the ranking of different methods according to the percentage responding "no problem" in the core questionnaire and "yes, would advise a woman to use" in the experimental questionnaire. The estimates indicate that the pill ranks as the next-to-least acceptable method in the core questionnaire and as the next-to-most acceptable method in the experimental questionnaire. On the other hand, female and male sterilization and rhythm are ranked relatively high on acceptability in both questionnaires. One possible explanation of the apparent differences for the pill is that, although the pill is widely known to have health-related side effects, it is still viewed as a method to be recommended.

Table 4.3.1 Distribution of women's perception of the main problem with using specific methods, among women who ever heard of method, core questionnaire

Main Problem Perceived	Pill	Impl.	IUD	Inj.	Diaph. Foam Jelly	Cond.	Female Ster.	Male Ster.	Rhythm	With.
No problem	17.9	21.4	15.0	23.9	26.2	23.9	53.0	40.1	34.8	33.8
Fear, forget	1.5	1.2	0.6	0.6	0.8	0.9	0.3	0.2	5.4	1.9
Husband disapproves	0.0	0.2	0.3	0.1	1.3	1.5	0.2	1.5	1.3	3.9
Vaginal infection	2.5	0.5	10.3	0.2	4.7	3.5	1.2	0.1	0.1	0.1
Other health problems	22.7	3.4	13.4	3.7	0.8	0.7	3.1	0.2	0.2	0.4
Fear of cancer	7.9	2.0	11.7	0.9	1.2	1.2	1.2	0.4	0.1	0.0
Other worries about health	22.3	7.8	9.8	9.4	4.6	5.4	7.7	3.0	0.9	3.0
Interferes with sex or diminishes sex enjoyment	0.2	0.1	0.3	1.4	2.8	2.7	2.4	4.3	0.8	6.2
Access	0.1	0.0	0.1	0.0	0.1	0.1	0.0	0.1	0.0	0.1
Cost	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0
Ineffective	1.4	1.5	10.2	2.1	6.4	15.9	4.3	0.7	21.1	12.1
Irreversible	1.0	0.3	0.4	1.5	0.3	0.3	5.9	6.6	0.3	0.3
Other	5.9	2.1	3.7	3.0	5.1	8.8	1.6	1.6	1.5	3.9
Don't know	16.6	59.5	24.2	53.0	45.7	35.0	19.1	41.2	33.5	34.3
Total	100	100	100	100	100	100	100	100	100	100
Percent who never heard of method	3.4	69.3	15.5	30.2	42.6	16.5	3.4	54.7	50.4	46.5

It is difficult to evaluate the two questions because both have weaknesses. The question about problems associated with each method in the core elicits too many "don't know" responses (Table 4.3.1), probably because the question implies a high level of familiarity with the method: the average percent in this category is 36 across the 10 methods and exceeds 50 percent for injection and implant. In the experimental questionnaire (Table 4.3.2) the category "don't know" contains, on average, only 12 percent

Table 4.3.2 Distribution of whether women would advise others to use a specific method, and reasons for not advising, among women who ever heard of method, experimental questionnaire

	Pill	Impl.	IUD	Inj.	Diaph. Foam Jelly	Cond.	Female Ster.	Male Ster.	Rhythm	With.
Yes, advise to use	59.8	40.8	41.8	40.9	40.3	38.5	75.0	56.9	48.8	43.1
Reason for not advising										
Not available	7.1	12.2	8.7	13.9	13.4	13.4	5.9	11.4	11.8	11.8
Too expensive	0.1	0.3	0.2	0.3	0.1	0.0	0.3	0.2	0.1	0.0
Health reasons	19.0	10.0	26.1	15.5	11.7	9.5	4.4	3.8	0.9	3.0
Ineffective	1.4	1.2	6.5	1.8	6.4	11.4	0.6	0.4	18.4	12.8
Interferes	0.2	0.2	0.2	0.6	1.5	2.8	0.8	2.5	1.0	8.2
Against contraception	2.7	1.1	2.1	2.4	1.9	1.9	3.0	3.0	1.1	1.6
Other reasons	4.3	11.1	6.6	7.6	9.8	9.8	6.1	11.7	7.0	7.4
Don't know	5.4	23.1	7.8	17.1	15.0	12.8	3.8	10.2	10.8	12.1
Percent total	100	100	100	100	100	100	100	100	100	100
Percent who never heard of method	2.6	67.3	13.4	23.3	35.4	16.6	3.2	47.4	56.8	51.8

of responses.[2] One advantage of the core questionnaire approach is that it seems to discriminate among the methods while the experimental question yields little differentiation in the acceptability of the IUD, implant, injection, vaginal methods, and withdrawal.

It is not clear that either question provides information useful to family planning program interests. In particular, most of the results are predictable: for example, health problems with the pill and IUD, ineffectiveness of rhythm, and irreversibility of sterilization. One unexpected finding is that costs are rarely mentioned as a concern. The main conclusion of this analysis is that the subject needs to be approached more intensively; the two strategies incorporated in the Dominican Republic DHS surveys are simply not adequate. The same conclusions were reached from the analysis of identical questions fielded in Peru.

The core and experimental questionnaires each included a question to determine the sources of supply for contraception. The following questions were asked of all respondents who acknowledged ever having heard of a method: "Where would you go to obtain (METHOD)?" (Q. 305 in the core questionnaire); and "What is the nearest place or person from which you can obtain (METHOD)?" (Q. 305 in the experimental questionnaire). Both questions listed similar categories for coding the response.[3]

The results are shown in Table 4.4. There is essentially no difference in the distribution of responses between the two questionnaires. The questions in the core questionnaire may be slightly preferable because they elicit fewer "don't know" responses for methods. The same conclusions were reached in the Peru study.

[2] Similar patterns of unknown responses occurred in the Peru surveys.

[3] The core questionnaire contains 11 specific codes, whereas the experimental questionnaire contains nine specific codes; the additional codes in the core represent "church" and "friends/family."

Table 4.4 Knowledge of sources of supply for contraception, among women who ever heard of a specific method, core and experimental questionnaires

Source of Supply	Pill		Implant		IUD		Injection		Diaphragm		Condom		Female Steril.		Male Steril.		Rhythm	
	Core	Exp.	Core	Exp.	Core	Exp.	Core	Exp.	Core	Exp.	Core	Exp.	Core	Exp.	Core	Exp.	Core	Exp.
Public hospital or family planning clinic	55.4	55.3	58.4	65.5	66.5	69.0	51.3	43.7	60.8	52.7	45.6	39.4	53.7	57.5	40.4	43.0	41.1	42.0
IDSS or FFA hospital	0.6	0.2	0.7	0.3	0.6	0.3	0.5	0.3	0.6	0.2	0.6	0.3	1.2	0.5	1.2	0.4	0.8	0.2
Private clinic	8.3	6.2	17.1	13.6	17.5	15.3	18.2	13.5	11.4	8.4	5.0	2.7	38.5	33.6	40.1	34.2	14.3	10.7
Doctor's office	2.6	1.7	3.2	2.3	5.0	2.7	4.8	3.0	3.3	2.0	1.4	0.6	3.4	2.9	3.8	3.3	7.8	6.4
Pharmacy	17.6	20.5	0.1	1.2	0.1	1.8	10.1	19.2	11.0	21.1	29.2	30.4	0.0	0.1	0.0	0.0	0.1	0.2
Health worker	7.7	7.8	0.2	0.3	0.3	0.4	0.6	0.8	2.9	3.1	5.0	6.5	0.1	0.1	0.0	0.2	2.4	4.0
Profamilia clinic	1.2	1.4	0.7	0.7	0.7	1.1	0.4	0.7	0.9	1.4	0.8	1.1	0.2	0.3	0.3	0.2	1.5	1.5
Other	0.9	0.5	0.0	0.2	0.0	0.2	0.2	0.4	0.2	0.3	0.5	1.1	0.0	0.3	0.1	0.5	16.4	14.1
No place	0.4	0.2	0.2	0.5	0.2	0.1	0.7	0.5	0.4	0.3	0.4	0.3	0.1	0.1	0.1	0.5	3.3	1.9
Don't know	5.4	6.1	19.4	15.3	9.0	8.9	13.0	17.8	8.5	10.5	11.5	17.6	2.9	4.6	14.1	17.7	12.3	18.9
Total	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Percent who never heard of method	3.4	2.6	69.3	67.3	15.5	13.4	30.2	23.3	42.6	35.4	16.5	16.6	3.4	3.2	54.7	47.4	50.4	56.8

4.4 Current and Previous Use of Contraception

The core and experimental questionnaires obtained information on current contraceptive use in essentially the same manner: interviewers determined whether the respondent was using a method and, if so, which method she was using and for how long she had been using the method continuously. There are, however, several minor differences between questionnaires. First, the experimental questionnaire (but not the core) refers to the woman's partner (Q. 313): "Are you *or your partner* currently doing something or using any method to avoid getting pregnant?" Second, the core questionnaire determines duration by asking "for how long...," with the answer coded in months or years, whereas the experimental question asks "for how many months..."[4] And thirdly, after obtaining the reported duration of current use, interviewers using the experimental questionnaire coded the reported months of use in the first column of the calendar.

Information on previous use was obtained in a different manner in the two questionnaires. After collecting information on current use, interviewers administering the core questionnaire collected data on the method used prior to the current method but subsequent to the last birth or marriage (i.e., in the open interval). For women not currently using a method, information on type of method and duration of use was obtained only for the last method in the open interval. Subsequently, in the core questionnaire, information on use was collected in a tabular format (Q. 348 through Q. 353) for the interval preceding each birth *since January 1981*. The questionnaire allows for the coding of up to two methods within an interval; however, duration of use is reported only for the *last method* in the interval.

In the experimental questionnaire, after obtaining information on current use and entering it into the calendar, interviewers used the calendar to probe for all previous segments of use between 1981 and interview date (Q. 318); interviewers were instructed to determine the month and year in which use began if it preceded the starting date of the calendar (January 1981). Interviewers were trained to use information already coded in the calendar to aid the respondent's recall; note that only months of pregnancy and birth had been entered into the calendar at this stage of the interview. Months of pregnancy and months of contraceptive use (including a code "0" for nonuse) were entered in the first column of the calendar and each month of this column contained one and only one code—a code for pregnancy, birth, nonuse, or use of a particular method (or a specified combination of methods).

Both questionnaires collected information on reasons for termination of use—i.e., whether the use resulted in a pregnancy, the woman stopped using in order to become pregnant, or the method was discontinued for another reason. In the core questionnaire, this information was obtained as part of the same table which collected information on use within each recent birth interval.[5] In the experimental questionnaire, interviewers were trained to determine the reason for termination for each contraceptive use segment[6] and to code the response in the next column (Column 1A) of the calendar alongside the last month of use for the relevant episode.

Estimates of current contraceptive use are shown in Table 4.5 for currently married women. The two sets of figures are similar; only the estimate for withdrawal is significantly different between questionnaires.

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[4] In both questionnaires, the date of sterilization is obtained separately from information on the duration of use of the current method.

[5] Whereas the core questionnaire contained 10 possible codes for the reason for discontinuation, the experimental calendar contained only three (became pregnant while using, stopped in order to become pregnant, and other).

[6] A contraceptive use segment is defined as a period of use followed by either a pregnancy or nonuse in the subsequent month, but not immediately by another method.

Table 4.5 Current use of contraception among currently married women, by method, core and experimental questionnaires

Method	Percent Currently Using Method	
	Core	Experimental
Any Method	49.8	52.9
Pill	8.8	8.7
Implant	0.2	0.4
IUD	3.0	2.5
Injection	0.1	0.0
Diaphragm, foam, jelly	0.2	0.4
Condom	1.4	1.5
Sterilization	32.9	34.6
Rhythm	1.3	1.7
Withdrawal	1.5	2.4*
Other	0.4	0.6
No Method	50.2	47.1
Total	100	100
Number of women	4134	2131

* Differences between the core and experimental questionnaires are significant at the 5 percent level.

The reliance on sterilization by nearly one-third of currently married women (and two-thirds of users) in the Dominican Republic implies that the evaluation of previous use between the core and the experimental surveys depends largely on the reporting of dates of sterilization. As shown in Table 4.6, the percent distributions of year of sterilization for the core and experimental questionnaires are very similar,[7] with about 55 percent of ever-married sterilized women reporting a sterilization in the period 1981-86; only about 10 percent reported their sterilization as having occurred prior to 1975. The similarity of the distributions is shown graphically in Figure 4.1. The average number of months since the sterilization took place equals 30.3 months in the core and 29.5 months in the experimental questionnaire.

As the results in the first two columns of Table 4.7 indicate, there is little evidence of heaping on selected durations of sterilization (i.e., multiples of 6 or 12 months) in either the core or the experimental questionnaire. However, this finding does not extend to other methods of contraception. The second set of columns of Table 4.7 demonstrates that, although heaping on preferred digits is not apparent in the experimental questionnaire, heaping of durations of current use occurs frequently in the core questionnaire. The heaping is even more pronounced for reported durations of use in closed intervals for the core questionnaire. The estimates in Table 4.7 also indicate that, while the average duration of use for the last method in closed intervals is virtually identical for both questionnaires, the mean duration of use for the current method (excluding sterilization) is 2.6 months longer for the core questionnaire.

[7] A Chi-square test indicates that the two distributions are not statistically different.

Table 4.6 Distribution of year of sterilization, among sterilized, ever-married women age 15-49, core and experimental questionnaires

Years	Percent Sterilized*	
	Core	Experimental
1962	0.1	0.5
1963-65	0.7	0.7
1966-68	1.0	1.0
1969-71	2.7	2.3
1972-74	6.1	6.1
1975-77	11.1	12.4
1978-80	23.1	21.3
1981-83	24.7	22.7
1984-86	30.4	33.2
Total	100	100

* Differences between the core and experimental surveys are not statistically significant at the 5 percent level.

Figure 4.1
Distribution of Year of Sterilization

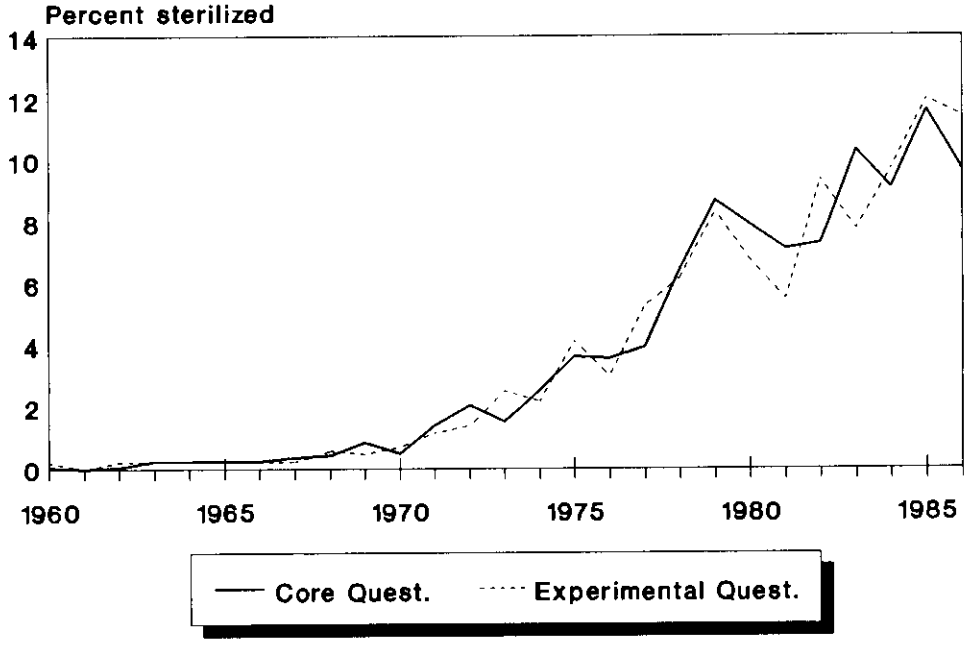


Table 4.7 Index of heaping on particular durations of contraceptive use, and mean length of use, for current use and use of last method in closed intervals, ever-married women, core and experimental questionnaires

Duration (months)	Sterilization		Current Use (Excluding Sterilization)		Use in Closed Interval[1]	
	Core	Experimental	Core	Experimental	Core	Experimental
6	1.6	1.1	1.2	1.3	1.4	1.9
12	0.6	1.2	5.0	0.9	15.4	1.5
24	1.4	0.8	12.2	1.2	21.3	1.3
Mean length of use (months)[2]	30.3	29.5	19.4	16.8	10.5	10.8
Median length of use (months)[2]	27.8	26.5	10.4	9.0	5.9	6.6

Note: The index of heaping is equal to the number at the reported duration divided by the average number at the two consecutive durations on either side. For example, the index for six months equals:

$$\frac{\text{\# segments with duration of 6 months}}{(\text{\# segments with durations of 4, 5, 7, and 8 months}/4)}$$

[1] In order to make the comparison between the core and experimental surveys comparable, this calculation includes only those closed intervals that began subsequent to January 1981. In addition, only open intervals which began subsequent to January 1981 are used for measures of current use and sterilization.

[2] Unweighted estimates.

Similar patterns of heaping occurred for the core questionnaire in Peru, whereas reported durations from the experimental questionnaire showed no evidence of heaping. What accounts for these differences? Part of the answer appears to be due to the fact that the core questionnaire provided codes for the duration of use of the current method (excluding sterilization) in terms of months and/or years; the corresponding question in the experimental survey required that the answer be in terms of a number of months. In the core questionnaires in both Peru and the Dominican Republic, over one-quarter of responses were in terms of years only. Undoubtedly, the absence of heaping in the experimental questionnaire is also due in large part to the use of a calendar which may have altered interviewer behavior in several ways. For example, interviewers could not have accepted reported durations of use which overlapped periods of pregnancy.

Although these results suggest better reporting of use in the experimental survey, it is not necessarily the case that unheaped responses in the experimental questionnaire are more accurate than the heaped ones in the core. Thus, it is important to evaluate the relative completeness and accuracy of reports of previous contraceptive use by other criteria. An obvious comparison would be with estimates of use reported in the 1983 CPS survey. That is, estimates of *current* use reported in that survey could be compared with estimates of use reconstructed from the DHS survey for the date of the CPS survey.

Although such calculations do not conclusively reveal the sources of discrepancy, reports of current use from an earlier survey are usually more complete than the reconstructed estimates derived from reported dates of use in the later survey (Pebley et al., 1986).

Reconstruction of the distribution of contraceptive use as of dates prior to the survey is a straightforward calculation from the experimental data, since the calendar allows the analyst to determine use status as of any month between the interview and January 1981. However, the same calculation cannot readily be carried out from the core questionnaire because the dates of use are not provided for all segments of use: i.e., only *durations* of use are reported for segments of use in closed intervals and for the episode of use preceding the current method in the open interval. In the evaluation of the Peru surveys, a calendar was "created" from the core questionnaire, in order to derive estimates of use for dates prior to the Peru survey. The creation of the calendar was a very complicated task which involved use of reported information (such as durations of use) together with simulation of missing data (such as starting dates of use) in such a way as to ensure that the resulting contraceptive histories would be internally consistent; details are described in the appendix of Goldman et al. (1989). It was decided not to create such a calendar for the core questionnaire in the Dominican Republic because the payoff would be small: i.e., since two-thirds of users rely on sterilization (for which dates are already provided in the core questionnaire), little additional information would be gained from a simulated calendar.[8]

Table 4.8 Reconstruction of percent of ever-married women 15 years and older using contraception, by method, as of the date of the 1983 CPS survey

Method	CPS	DHS
Any method	39.3	39.5
Pill	7.1	8.1
IUD	3.2	2.7[1]
Injection, diaphragm, and condom	1.5	1.1
Rhythm	0.9	1.4
Withdrawal	2.0	2.3
Sterilization[2]	24.1	23.5
Other	0.4	0.4
Number of women	3362	2311

Note: The National Contraceptive Prevalence Survey took place between April and July 1983. The upper age limit in the CPS survey is 49, whereas it is approximately 46 in the DHS survey (since no women older than 49 were interviewed in 1986).

[1] Includes implant.

[2] Almost all sterilizations are female sterilizations.

Thus, the comparison of estimates of use with those reported in the 1983 CPS survey is restricted to the experimental questionnaire; the values are shown in Table 4.8. Recall that the estimates from the DHS survey are reconstructed from the calendar for the date of the CPS survey; so as to be comparable with the latter estimates, they are based on ever-married women fifteen years of age and over (as of the date of the CPS survey). The two sets of estimates are remarkably close. For example, according to the CPS survey, 39.3 percent of ever-married women were using a contraceptive method at the time of the survey; the corresponding estimate derived from the experimental questionnaire is 39.5 percent. None of the differences in Table 4.8 is statistically significant.[9]

[8] However, one clear advantage of having created the simulated calendar from the core questionnaire in Peru was that it made it possible to check for inconsistencies in reporting: e.g., reported lengths of use which exceeded the length of the pregnancy interval or reasons for discontinuation (such as failure) which were implausible. Such inconsistencies did occur in Peru (see Goldman et al., 1989). Another advantage was that, in some circumstances, it was possible to reduce the number of missing responses (e.g., missing discontinuation codes) by using related information from other parts of the questionnaire.

[9] These tests, at a 5 percent level of significance, are based on the assumption of simple random samples in the CPS and DHS surveys.

The comparisons described above suggest that the calendar in the Dominican Republic obtained relatively complete reporting of contraceptive use, at least for the most recent three- to four-year period. In Peru, on the other hand, estimates of prevalence for ineffective methods derived from the calendar were significantly below those reported in the 1981 CPS survey in Peru (although the calendar led to substantially higher estimates of prevalence for 1981 than did the core questionnaire, see Goldman et al, 1989 for details). The better performance of the calendar in the Dominican Republic than in Peru may be due to one or both of the following factors: (1) since the CPS survey took place earlier in Peru than in the Dominican Republic, we are evaluating the performance of the calendar about five years prior to survey date in Peru and three and one-half years prior to survey date in the Dominican Republic; and (2) women in Peru rely primarily on traditional methods of contraception which are generally reported less completely than modern methods (Pebley et al., 1986; Laing, 1984).

One remaining question is the extent to which the *core* questionnaire in the Dominican Republic obtained complete reports of contraceptive use. Reported dates of sterilization in the core questionnaire were used to obtain an estimate of the percent of women sterilized as of the date of the CPS survey. That estimate, 23.2 percent, is in close agreement with estimates from both the experimental questionnaire and from the CPS survey. Does the core questionnaire perform as well for other contraceptive methods? Although this cannot be answered directly without a comparison of the sort presented in Table 4.8, results presented below suggest that the core questionnaire in the Dominican Republic would produce underestimates of use for the calendar period for methods other than sterilization.

Undoubtedly, one very important advantage of the calendar was that it allowed for reports of multiple segments of use within an interval. Data from the calendars in both countries indicate that a substantial proportion of women used more than one method within an interval. For example, in the calendar in Peru, approximately 20 percent of intervals with reported use were characterized by more than one segment of use; the corresponding value for the Dominican Republic was 16 percent. Thus, the structure of the core questionnaire which focused on only the last method within closed intervals, was apt to result in underestimates of use for periods prior to the survey.[10] Of particular concern in this analysis is the extent to which the differences in estimates of prevalence derived from the two questionnaires affect the resulting estimates of contraceptive failure and discontinuation.

4.5 Estimates of Contraceptive Failure and Discontinuation

One of the main findings from the Peru study was that the underreporting of previous contraceptive use in the core questionnaire led to modest overestimates of contraceptive failure and substantial underestimates of contraceptive discontinuation, in comparison with the estimates derived from the experimental questionnaire. These discrepancies resulted from the failure of the core questionnaire to obtain information on multiple use segments within closed intervals.

In order to determine whether similar findings occur in the Dominican Republic, life tables of contraceptive failure and discontinuation were calculated from both the core and experimental surveys. Estimates from the experimental questionnaire were calculated from the reported calendar information while those derived from the core were based on information in the raw data file. The former set of estimates are based on all contraceptive use segments which began in the calendar period—i.e.,

[10] A more extensive analysis presented elsewhere (Goldman et al., 1989) indicates that a simple modification of the core questionnaire to include reported durations for *two* methods per interval would *not* have resulted in a substantial improvement of the estimates.

subsequent to January 1981. Estimates from the core are based on contraceptive use within intervals that began subsequent to January 1981.[11] Both sets of estimates are restricted to ever-married women.

Single decrement probabilities of use-failure and of discontinuation are used to compare the findings from the core and experimental questionnaires. The use-failure rates can be interpreted as the probability of becoming pregnant while using a method, by a specified duration of use, in the absence of any "competing risk" (i.e., abandoning the method to become pregnant or for some other reason). This analysis examines the corresponding *first-year* rates, which are based on the first 12 months of contraceptive use for episodes beginning during 1981-86. It is important to note that "first" refers to a particular episode of use, rather than to the woman's first experience with the method: e.g., a woman who used the pill for a year, abandoned the method for some period of time, and resumed use of the pill subsequently, would contribute two episodes of use to the life table calculation for the pill.

Table 4.9 shows the number of contraceptive use segments (i.e., episodes) on which the life table calculations are based. Because of sample size considerations, a number of methods, such as condom, injection, and implant, have been grouped into the "other" category; sterilization is excluded from all of the calculations.[12] Because of the high sampling variability associated with the number of segments shown in Table 4.9 (for all methods except the pill), it is important to determine whether the observed differences between the two surveys are statistically significant.[13] Greenwood's formula was used to obtain approxi-

Table 4.9 Number of contraceptive use segments contributing to exposure during the first year of use, core and experimental questionnaires

Method	Core	Experimental
Pill	953	853
IUD	188	140
Rhythm[1]	161	191
Withdrawal[2]	136	227
Other Methods[3]	178	243

[1] Includes all cases where rhythm was used in combination with another method.

[2] Includes cases where withdrawal was used in combination with condom.

[3] Includes implant, injection, condom, vaginal methods, as well as other methods not specified in the questionnaires.

[11] Note that, whereas it is necessary to know actual dates of use in order to estimate contraceptive prevalence for dates prior to the survey, estimates of failure and discontinuation can be obtained directly from information on reported durations of use and on reasons for termination of use. The only problem is to define the underlying time period for these estimates. The most straightforward way to obtain comparable estimates from the core and experimental questionnaires is to restrict the former estimates to intervals which begin after January 1981. In both sets of estimates, exposure was censored three months prior to interview so that first-trimester pregnancies, which are often underreported, would be excluded from the calculations.

[12] There were zero failures subsequent to sterilization in the experimental survey and only one in the core survey.

[13] An interesting comparison is the number of segments by method for the core and experimental questionnaires. Although the core sample is twice as large as the experimental sample, the total number of segments is approximately equal for two reasons: fewer segments of use per respondent were reported in the core questionnaire and the core calculation is restricted to intervals which began during the calendar period (as opposed to segments of use which began during the calendar period). Even more surprising is the fact that the number of segments for effective methods is higher in the core whereas the number for ineffective methods is higher in the experimental questionnaire. This simple tabulation suggests that the calendar obtained more complete reporting of the use of ineffective methods than did the core questionnaire.

mate values for the standard errors of the life table survivorship probabilities (Elandt-Johnson and Johnson, 1980), on the assumption of a simple random sampling design. The actual sampling errors are undoubtedly higher because of the cluster design implemented in the DHS surveys. Thus, although both 1 percent and 5 percent tests of significance are presented in the tables, only those differences which are significant at the 1 percent level are reported.

Table 4.10 and Figure 4.2 present first-year contraceptive failure rates by method, based on data from the two surveys. Since the experimental questionnaire included a non-live birth history, it is natural to include these fetal deaths as failures where appropriate. However, this cannot be done from the core questionnaire, which collected information only for live births.[14] In Table 4.10 we present two sets of rates for the experimental questionnaire: those which exclude reported fetal deaths and those which include them.[15] The former estimates are comparable with those derived from the core.

Table 4.10 Percent of women who experience a contraceptive failure within one year of use, core and experimental questionnaires

Method	Core	Experimental (Excluding Non-live Births)	Experimental All Pregnancies
Pill	12.8	6.1†	7.2
IUD	4.3	3.7	4.3
Rhythm[1]	22.0	32.9	35.3
Withdrawal[2]	32.1	27.5	28.2
Other[3]	25.4	15.0	15.5
All methods[4]	15.3	13.9	15.0

Note: Estimates based on the experimental questionnaire are significantly different from the corresponding values based on the core questionnaire at a 1 percent (†) or 5 percent (*) level of significance.

[1] Includes all cases where rhythm was used in combination with another method.

[2] Includes cases where withdrawal was used in combination with condom.

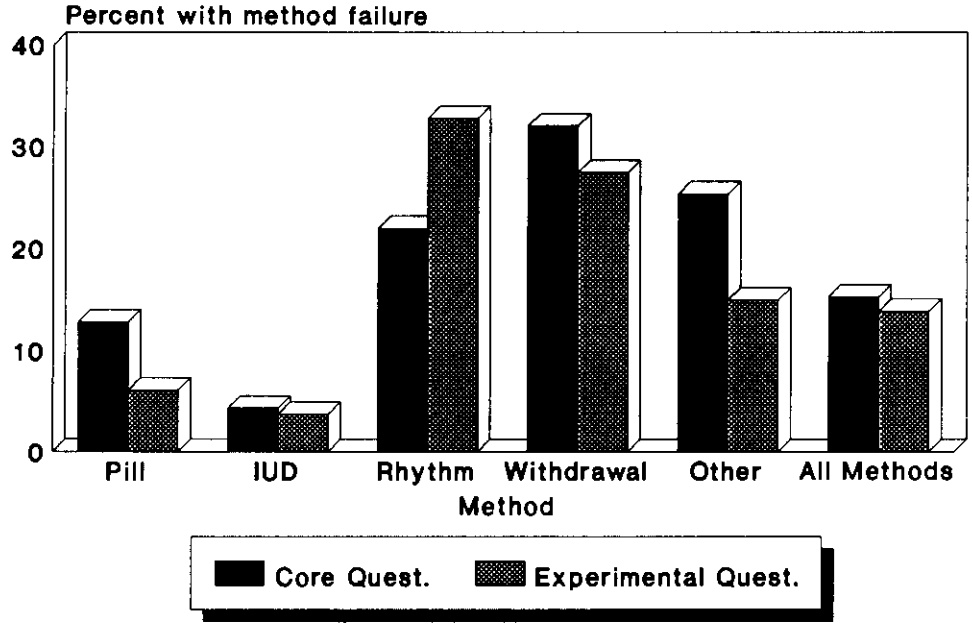
[3] Includes implant, injection, condom, vaginal methods, as well as other methods not specified in the questionnaires.

[4] Excludes sterilization.

[14] There were, however, seven women in the core survey who claimed to have stopped using the method in the open interval because of contraceptive failure. These may have been actual failures which ended in fetal death. They are not included as failures in the rates presented here.

[15] A total of 37 fetal deaths, which constitute about 11 percent of all fetal deaths to ever-married women, were reported as contraceptive failures. In calculations which exclude fetal deaths, contraceptive exposure is censored at the time a woman begins the pregnancy which results in a fetal death.

Figure 4.2
First-Year Failure Rates



Overall, the life table probabilities appear plausible: first-year failure rates are greater than 20 percent for withdrawal and rhythm and about 4 percent for the IUD. Estimates for the pill are surprisingly high with values of 7 percent and 13 percent, from the experimental and core questionnaires, respectively; the latter figure is higher than any of the estimates for the pill reported in a large number of studies in developed countries (Trussell and Kost, 1987) and is significantly higher than the corresponding estimate from the experimental questionnaire.

Based on calculations which exclude non-live births, the resulting life table probabilities indicate that, with the exception of rhythm,[16] estimates of failure from the core are higher than those from the experimental survey; however, the only significant difference is for the pill.[17] The estimates in Table 4.10 also indicate that the inclusion of non-live births which resulted from contraceptive failure has a substantial effect on the resulting failure rates: method-specific rates are between 10 and 20 percent higher with the inclusion of these failures.

One conclusion which emerged from the Peru study was that, although there were some significant differences in failure rates between the two questionnaires, the two sets of values were generally similar. The same result appears to hold for the Dominican Republic surveys, with the

[16] Although the calendar resulted in a much higher failure rate for rhythm than the core questionnaire, the differences are not statistically significant. A more detailed analysis of the calendar indicates that failures due to rhythm are inexplicably concentrated in the two-year period prior to the survey.

[17] This arises from the fact that, for each recent closed interval, complete information is available only for the last segment of use; by definition, previous use segments in an interval could not have been terminated by failure. Higher estimates for the core could easily arise from the design of the contraceptive history in the core questionnaire, which selectively omits use segments which did not end in failure.

exception of estimates for the pill. The same finding is unlikely to extend to estimates of contraceptive discontinuation, however, since data presented above suggest that a number of women do use more than one method of contraception in an interval. Although use of multiple methods could easily be captured by the calendar, the DHS core questionnaire did not permit the recording of such detailed information.

The estimated percentage of women who discontinue specific methods within one year of use is shown in Table 4.11; separate estimates are presented for discontinuation in order to become pregnant and for discontinuation due to all other reasons.[18] In both cases, estimates derived from the experimental questionnaire (for all methods combined) are higher than the corresponding estimates derived from the core. The first-year probabilities of discontinuation for "other" reasons (shown graphically in Figure 4.3) are higher for the experimental questionnaire for each of the specified methods; the differences are statistically significant for the pill, the IUD, and all methods combined. The overall probabilities of discontinuing contraception within one year of use for "other" reasons is 36.6 percent for the core questionnaire and 45.5 percent for the experimental questionnaire.

The estimates in the first column of Table 4.11 are first-year probabilities of discontinuation for all reasons except failure. Not surprisingly, these values are consistently higher for the experimental questionnaire, although most of the method-specific differences are not statistically significant. In spite of the failure of the core questionnaire to capture method-switching behavior within intervals, the estimates in Table 4.11 suggest that both questionnaires give a similar overall picture of discontinuation: the lowest values occur for the IUD and even these imply that one-quarter to one-third of women discontinue the method within a year; the corresponding estimates for the pill and "other" methods frequently exceed 50 percent.

The conclusion drawn from the Peru analysis is similar to that found here—namely, that the experimental questionnaire yields higher estimates of discontinuation than the core. Overall, however, the differences between the results of the two questionnaires are somewhat smaller in the Dominican Republic than in Peru. The differences were especially large in Peru for the ineffective methods (rhythm and withdrawal); estimates from the experimental questionnaire were almost double those from the core. In the Dominican Republic, discontinuation rates for the ineffective methods are similar for the two questionnaires, while those for effective methods differ.[19]

4.6 Completeness and Consistency of Information

The creation of a simulated calendar from the Peru core questionnaire permitted a thorough evaluation of the consistency of contraceptive information reported in the core questionnaire. Although this exercise was not repeated for the Dominican Republic, some of the findings from the Peru analysis appear to pertain to the Dominican Republic survey as well, and point to advantages of the calendar which are not apparent from the analyses above.

First, the fact that all dates of pregnancy and use were entered in the same column of the calendar eliminated certain types of inconsistencies which occurred in the standard survey. For example, in the

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[18] These estimates are single decrement probabilities of discontinuation and exclude failures. In the experimental questionnaire, one reason for discontinuation is labeled "other" and is a residual category for those who did not fail or stop to become pregnant; in the core questionnaire, this category includes the following coded responses: infrequent sex, partner disapproved, health concerns, health problems, method not available, cost, fatalism, inconvenient, and other.

[19] The similarity of estimated discontinuation rates for ineffective methods from the two questionnaires is surprising, since it appears that the calendar captured use of ineffective methods more completely than did the core questionnaire.

Table 4.11 Percent of women who discontinue a method within one year of use, in order to become pregnant and for other reasons, core and experimental questionnaires

Method	Reason for Discontinuation		
	All Reasons (Except failure)	To Become Pregnant	Other Reasons
Pill			
Core	42.9	8.3	37.7
Experimental	55.4†	11.6	49.5†
IUD			
Core	25.3	7.1	19.7
Experimental	33.2	1.9*	31.9†
Rhythm[1]			
Core	34.4	9.5	27.5
Experimental	37.9	14.2	27.6
Withdrawal[2]			
Core	42.9	13.0	34.4
Experimental	44.0	13.1	35.6
Other[3]			
Core	63.4	6.4	60.9
Experimental	67.7	18.1*	60.5
All methods[4]			
Core	42.1	8.6	36.6
Experimental	51.9†	11.8*	45.5†

Note: Estimates based on the experimental questionnaire are significantly different from the corresponding values based on the core questionnaire at a 1 percent (†) or 5 percent (*) level of significance.

[1] Includes all cases where rhythm was used in combination with another method.

[2] Includes cases where withdrawal was used in combination with condom.

[3] Includes implant, injection, condom, vaginal methods, as well as other methods not specified in the questionnaires.

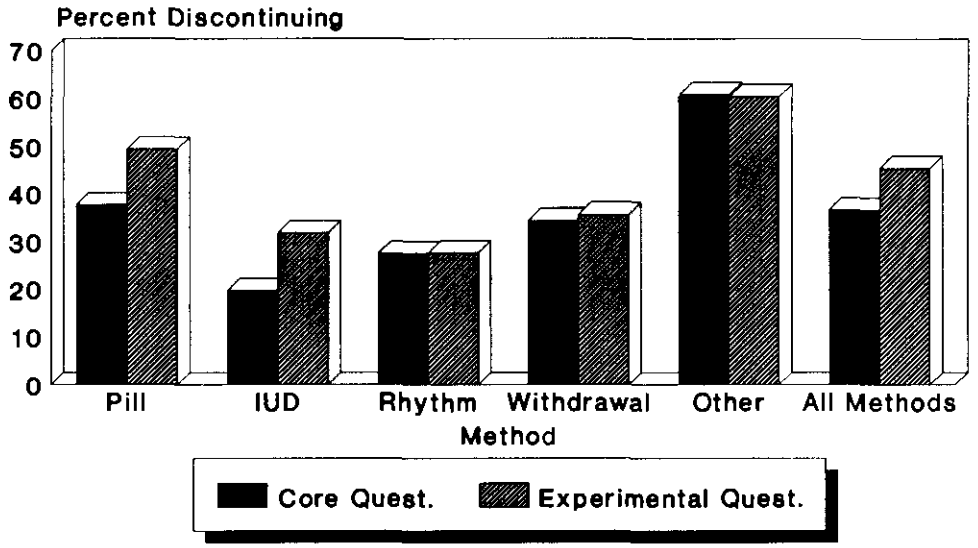
[4] Excludes sterilization.

standard survey in Peru, nearly 20 percent of closed intervals with reported use had a reported duration for the last method which exceeded the length of the interval; this error appears to have occurred infrequently in the Dominican Republic.[20] Second, since interviewers using the calendar were instructed not to leave any months of the first column without a code, all experimental questionnaires were complete in this regard. Third, the coding of information on reasons for discontinuation alongside information on months of use in the calendar enables the interviewer (and the analyst) to check for inconsistent information (e.g., a code for failure without a pregnancy occurring immediately after the segment of use); these inconsistencies did occur in the experimental surveys of both Peru and the Dominican Republic. It is not always possible to determine if the same types of inconsistencies occurred in the standard survey.

The calendar does have some drawbacks. For example, in the case of information on reasons for discontinuation, the experimental questionnaires in both countries had higher frequencies of missing responses than did the standard survey. For example, in the calendar for the Dominican Republic, as

[20] This could be due to editing of responses during the fieldwork.

Figure 4.3
First-Year Discontinuation Rates



• Discontinuation for reasons other than method failure or desire to become pregnant.

much as 17 percent of segments of use which were supposed to have a discontinuation code[21] had no such code. This may have resulted from the difficulty of identifying each segment of use in the first column of the calendar. A second potential drawback is that the calendar provides a consistency check for reported durations in only one direction: responses that are too long (e.g., to fit into the available space in the calendar) are shortened, but responses that are too short are rarely detected.[22] Another potential disadvantage of the calendar is that it may be more difficult to train interviewers, since the questionnaire is substantially less structured than the standard one. Interviewers in Peru and in the Dominican Republic initially had more difficulty with the experimental questionnaire; however, after a short period of training, they preferred the calendar because it allowed them to reconcile the timing of different events and to probe for information.

Overall, the evaluation of contraceptive information presented in this chapter suggests that both the experimental and the standard surveys obtained reasonably accurate reports of contraceptive use. To the extent that the analyst is interested in current status measures of contraceptive use, or even period-based estimates of contraceptive failure, there are only modest differences between the two survey instruments. The major advantages of the calendar for the analysis of information on contraception are threefold: (1) it obtains more complete reports of use for periods prior to the survey (particularly for ineffective methods of contraception)—an improvement of the calendar which has obvious implications for estimates of trends in contraceptive prevalence and estimates of contraceptive discontinuation; (2) it allows for a detailed study of contraceptive use patterns—e.g., timing and frequency of the readoption of use following discontinuation—and hence of the demographic impact of contraceptive discontinuation (Kost, 1990); and (3) it obtains information which is more complete and internally consistent with other types of information. In addition, the cost of including a calendar appears to be small: generally, interviewers prefer it and the increase in interview time is slight.

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[21] All segments which ended prior to the interview date and which were not immediately followed by another segment of use were meant to have a discontinuation code.

[22] This is loosely referred to as the "half-too-smart" correction.

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CHAPTER 5

REPRODUCTIVE ATTITUDES

5.1 Introduction

Several questions were included in the core and experimental questionnaires for the purpose of learning more about women's fertility and contraceptive preferences and their future intentions. This chapter examines the relative merits of alternative questions used to measure the ideal number of children, reproductive intentions, intentions to use contraception, reasons for nonuse, and sterilization regret.

5.2 Ideal Number of Children

Questions about the ideal number of children that a woman would prefer have been a standard part of every fertility survey. One of the recurrent criticisms of these questions has been that they are sensitive to the number of children the woman already has and, for many women, simply reflect the rationalization of children which were not desired at the time of their birth. As in the Peru experimental study, two versions of the question on ideal number of children were included in the core and experimental questionnaires. The experimental version of the question was actually included in the core questionnaire, while the "standard" version (previously used in the World Fertility Survey) was included in the experimental questionnaire. The latter question (labeled "Desired Family Size") reads as follows (Q. 662):

> "If you could choose exactly the number of children to have in your whole life, how many would that be?" (Answers could be a number, a range, or other answer.)

An improved version of the question—i.e., one less likely to encourage rationalization of previously unwanted births—was included in the core questionnaire: the same wording was used for childless women as in the experimental questionnaire, but was altered for women with children (Q. 614):

> "If you could go back to the time you did not have any children and choose exactly the number of children to have in your whole life, how many would that be?" (Answers could be a number, range, or other answer.)

In the Peru study, the expectation that the improved question would result in a lower average number of children considered ideal (consistent with the rationalization hypothesis) was substantiated. The mean (and median) ideal number was about 10 percent lower in the core questionnaire than in the experimental questionnaire. In the Dominican Republic, the results are similar to those from Peru, although the mean from the improved question in the core is lower by only 0.1 than the corresponding value from the experimental question (Table 5.1). The correlation between the ideal number and the actual number of living children was slightly higher for the experimental questionnaire (0.32 in the experimental compared with 0.29 in the core); the corresponding values for Peru were about 0.4 and 0.3 respectively.[1]

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[1] Since a substantial number of women supplied a range for the ideal number of children, the calculations for Peru were done separately for the minimum ideal number and the maximum ideal number. For the minimum ideal number, the correlation with the actual number of children is 0.38 for the experimental questionnaire and 0.29 for the core; for the maximum ideal number, the corresponding correlations are 0.43 and 0.33 respectively.

Table 5.1 Distribution of the ideal number of children, core and experimental questionnaires

Ideal Number of Children	Core	Experimental
0	1.8	2.1
1	3.3	2.6
2	24.2	21.3
3	36.4	37.2
4	17.7	17.7
5	5.4	7.0
6	4.1	5.1
7	0.8	1.0
8	0.9	0.9
9	0.2	0.5
10	1.2	1.0
11	0.1	0.1
12+	1.3	1.6
Non-numeric*	2.6	2.0
Percent total	100	100
Mean	3.38	3.49
Number of women	7648	3872

Note: In the experimental questionnaire, approximately 1 percent of responses were given in terms of a range; these values were subsequently converted into the midpoint of the range. In the core questionnaire, all numeric responses on the data file were coded as a single number; i.e., any imputation had occurred during the fieldwork.

* Includes a small percentage of "no answer" responses.

The conclusion in the Dominican Republic study is that the improved version of the question is only slightly better than the original version. In fact, there is very little difference in the two distributions. This finding suggests that it may be possible to study trends in the ideal number of children based on WFS data with greater confidence in the comparability of the two questions. On the other hand, without a better understanding of why the discrepancies in Peru are greater than those in the Dominican Republic, it remains unclear under what circumstances rationalization of unwanted births is an important component of the response.

5.3 Reproductive Intentions

The question of whether women intend to have more children bears both on the future level of fertility and the need for family planning services. The two questionnaires approached the subject in different ways. The core questionnaire followed the conventional route of asking first about whether the woman did or did not want any more children (Q. 603) and then followed both positive and negative responses with questions about whether the attitude was definite or not (Q. 604-606). In contrast, the experimental questionnaire focused on whether the woman wanted to get pregnant in the next 12 months (Q. 654). Women who replied in the negative were asked how much against the idea they were (Q. 655) and whether they wanted more children in the future (Q. 656).

The results in Table 5.2 suggest that the two approaches yield similar results. In the core questionnaire about 32 percent of married women can be classified as wanting another child (now or later), compared with about 35 percent in the experimental questionnaire. Likewise, according to the two questionnaires, about 61 or 62 percent want to stop childbearing or are sterilized.

Table 5.2 Distribution of reproductive intentions, percent currently using contraception, and mean number of children ever born, among currently married women (who are not pregnant or menopausal), by intention, core and experimental questionnaires

Reproductive Intention	Percent	Percent Currently Using Contraception	Mean Number of Children Ever Born
Core Questionnaire			
Would like another child (definitely)	28.7	30.3	1.7
Would like another child (not sure)	2.7	33.1	2.6
Undecided, inclined to have another	0.8		
Undecided	1.4	25.4	3.5
Undecided, inclined not to have another	0.8		
Prefer not to have another, not sure	4.5	43.1	3.6
Want no more (definitely)	20.2	28.1	5.1
Sterilized	40.9	100.0	5.0
Experimental Questionnaire			
Would like to get pregnant in next 12 months	18.4	18.1	1.9
Do not mind if pregnant in next 12 months	3.2	35.3	2.9
Do not want pregnancy now but want more children	13.7	48.2	2.0
Do not want pregnancy now, uncertain about future	3.0	69.6	3.1
Do not want pregnancy now, want to stop	18.8	35.7	5.4
Sterilized	42.8	100.0	5.0

The percent using contraception and the average number of children ever born for each category of response are included in Table 5.2 as a rough indicator of the discriminatory power of the various intermediate response categories of reproductive intentions. Contraceptive use is more strongly related to intentions as measured in the experimental questionnaire; however, among women who want to stop childbearing but are not sterilized, only a small proportion in both surveys were using contraception. The mean number of children ever born shows the expected progression with the intensity of reproductive intentions as measured in both questionnaires.

These results are very similar to those from the Peru study in that the two sets of questions perform about equally well. This finding increases our confidence in the robustness of the measure of reproductive intentions.

5.4 Intentions to Use Contraception

There is an obvious interest in estimating women's intentions to use a method of contraception in the future: it bears both on the future of fertility in the population and on the satisfaction of unmet need. In both questionnaires, women who were not using a method at the time of interview were asked two questions about whether they intended to use in the future: one about the future in general and the other about use in the next 12 months. The experimental variation reversed the order of the two questions from

that in the core. Specifically, the questions in the core determined whether the respondent intended to use at any time in the future (Q. 338) and, if so, whether she intended to use (her stated preferred method) in the next 12 months (Q. 341). In the experimental questionnaire, respondents were first asked about whether they intended to use a method in the next 12 months (Q. 329) and, if not, whether they intended to use a method at some time in the future (Q. 329A).

The estimates presented in Table 5.3 suggest that the order of these questions does indeed make a difference. The estimated proportion (of nonusers) who intend to use contraception in the future is about 57 percent for the experimental questionnaire and 44 percent for the core. The difference probably results from the fact that the respondent in the experimental questionnaire is asked the shorter reference period question first and is then given a second chance to define herself as a potential user. In contrast, in the core questionnaire she is offered only one chance to be classified as a potential user, since a negative reply to the "ever use" question prevents any further probing on this issue. It is not the order of the questions *per se* but the additional opportunity to respond to the question that is the probable explanation. In contrast with the difference in the estimated proportion of women who intend to use a method some time in the future, the estimated proportion who expect to use a method in the next 12 months is about the same (20 percent) in both surveys.

Table 5.3 Intention to use contraception in the future, among all women not currently using a method, core and experimental questionnaires, Dominican Republic and Peru

	Dominican Republic	Peru
Percent Who Intend to Use in the Future		
Core	44.4	51.1
Experimental	56.7	57.1
Percent Who Intend to Use in the Next 12 Months		
Core	19.1	21.2
Experimental	20.7	28.8

These results are shown in Table 5.3 along with a comparison of the estimates from the Peru study. In both countries, the proportion ever intending to use is higher for the experimental questionnaire (in which the "12-month" question is asked first); this difference is somewhat greater in the Dominican Republic than in Peru. On the other hand, while the estimates of the percent intending to use in the next 12 months are about the same for the two questionnaires in the Dominican Republic, estimates for the experimental questionnaire in Peru are considerably higher than for the core. A major unresolved issue is whether the higher estimates which generally result from the experimental questionnaire are *too high.* Since there is no way of assessing the validity of these measures, it is difficult to address the issue of the relative biases of the different approaches. Yet a third approach, which may result in less bias than either of those used here, is to merge the two questions into one. Such a question would consider the options of using in the near future, using later, or never using as part of a single set of possible responses.

5.5 Reasons for Nonuse

Both questionnaires attempted to determine why women were not using any method or did not intend to use any method of contraception in the future. In the Peru study, it was concluded that such

questions were not very successful: the questions yielded predictable responses that add little to the knowledge of family planning behavior. The findings were similar for the Dominican Republic.

In the core questionnaire, nonusers were asked to give the main reason that they were not using a method to avoid pregnancy (Q. 527). Unmarried women, sexually inactive women, and women who would be happy if they became pregnant in the next few weeks were not asked this question.

The results shown in Table 5.4 indicate that postpartum behavior or subfecundity together account for 28 percent of the reasons. Fear of side effects is the single most important response (20.8 percent). The fact that many responses (22.5 percent) fell in the "other reasons" category suggests that the answer categories could have been refined.

Table 5.4 Reasons for nonuse of contraception among currently married, sexually active nonusers who would be indifferent or unhappy if they became pregnant in the next few weeks, core questionnaire

Reason	Percent
Infrequent intercourse	3.8
Postpartum/breastfeeding	15.0
Menopause/subfecund	13.0
Lack of knowledge or source	4.1
Difficult access	1.0
Religion	1.0
Partner opposed	2.6
Fear of side effects	20.8
Fatalistic	2.9
Opposed to family planning	6.0
Cost	1.6
Other reasons	22.5
Don't know	5.7
Percent total	100.0
Number of women	416

Note: Women are defined as sexually active if they had intercourse in the four weeks before the survey.

In the experimental version, the question was also restricted, but to a different subgroup of nonusers—those who replied that they never intended to use a method. These women were asked to supply the main *reasons* that they did not intend to use a method (Q. 332). The tabulation (Table 5.5) is based on currently married women who never intend to use a method. As in the core questionnaire, menopause and subfecundity capture a substantial fraction of the reasons cited, with health worries a common alternative response. As in the core questionnaire, "other reasons" includes a high proportion of respondents, a finding which indicates a need for greater specification of reasons.

5.6 Sterilization Regret

Because a large proportion of women in the Dominican Republic elect surgical sterilization and because the average age at the time of the operation is declining, a question was added (only in the core

Table 5.5 Percent of married nonusers citing different reasons for not intending to use a method, experimental questionnaire

Reason	Percent
Infrequent intercourse	5.0
Abstaining, postpartum, breastfeeding	2.8
Menopausal, subfecund	30.9
Doesn't know source	1.8
Difficult access	0.0
Religious reasons	6.1
Spouse opposes	5.7
Health worries	22.0
Fatalistic	5.6
Opposed to family planning	17.4
Cost	3.3
Other reason	48.1

Note: The questionnaire permitted multiple responses.

questionnaire—Q. 610) to determine whether the woman regretted her decision: "Do you (or your partner) regret having had the operation for not having more children?" A surprisingly large proportion of those sterilized (24.2 percent) replied "yes" to the question. There are various problems with relying on this single question to assess what is probably a very complex issue; thus, subsequent revisions of the DHS core questionnaire have expanded the topic. Of particular concern, are the implications for the measurement of reproductive intention. The 24.2 percent who expressed regret were then asked the following question (Q. 611): "Would you like to have another child or do you prefer not to have any more children?" Almost three-quarters (73.2) of these woman said they would like to have another child. If these women were reclassified as wanting more children (rather than automatically being defined as wanting no more children), the distribution of reproductive intentions would be significantly altered. Instead of the 32 percent now classified in the "want more" category, there would be 42 percent.

There is no obvious answer to this dilemma, since it depends on how reproductive intentions or preferences are conceptualized. If the purpose is to predict fertility, the fact of sterilization would seem to take precedence. If, on the other hand, emphasis is on assessing the actual level of current preference, the expressed desire for more children among women who are sterilized should be taken into account.

CHAPTER 6

CHILD HEALTH VARIABLES

6.1 Introduction

Since a main focus of the DHS standard survey is issues related to maternal and child health, the experimental questionnaire included several questions dealing with this subject. This chapter analyzes the data on child health variables—diarrhea, immunization, birthweight and prematurity—from both surveys. In the case of diarrhea and immunization, the analysis focuses on the consistency of information collected with the core and experimental questionnaires, since somewhat different questions were used in each. With regard to birthweight and prematurity, the relevant questions were used only in the experimental questionnaire and differed from those asked in the Peru experimental questionnaire. The objective here is to assess the utility of the resulting information and compare the approaches used in the two countries.

6.2 Diarrhea

As in the case of Peru, the two DHS surveys in the Dominican Republic collected information on diarrhea for all living children born since January 1981. The core questionnaire asked whether the child had had diarrhea in the past 24 hours and in the past two weeks. The experimental questionnaire asked about use in the past 24 hours, but the second question was replaced by one asking the length of time since the last diarrhea episode, coded in days, weeks, or months.

In order to compare the prevalence of diarrhea in both surveys, for the 24-hour and two-week reference periods, it was necessary to calculate the two-week prevalence rate for the experimental survey (since the question was not asked directly).[1] The results in Table 6.1 show that the experimental survey yielded higher estimates for both reference periods. For instance, the prevalence of diarrhea in the preceding 24 hours is estimated to be nearly 16 percent for children under five in the experimental survey, but less than 14 percent in the core. Similarly, nearly 29 percent of children were reported to have had diarrhea during the preceding two weeks in the experimental questionnaire, but only one-quarter of children in the core. In both instances, the differences are statistically significant.[2] The data from both surveys indicate that the prevalence of diarrhea by age is relatively constant among infants between 6 and 18 months of age, but is substantially lower for children age two to five years and for those under 6 months of age.

The higher prevalence rates for diarrhea obtained from the Dominican Republic experimental questionnaire were also reported for the Peru experimental questionnaire. This is particularly puzzling with regard to the 24-hours reference period, since the identical question is included in both the core and the experimental questionnaires. One explanation may be that the questions on diarrhea in the core are asked immediately after the questions on immunization. As described below, the latter questions are burdensome and time consuming because the respondent is asked to produce a health card. In contrast, in

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[1] Since it is common in Latin America for respondents to report a two-week period as 15 days rather than 14 days, we have included all reported episodes within the last 15 days in the estimate derived from the experimental questionnaire. The reported prevalence rate would decrease from 28.7 percent (Table 6.1) to 28.3 percent if we limited the estimate to episodes within the last 14 days or two weeks.

[2] A 5 percent significance level is used throughout this chapter. Tests are based on the assumption of simple random samples.

Table 6.1 Percent of children under age five reported to have had diarrhea in a given reference period, core and experimental questionnaires

Age of Child	Past 24 Hours		Past 2 Weeks*	
	Core	Experimental	Core	Experimental
Total	13.6	15.8	25.0	28.7
< 6 months	16.7	18.3	26.2	31.4
6-11 months	23.6	23.5	41.4	39.9
12-17 months	23.0	22.4	38.8	39.5
18-23 months	16.5	21.8	32.8	40.4
24-59 months	8.9	12.1	17.8	22.7

* Includes the past 24 hours

the experimental questionnaire, the questions on immunization (which do not require a health card) are followed by questions on postpartum behavior and then by questions on diarrhea. It may well be that respondents in the core questionnaire preferred to answer negatively to the diarrhea probe, fearing that a positive answer would lead to another lengthy round of questions.

Table 6.2 indicates that responses in the experimental questionnaire to the question on the timing of the last episode of diarrhea are heavily concentrated: in particular, days 2, 3, 4, and 5, weeks 1 and 2, and months 1, 2, 3, and 12 constitute the vast majority of answers. Although such heaping is not unexpected, it does suggest that the reported prevalence of diarrhea in the most recent two-week period may be unreliable. Notice also that some children (4.8 percent of cases reported in days) were reported with a diarrhea episode that started within *0 days*, but were not reported to have had diarrhea in the past 24 hours.[3]

Table 6.3 compares the type of treatment given to children with reported episodes of diarrhea in the most recent two weeks. The questions used to determine the type of treatment (if any) differed between the two questionnaires. In the core questionnaire, women whose children were reported to have had diarrhea during the preceding two weeks were specifically asked whether the child was treated with an oral rehydration packet (ORT) (Q. 425); they were then asked whether anything else was administered to treat the diarrhea and, if so, what was used (Q. 426); multiple responses were coded. In the experimental questionnaire, women who reported the timing of the last episode of diarrhea for their children were asked whether a treatment was administered and, if so, the interviewer asked whether any of five specific treatments (plus "other") was given (Q. 417).

The responses shown in Table 6.3 indicate substantial differences between the questionnaires. Most importantly, the core questionnaire yielded higher estimates for the percent of children receiving oral rehydration packets (ORT): i.e., 37 and 22 percent in the core and experimental questionnaires, respectively, a difference which is statistically significant. It appears that the probe for ORT in the core resulted in higher proportions of women acknowledging use of the packets for treatment—even though the packets were among the treatments listed in the experimental questionnaire. On the other hand, the specific listing by the interviewer of "homemade solution of sugar, salt and water" seems to have resulted in higher proportions of women acknowledging this treatment in the experimental questionnaire. Higher rates of "other" treatments in the core probably result from the different codes and probes used in the two questionnaires: the core questionnaire had specific response codes for "increased liquids" and "increased

[3] This inconsistency in the reporting of the time since the last diarrhea episode did not occur in the Peru experimental questionnaire.

Table 6.2 Distribution of time since most recent episode of diarrhea, among children under age five with reported episode, experimental questionnaire

Days	%	Weeks	%	Months	%
0*	4.8	1	34.7	1	19.5
1	3.6	2	45.3	2	17.9
2	16.1	3	11.5	3	10.9
3	19.5	4	8.5	4	7.6
4	14.6			5	5.2
5	14.2			6	3.7
6-14	14.6			7-11	10.4
15	6.4			12	8.1
16+	6.2			13-23	4.2
				24	4.8
				25-35	2.4
				36	4.4
				37+	0.9
Total	100.0		100.0		100.0
No. of cases	151		152		608

Note: Episodes in the most recent 24 hours are excluded from this distribution.
* These cases *were not reported* as having had diarrhea in the past 24 hours.

Table 6.3 Percent of children under age five with diarrhea during the past two weeks who received specified treatments, core and experimental questionnaires

Age of Child	ORT Packets		Pharmacy Treatment[1]		Home Treatment[2]		Other Treatment[3]		Some Treatment	
	Core	Exp.	Core	Exp.	Core	Exp.	Core	Exp.	Core	Exp.
Total	37.3	22.3	30.7	32.0	10.0	17.7	37.5	29.2	74.7	60.4
< 6 mos.	34.3	19.0	16.2	22.7	9.4	11.8	22.8	26.1	57.7	47.9
6-11 mos.	40.9	19.1	29.1	36.9	11.7	13.9	35.7	22.1	72.9	56.1
12-17 mos.	38.8	25.6	40.7	32.9	8.9	22.9	41.6	28.8	76.0	60.6
18-23 mos.	33.6	31.0	34.8	37.0	8.0	25.8	38.5	41.8	73.8	77.6
24-59 mos.	37.1	20.7	29.8	30.7	10.6	16.4	39.9	28.6	79.6	58.1

[1] Pharmacy treatment consists of: tablets, injection and syrup.
[2] Home treatment consists of: homemade solution of sugar, salt and water.
[3] For the core, other treatments include "increased liquids," "increased solids" and "other," whereas for the experimental survey this category includes "intravenous serum," "hospitalization" and "other."

solids," i.e., treatments which may be minimal. In contrast, the experimental questionnaire had specific probes for "intravenous serum" and "hospitalization"—treatments which imply much more serious episodes of diarrhea and are apt to be used less frequently. Overall, women were about equally likely to have reported using more than one type of treatment: 47 percent and 44 percent of treated episodes in the experimental and core questionnaires, respectively. However, a significantly higher proportion of episodes were characterized by some form of treatment in the core questionnaire (75 percent) than in the experimental questionnaire (60 percent). It is important to note that these overall percentages for treatment are not robust measures. They appear to be sensitive to the types of questions, probes and codes used to elicit and record responses.

6.3 Immunization

The core and experimental questionnaires used entirely different approaches for collecting information on immunization. In the core questionnaire, women were asked for each living child born after January 1981, if the child had a health card (Q. 420). If the answer was affirmative, women were asked to show the child's health card. Data on the type and date of vaccination were copied directly from the health card onto the questionnaire by the interviewer (Q. 421). Since a series of intensive immunization campaigns[4] were carried out in the Dominican Republic between 1983 and 1986, women were asked if their child was vaccinated in a campaign (Q. 421A). If the answer was affirmative, they were asked to mention in which vaccination campaign the child was immunized (12 specific campaigns were coded as response categories; Q. 421B).

In the experimental questionnaire, interviewers first determined whether each young child had ever been immunized, irrespective of survival status at the interview (Q. 404C). For each child reported to have been immunized, interviewers then determined the type of vaccination[5] received (but not the number of doses or the date of immunization) without using a health card (Q. 404D).

The immunization questions in the Dominican Republic core questionnaire are unlike those of other DHS surveys—they fail to ascertain whether the child has been immunized, prior to determining whether the woman has a health card. Since interviewers did not see health cards for the majority of children (about 90 percent),[6] it is impossible to obtain reasonable estimates of the prevalence of immunization from the core.

The best estimate that can be derived from the Dominican Republic core questionnaire is a minimum estimate, based on the respondent's own report: children for whom the mother showed a health card[7] and children reported to have been immunized in a campaign are the only children considered to have been immunized.[8] This procedure results in an estimate of 86 percent of children under five reported to have ever been immunized. As shown in Table 6.4, the vast majority of these children were reported as vaccinated in a campaign; only 3.8 percent were classified as immunized on the basis of the health card alone. Note that when a child was immunized in a campaign, information about the vaccination was *not* recorded in the health card. In Table 6.5, the corresponding estimate from the experimental questionnaire indicates that 92.5 percent of children under five had been immunized, an estimate significantly higher than that for the core questionnaire.

It is even more difficult to estimate the prevalence of specific immunizations from the core. The problem can be seen from the estimates of the proportion of children immunized against specific diseases shown in Table 6.5. Estimates from the core are based only on immunizations recorded on health cards

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[4] The campaigns consisted of immunizations against polio, DPT, and measles (UNICEF, 1986).

[5] Interviewers asked respondents whether the child received the following vaccinations: tuberculosis; diphtheria, pertussis and tetanus; polio; and measles.

[6] Among children under five, nearly 46 percent were reported as having a health card, but the card was shown to the interviewer for only 10 percent of the children.

[7] Only 0.6 percent of the health cards contained no information on specific vaccinations.

[8] This implies that children of women who report not having a card and children of women who fail to show a card are considered never immunized if they were not reported as immunized through a campaign. It is known from other surveys that this is unlikely to be the case—e.g., for a substantial proportion of children (61 percent) reported as immunized in the core questionnaire in Peru, mothers either did not have health cards or did not show them to the interviewer.

Table 6.4 Among children under age five, the percent distribution by source of information on whether the child was ever immunized, core questionnaire

Age of Child	Immunized: Health Card Only	Immunized: Campaign Only	Immunized: Both	Immunized: All Sources	Not Immunized*
Total	3.8	71.8	10.4	86.0	14.0
< 6 mos.	13.3	11.9	3.1	28.3	71.7
6-11 mos.	4.9	71.0	10.4	86.3	13.7
12-17 mos.	3.6	75.0	14.0	92.6	7.4
18-23 mos.	2.6	75.5	15.3	93.4	6.6
24-59 mos.	2.2	81.1	10.2	93.5	6.5

Note: The base population includes all children under five, n=4110.

* Includes "Do not know" responses to the question about vaccination in a campaign.

Table 6.5 Percent of children under age five who have ever been immunized and, among these, the percent receiving specific vaccines, core and experimental questionnaires

Ever Immunized		BCG		DPT*		Polio*		Measles	
Core	Exp.	Core	Exp.	Core	Exp.	Core	Exp.	Core	Exp.
86.0	92.5	9.4	72.1	29.3	87.4	76.4	96.1	7.7	79.1

Note: The base population for the core questionnaire individual vaccines includes children for whom the mother showed a health card to the interviewer, or were reported to have been immunized in a campaign, or both; n=3535. The base population for the experimental questionnaire individual vaccines includes all children who were reported to have been immunized; n=1887.

* At least one dose of vaccine.

or reported as having occurred in campaigns. Not surprisingly, estimates based on the experimental questionnaire are consistently higher than those derived from the core. The differences become extreme for measles and BCG, since these vaccinations are generally not given in campaigns—i.e., measles vaccinations were given in only one campaign during 1983-86 and BCG vaccinations were not administered during any campaign. Hence, numerators for the core estimate are derived mainly from the small number of children whose health cards were shown to the interviewer.

An alternative possibility is to restrict estimates of the frequency of specific vaccinations to the subset of children whose health cards were shown to the interviewer. For two reasons this procedure also yields questionable estimates for the core questionnaire. First, vaccines administered during campaigns were not recorded on health cards. Second, it is likely that children with cards are a selective group with respect to social and economic characteristics. Indeed, among DHS surveys, the Dominican Republic has

one of the lowest proportions of children with health cards actually seen by the interviewer.[9] Multivariate models, which are not presented here, were used to examine the relationship between whether a woman showed a health card for a child and several correlates: age of the child at interview, type of prenatal care, mother's education, mother's place of residence, mother's age, and birth order. All of the explanatory variables included in the analyses, except for the age of the mother at the birth of the child, are significant determinants (in the expected direction) of whether or not the mother showed a health card to the interviewer. For example, women with higher levels of education and women who live in urban areas were more likely to have shown a card than uneducated women living in rural areas. Mothers of children two to five years at the time of the interview were less likely to have shown a health card (although more likely to have reported having a health card) than were women with younger children, perhaps because they could no longer locate the card.[10]

The reason for collecting immunization information directly from children's health cards is to obtain detailed data on vaccination dates and doses which can be used to evaluate various aspects of the immunization program. This data collection procedure has been burdensome for both the interviewer and the respondent, and consumes a substantial amount of time. From the results presented for the Dominican Republic, as well as those for Peru, it is clear that estimates of immunization coverage, assessment of whether children are immunized at the recommended ages, and estimates of the likelihood that children have been fully immunized, will be restricted to a select group of children. Hence, the estimates may be affected by varying degrees of bias. An alternative data collection procedure, which was incorporated into the experimental questionnaires in both Peru and the Dominican Republic, is to ascertain immunization status from women's self-reports and forego the potentially valuable information on dates and doses. There is the possibility, however, that these estimates may also be flawed. In particular, it is likely that estimates based on self-reporting will be high, because of the tendency of respondents to acknowledge having done something positive for their children in response to successive questions and probes. This hypothesis is consistent with comparisons between the experimental questionnaires and survey estimates provided by UNICEF: estimates of the prevalence of immunization for measles and BCG derived from the experimental surveys in the Dominican Republic and in Peru are higher than comparable UNICEF estimates.[11] Unfortunately, these results suggest that neither the core nor the experimental approach may be successful and that it may be impossible to obtain good estimates of immunization status from a multi-purpose retrospective survey—except perhaps in populations where the majority of women have health cards, can locate them, and are willing to show them to the interviewer.

6.4 Birthweight and Prematurity

Because of the importance of birthweight as a determinant of infant mortality, the experimental questionnaire in the Dominican Republic included a question intended to measure this variable. For each birth since January 1981, respondents were asked to supply the birthweight of the child in pounds and ounces (Q. 404A). Respondents were subsequently asked whether the child was full-term or premature (Q. 404B). The respondents classified their children according to their own interpretation of prematurity,

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[9] Among the DHS surveys in Bolivia, El Salvador, Guatemala, Peru, and Trinidad and Tobago, only Bolivia had fewer than one-quarter of children under age five with a health card shown to the interviewer.

[10] Similar results were obtained from the Peru study.

[11] For example, estimates from UNICEF (1989) for 1986-87 indicate that 71 percent of children aged one to two were immunized against measles and 51 percent of children aged one received the BCG vaccine. Roughly comparable figures derived from the experimental survey in the Dominican Republic are 87 and 69 percent, respectively. It is not possible to compare polio and DPT immunizations because published UNICEF estimates refer to the completed series of immunizations (i.e., all three doses); comparable information was not collected in the experimental surveys.

without any specific reference to the length of gestation.[12] Do such subjective assessments of prematurity yield estimates that are consistent with the conventional definition?

Table 6.6 presents the percent distribution for reported birthweight (in grams),[13] and the subjective assessment of maturity status for all singleton children born since January 1981. In contrast with Peru, where nearly one-third of the children did not have a reported birthweight, data for the Dominican Republic indicate that fewer than 8 percent of children have missing birthweights. In addition, data on maturity status are available for all children. The range of birthweights reported appears to be reasonable. The estimate of 10 percent[14] low birthweight children (below 2,500 grams) is similar to estimates in the DHS surveys in Peru and Mexico (11 and 12 percent, respectively). The mean birthweight (3,309 grams) is also close to means estimated for Peru and Mexico (3,223 and 3,267 grams, respectively).

Table 6.6 Distribution of reported birthweight (in grams) and maturity status among children born since January 1981, experimental questionnaire

Reported Birthweight (in grams)	%
< 1500	1.1
1500-2499	7.8
2500-2999	16.9
3000-3499	32.5
3500-3999	22.6
4000-4499	9.1
4500 +	2.1
Don't Know or Missing	7.9
Total	100.0
Maturity Status	**%**
Premature	4.4
Full-term	95.6
Don't Know or Missing	-
Total	100.0
Number of births	2533

Note: Only singleton births are included.

The incidence of premature births (4.4 percent) estimated for the experimental questionnaire is probably too low. The figure is lower than reported rates for the U.S., 10 percent (Hughes et al., 1989), and lower than rates in other Latin American countries: Chile (5.7 percent), Costa Rica (4.9 percent), and Uruguay (8.1 percent) (Puffer and Serrano, 1987). Similarly, as shown in Table 6.7, the percentage of infants who are both low birthweight and premature in the Dominican Republic (2.3 percent) is lower than that found in the same countries (Puffer and Serrano, 1987): Chile (3.5 percent), Costa Rica (3.0 percent), Uruguay (4.6 percent), and the United States (3.8 percent). One explanation for the differences between the Dominican Republic and other countries is that respondents in the experimental survey were conservative in their assessment of prematurity: e.g., defining premature births as those occurring prior to 34 or 35 completed weeks of gestation rather than 37 weeks, which is the standard definition.

Table 6.8 presents cumulative probabilities of dying by age one, by broad categories of reported birthweight and maturity status. Not surprisingly, low birthweight and premature infants have a greater probability of dying than births weighing 2,500 or more grams or full-term births. The relative risk of dying for premature births compared with full-term births is 10 to 1, and supports the idea that women tended to classify fewer births as premature than the conventional definition. For example, estimates derived from Indian villages in Guatemala yield a relative risk of 6 (Martorell and González-Cossío, 1987). On the other hand, as shown in Table 6.8, the relative risk of dying for low weight births relative

[12] According to WHO, premature births are those under 37 completed weeks since the last menstrual period (World Health Organization, 1948).

[13] The reported weights in pounds and ounces were converted into grams.

[14] This is based on the proportion of children (.921) with a reported birthweight.

Table 6.7 Percent distribution of births by reported birthweight and maturity status, experimental questionnaire

Reported Birthweight	Maturity Status		
	Premature	Full-term	Total
Low Birthweight (<2500 grams)	2.3	7.4	9.7
Normal Birthweight (2500+ grams)	1.9	88.4	90.4
Total	4.2	95.8	100

Note: Only singleton births with reported birthweights are included.

Table 6.8 Cumulative probability of dying by age one (per 1,000 births) by reported birthweight and maturity status, experimental questionnaire

	Number of Births*	$_1q_0$
Reported Birthweight		
Low Birthweight (< 2500 grams)	226	140.1
Normal Birthweight (2500+ grams)	2109	41.7
Don't Know or Missing	198	142.2
Maturity Status		
Premature	111	451.0
Full-term	2422	42.0
Total	2533	57.7

* Only singleton births are included.

to normal weight births is 3 to 1, a ratio which is consistent with estimates for Peru and other countries. As in Peru, the probability of dying within the first year of life for children whose mother did not report a birthweight is as high as for low birthweight infants. These estimates support the contention that children with missing information are apt to have actual birthweights well below the average (Moreno and Goldman, 1990).

The experimental questions on birthweight included in the Dominican Republic DHS survey differed from those included in the Peru questionnaire. In Peru, after reporting numerical weights for children born in the reference period, respondents were asked to provide a subjective assessment of the infant's weight (very small, below average, average, above average, or very large) for *each* child—i.e., those with and without reported numerical weights. In spite of some obvious problems with these subjective weights (e.g., the tendency to report "average"), they proved to be important in allowing the

analyst to determine the extent to which infants with missing numerical weights are select (with regard to a variety of demographic and socioeconomic characteristics) and to obtain a rough idea of the degree to which bias may affect estimates derived from reported numerical weights (Moreno and Goldman, 1990). Although missing weights occur less frequently in the Dominican Republic, the data in Table 6.8 indicate that these births are select for high mortality and hence probably also for low birthweight. Inclusion of subjective assessments of birthweight would have provided useful additional information.

In summary, the analysis of information on birthweight and prematurity from the experimental survey suggests that, although the information collected shows internal consistency, more comparable data would have been obtained if a better set of questions for establishing prematurity had been used. In particular, interviewers should have obtained information on gestational age of births. In addition, inclusion of questions on prematurity in the Dominican Republic survey did not have to result in exclusion of the subjective birthweight question fielded in Peru. Rather, the best strategy would have been to include a series of questions to obtain numerical birthweights, subjective assessments of weight for all births (including those with numerical weights), and gestational age for all births. Such data would permit more comprehensive analyses of the relationship between birthweight, gestational age, and infant health and survival, even in the presence of missing information.

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CHAPTER 7

RELIABILITY

7.1 Introduction

One of the major concerns of collectors of survey data is the reliability of the information obtained in the interview. One measure of reliability is the consistency with which the same responses are obtained when the same questions are asked in a reinterview. This does not address the issue of validity—whether the responses are "correct" as measured by external criteria. The concept of reliability relates only to whether respondents would offer the same information about the same subject on different occasions. Assessing how reliably the year of birth is reported, for example, means determining whether the respondent reports the same year on another occasion; the question of validity, on the other hand, focuses on whether the year of birth reported is the correct one—perhaps judged by a birth certificate or other external documentation (which of course may also have problems of accuracy). Theoretically, it is possible to have high reliability with low validity (inaccurate information reported consistently), but, it is not possible to have high validity with low reliability. Thus, reliability is important because it sets a ceiling on the potential validity of observations.

Reliability can be impaired by various types of error. Variability can be introduced by respondent error, by interviewer error, and by data processing error, and can be influenced by questionnaire design, i.e., some questions are better—less ambiguous, for example—than others. In principle, these sources of error can be classified by type; in fact, this is extremely difficult, and the typical situation is limited to assessing the net error contributed by all sources.

The focus of this chapter is on the assessment of the comparative reliability of numerous types of information collected in the core and in the experimental questionnaires used both in Peru and in the Dominican Republic, although the reliability study was conducted only in the Dominican Republic.

7.2 Research Design and Data

A reinterview study was carried out in the Dominican Republic to assess the comparative reliability of the two DHS survey instruments. For various reasons, several compromises were made in the design originally conceived for the reinterview study. First, it was decided to concentrate the reinterviews in three areas near Santo Domingo, rather than covering the entire country (a compromise made for reasons of economy); second, it was decided to select women with children under five years of age. The latter was done in order to evaluate the consistency of the more complex information collected about family planning, fertility, and child health, which are the important areas differentiating the core and the experimental questionnaires. The result was exclusion of older women whose childbearing was completed more than five years earlier, as well as younger, unmarried women without children. The first compromise, limiting the women selected for reinterview to those living in or near the capital, Santo Domingo, probably creates a bias toward somewhat higher reliability, although one of the three districts was semi-rural in nature. The second compromise, to limit the reinterviews to women with small children, has the effect of selecting younger women and of reducing the length of the recall period for many of the events of interest. The result of these compromises is probably to overestimate somewhat the general reliability of the data, compared with what the outcome would have been if the reinterviews had been selected as a representative subsample of the initial national sample of women 15 to 49. However, the reinterview sample actually includes women with less education—26.4 percent had secondary or higher education—compared with 33.3 percent in the national sample. The exclusion of young unmarried women offsets to some extent the effects of excluding the older women.

Two additional features of the design of the reinterview survey are noteworthy. First, different interviewers were used for the second interview. Second, the same questionnaires were used in the reinterview as in the original interview. The reinterviews were scheduled at the end of the fieldwork, an average of 2.4 months after the first interview. Some 208 reinterviews were conducted with the core questionnaire and 215 with the experimental questionnaire.

7.3 Measures of Reliability

There are several different measures of reliability[1] that can be used, depending on the objectives. The first is a comparison of aggregate consistency, which is shown in Table 7.1, with the percentage or average values calculated at the first and at the second interview. For example, the median duration of amenorrhea (following all births in the preceding five years) reported in the first interview with the core questionnaire is 2.2 months; in the reinterview with the core questionnaire the corresponding value is 2.1 months.[2] In the first interview with the experimental questionnaire, which used the monthly calendar, the median duration is 2.1 months; in the reinterview, the median duration is 2.2 months. From this comparison it may be concluded that the two different questionnaire approaches yield the same aggregate reliability as indicated by this statistic. In other words, the average duration of amenorrhea is consistently reported to be fractionally above two months regardless of which of the two approaches is used.

Another example is in connection with the ideal number of children (Table 7.3). In this case, the core questionnaire approach yields a median of 2.6 children for both interviews while the experimental question shows medians of 2.8 and 2.7 children for the two interviews. The slightly higher values in the experimental survey are consistent with observed results for the two forms of this question in Peru and in the earlier analysis of these data in the Dominican Republic. It would appear that either form of the question yields a high level of aggregate reliability.

For many demographic purposes, the aggregate level is the appropriate level of measurement. Of particular interest are estimates of contraceptive prevalence, the mean duration of breastfeeding, and the proportion of women who want no more children. From this perspective, the appropriate measure of reliability is the consistency of such aggregate summary statistics. On the other hand, such consistency can mask considerable individual error. For example, a woman can report one month of amenorrhea in the first interview and three months in the second interview; her inconsistency would be offset by another woman who reported three months in the first and one month in the second interview. Thus, aggregate consistency has little value unless there is underlying individual consistency. Moreover, many analyses of relationships that are conducted with survey data are based on individual units of observation; reliability at the individual level is important because it sets limits on the maximum value of associations. If the interest is in the association between two variables, the potential value of that association is constrained by the lower reliability of either measurement.

Several measures of individual consistency are utilized. The percent of women giving the same report at both interviews is the most direct measure. For example, 54 percent of the births occurring in the past five years were reported in both interviews with the core questionnaire to have been followed by the same number of months of amenorrhea; for the experimental questionnaire, the value is 50 percent (i.e., half reported a different number of months). If the measure of agreement is allowed to include one month more or less, the values rise to 78 and 73 percent respectively. Similar levels of individual agreement are observed for the variable for ideal number of children.

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[1] All measures presented in this chapter are based on unweighted numbers.

[2] Estimates for the duration of the postpartum variables are medians of all reported segments (i.e., completed and not completed); they are not life table estimates.

This simple percentage in agreement has several problems as a measure of consistency. The chief difficulty is that it is influenced by the marginal distributions of the particular variables. If the proportions are extreme, such as for knowledge about the IUD (about 95 percent had heard of it in both interviews), the percent consistent would be expected to be high simply by chance; this would not be the case for a distribution close to 50-50, such as knowledge of male sterilization. Since the percent consistent is influenced by the marginal distribution, it reduces the comparability of the measure across variables.

The index of consistency (labeled Kappa in the statistical literature) was developed to correct for this weakness of the percentage agreement. Essentially, it is the ratio of the observed to the expected number of cases in agreement:

$$K = 1 - \frac{(1 - P_o)}{(1 - P_e)} = \frac{P_o - P_e}{1 - P_e}$$

where P_o = the sum of the observed proportion in agreement between the two interviews and P_e = the sum of the expected proportion in agreement.[3] For both the reported number of months amenorrheic and for the ideal number of children, this index falls below .50, indicating comparatively low reliability in terms of this criterion of improvement over chance expectation.

7.4 Fertility and Postpartum Variables

The reliability of birth dates reported for both forms of the birth history (full history and truncated history) is high in the Dominican Republic. The main comparison that can be made is for births occurring from 1981 to 1986.

For both the interviews and reinterviews of the core and the experimental questionnaires, the proportion of births for which the same year was reported exceeds 90 percent (Table 7.1). When the test is repeated for month *and* year of birth, agreement drops to 82 and 79 percent for the core and experimental questionnaires, respectively.

The experimental questionnaire included questions on infertile pregnancies (abortions and miscarriages together). The percent of all pregnancies since 1981 reported as infertile is 9 and 8 percent in the two interviews, with 91 percent individual consistency. However, the proportion reporting the same year of its occurrence and the proportion reporting the same gestation month are 69 and 61 percent, respectively. Not only are such events considerably underreported, but even when reported, the dating and the reporting of the duration of the pregnancy are unreliable.

The aggregate reliability of the duration of breastfeeding is indexed here by the median number of months all births (since January 1981) were reported to have been breastfed. This index shows almost perfect agreement between the two questionnaires but inexplicably a somewhat higher median (6 months compared with 5 months) in the experimental survey. The consistency of individual reporting of exactly the same number of months is about half for each questionnaire and about two-thirds if the criterion is expanded to include plus or minus one month. There is essentially no difference in reliability between the two questionnaires except that since the calendar results in less heaping, consistency may be more

[3] This measure is described and employed in the analysis of fertility survey data in Ryder and Westoff (1971) and in MacDonald et al. (1978). The measure of consistency used in the WFS analysis is a weighted version of Kappa that takes into account the degree or magnitude of disagreement.

Table 7.1 Reliability of fertility and postpartum variables, core and experimental questionnaires

	Core	Experimental
Year of Birth of Children Born 1981-1986		
Percent for whom same year was reported	95	93
Percent for whom same month and year were reported	82	79
Number of births	329	300
Infertile Pregnancies Since 1981		
Percent of all pregnancies infertile (1)	NA	9
Percent of all pregnancies infertile (2)	NA	8
Percent consistent	NA	91
Consistency index	NA	.71
Number of women	NA	199
Percent reporting same year for occurrence of infertile pregnancy	NA	69
Percent reporting same gestation month for occurrence of infertile pregnancy	NA	61
Number of infertile pregnancies	NA	30
Duration of Breastfeeding (All births in past five years)		
Median months (1)	5.0	5.9
Median months (2)	5.0	6.0
Percent consistent (same month)	52	52
Percent consistent (± one month)	65	70
Consistency index (same month)	.47	.49
Number of births	348	291
Duration of Amenorrhea (All births in past five years)		
Median months (1)	2.2	2.1
Median months (2)	2.1	2.2
Percent consistent (same month)	54	50
Percent consistent (± one month)	78	73
Consistency index (same month)	.47	.41
Number of births	348	291
Duration of Abstinence (All births in past five years)		
Median months (1)	1.2	1.3
Median months (2)	1.2	1.5
Percent consistent (same month)	51	45
Percent consistent (± one month)	82	84
Consistency index	.32	.26
Number of births	349	291

Note: Numbers in parentheses indicate first (1) and second (2) interview.

difficult in the experimental questionnaire (i.e., it may be easier in the core questionnaire to recall 6 months than it is to recall 5 or 7 months in the experimental questionnaire). However, the index of consistency shows no difference between the two questionnaires.

The results for the reporting of months of postpartum amenorrhea have already been described, i.e., there is no difference between the two questionnaires. The estimates of reliability are quite similar to those for breastfeeding.

The duration of postpartum abstinence shows high aggregate reliability but low individual consistency as measured by the index. (Recall that the index takes into account the limited range of months for this variable compared with durations for the other postpartum variables).

In summary, the postpartum variables show high aggregate consistency in the reporting of duration but poor individual consistency.

7.5 Contraceptive Measures

With regard to information on knowledge and ever use of contraception, the experimental and core questionnaires differ mainly in the order in which contraceptive methods are presented. The questions are essentially the same in both versions. The interest here is in whether order has any effect on the consistency of responses regarding knowledge and use of specific methods.

For all methods except the pill (which has universal recognition), the proportion reporting knowledge of the method is greater in the second interview than in the first (Table 7.2). This undoubtedly resulted from the fact that some learning occurred during the first interview. That is, women who responded negatively in the first interview could correctly respond positively in the second interview since the method had been described to them previously.

The measures of individual consistency for knowledge are similar (but low) for both questionnaires. Note that for some of the variables (e.g., ever heard of sterilization or ever used implant), the index of consistency cannot be calculated because almost 100, or 0, percent of women had heard of, or had used, the method; such extreme margins lead to unstable and low estimates for the index.

The reliability of reporting whether particular methods were ever used is also similar in the two questionnaires. For most methods, the percent agreement is over 90 percent. The main exception is withdrawal, for which the percentage agreeing that they had ever used the method is only 76 percent for the core and 69 percent for the experimental questionnaire. Use of the rhythm method and of the condom are also below 90 percent. The relatively low reliability of the reporting of use of withdrawal or rhythm is no doubt related to the absence of a mechanical device or chemical substance for these methods of contraception.

The reliability of reporting whether *any* method was ever used is quite high in the two questionnaires. The consistency of reports of current use are similar to ever use and reflect the same pattern of questioning. It should be noted that the consistency of such reporting is related to the type of methods that predominate in the country. In the Dominican Republic, where female sterilization is common, consistency would be expected to be higher than in a country like Peru, where rhythm is a popular method.

The two questionnaires approached the subject of future use of contraception in different ways. The chief variant was whether the question on intention to use a method at any time in the future was preceded or followed by the question on intention to use in the next 12 months. From the point of view of reliability, there seems to be little difference: both approaches show low individual reliability. Of course, there could be some genuine change in intention over the few months between interviews.

The reasons reported for discontinuing use are particularly important, in part because they influence the estimation of contraceptive failure. Aggregate reliability for contraceptive failure was found to be reasonably high for both questionnaires (and both interviews). About 30 percent of births since January 1981 were classified as failures (i.e., women reported that they became pregnant while using the method), but individual consistency is below 80 percent. The two questionnaires show the same pattern of consistency. Overall, this suggests that, although the proportion of failures for all methods appears to be stable, a sizeable number of different individuals would be classified as having failed. Whether this would constitute a problem depends on whether there is selectivity in terms of who is inconsistent, e.g., by method or by duration of use. The size of the sample for the reinterviews does not permit addressing these questions. Even the summary analysis presented here is based on fewer than 100 women for each questionnaire, which is barely adequate for comparing the reliability of the two questionnaires.

Table 7.2 Reliability of contraceptive measures, core and experimental questionnaires

		Heard of:		Ever Used:	
		Core	Exper.	Core	Exper.
Pill	Percent heard of; Ever used (1)	99	99	53	45
	Percent heard of; Ever used (2)	99	99	50	45
	Percent consistent	99	98	92	93
	Index of consistency	-	-	.84	.86
	Number of women	201	207	200	203
Implant	Percent heard of; Ever used (1)	58	48	0	5
	Percent heard of; Ever used (2)	69	54	0	2
	Percent consistent	74	77	100	98
	Index of consistency	.45	.54	-	-
	Number of women	201	207	102	82
IUD	Percent heard of; Ever used (1)	94	93	11	13
	Percent heard of; Ever used (2)	97	95	11	13
	Percent consistent	93	93	99	97
	Index of consistency	-	-	.97	.88
	Number of women	201	207	186	187
Injection	Percent heard of; Ever used (1)	81	82	2	1
	Percent heard of; Ever used (2)	90	88	2	1
	Percent consistent	80	83	100	99
	Index of consistency	.21	.33	-	-
	Number of women	201	207	152	161
Vaginal	Percent heard of; Ever used (1)	78	77	12	12
	Percent heard of; Ever used (2)	86	81	12	8
	Percent consistent	81	80	92	93
	Index of consistency	.27	.39	.62	.61
	Number of women	201	207	146	142
Condom	Percent heard of; Ever used (1)	94	88	26	21
	Percent heard of; Ever used (2)	96	95	30	19
	Percent consistent	93	90	86	88
	Index of consistency	-	-	.66	.62
	Number of women	201	207	184	179
Female Sterilization	Percent heard of; Ever used (1)	98	98	25	27
	Percent heard of; Ever used (2)	100	99	28	28
	Percent consistent	98	99	96	97
	Index of consistency	-	-	.91	.94
	Number of women	201	207	197	204
Male Sterilization	Percent heard of; Ever used (1)	45	54	1	0
	Percent heard of; Ever used (2)	53	65	1	1
	Percent consistent	69	72	100	99
	Index of consistency	.39	.42	-	-
	Number of women	201	207	67	94
Rhythm	Percent heard of; Ever used (1)	55	39	28	29
	Percent heard of; Ever used (2)	61	44	27	32
	Percent consistent	77	74	82	86
	Index of consistency	.52	.47	.54	.68
	Number of women	201	207	93	59
Withdrawal	Percent heard of; Ever used (1)	70	53	29	44
	Percent heard of; Ever used (2)	77	67	35	36
	Percent consistent	74	71	76	69
	Index of consistency	.33	.41	.45	.36
	Number of women	201	207	121	94

Note: Numbers in parentheses indicate first (1) and second (2) interview.

Table 7.2 (continued)

Variable	Core	Exper.
Ever Used a Method		
Percent ever used (1)	78	73
Percent ever used (2)	79	74
Percent consistent	91	83
Consistency index	.73	.71
Number of women	201	207
Currently Using a Method (Excludes Never Users and Currently Pregnant Women)		
Percent currently using (1)	72	77
Percent currently using (2)	73	74
Percent consistent	82	90
Consistency index	.56	.73
Number of women	131	129
Use in the Future (Excludes Current Users)		
Percent intend to use (1)	58	56
Percent intend to use (2)	64	58
Percent consistent	71	62
Consistency index	.42	.29
Number of women	89	98
Classification of Births (since January 1981) as Contraceptive Failure		
Percent became pregnant while using (1)	31	31
Percent became pregnant while using (2)	26	28
Percent consistent	79	76
Index of consistency	.50	.47
Number of women	92	74

Note: Numbers in parentheses indicate first (1) and second (2) interview.

7.6 Reproductive Attitudes

The reliability of three measures of reproductive attitudes are reviewed in Table 7.3: (1) ideal number of children, which is based on a slightly different approach in the two questionnaires, (2) intentions about future childbearing, which are based on very different questions, and (3) planning status of recent births, which determines estimates of wanted and unwanted fertility.

The measure of fertility norms—the "ideal" number of children—was discussed in the methodological illustration in section 7.3. In terms of the comparative reliability of the questions asked in the two questionnaires, there is little difference: both versions produce high aggregate consistency and low individual consistency.

In contrast, whether the woman wants more or no more children yields both high aggregate and individual consistency. The approaches in the two questionnaires yield similar results. This appears to be the most robust of the attitudinal measures.

Both questionnaires relied on the same question to determine whether a particular birth was planned, mistimed, or unwanted. However, the core questionnaire had a series of prior questions

determining whether a method was used and why the woman discontinued; these answers either led into, or were part of, the final classification of planning status. Similar information was collected in the experimental questionnaire but was recorded on the calendar and not integrated with the planning status question.

Table 7.3 Reliability of reproductive attitudes, core and experimental questionnaires

	Core	Exper.
Reproductive Intentions (Including sterilized)		
Percent want no more (1)	69	64
Percent want no more (2)	70	69
Percent consistent	85	80
Consistency index	.65	.51
Number of women	150	143
Ideal Number of Children		
Median ideal number (1)	2.6	2.8
Median ideal number (2)	2.6	2.7
Percent consistent (same number)	51	55
Percent consistent (± one child)	78	80
Consistency index (same number)	.35	.41
Number of women	201	207
Planning Status of Births since January 1981		
Percent planned (1)	47	42
Percent planned (2)	51	47
Percent mistimed (1)	31	30
Percent mistimed (2)	26	33
Percent unwanted (1)	22	27
Percent unwanted (2)	22	20
Percent consistent (three categories)	67	59
Consistency index (three categories)	.47	.37
Percent consistent (wanted vs. unwanted)	83	76
Consistency index (wanted vs. unwanted)	.51	.33
Number of births	290	313

Note: Numbers in parentheses indicate first (1) and second (2) interview.

For the critical category "unwanted", the core questionnaire approach seems to yield higher reliability at both the individual level and the aggregate level. The individual reliability of the three categories (planned, mistimed, and unwanted) is disappointing, with only 67 percent of the births classified consistently (59 percent in the experimental questionnaire). The wanted/unwanted dichotomy shows 83 percent agreement for the core questionnaire and 76 percent agreement for the experimental questionnaire. The most critical measure here—the aggregate consistency of the percent unwanted—is reassuringly high for the core questionnaire.

In summary, these three measures of reproductive attitudes all show high aggregate consistency and, with the exception of reproductive intention, low individual consistency. In terms of reliability alone, there is not much difference between measurements for the two questionnaires, although the core questionnaire approach to planning status may be preferable.

References

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McDonald, A.L., P.M. Simpson, and A.W. Whitfield. 1978. *An Assessment of the Reliability of the Indonesia Fertility Survey Data*. World Fertility Survey Scientific Reports, Number 3. Voorburg, Netherlands: International Statistical Institute.

CHAPTER 8

SUMMARY AND CONCLUDING REMARKS

8.1 Objectives and Methods

This report marks the completion of an experimental study which was designed to evaluate various ways of collecting demographic and health information from national-level sample surveys. The standard questionnaire used in the first phase of the Demographic Health Surveys project was evaluated along with a new questionnaire which incorporated different approaches to the measurement of demographic and health variables. The experiment was fielded in two Latin American countries—Peru and the Dominican Republic—in the fall of 1986. The results from the analysis of the Peru surveys have already been published (Goldman et al., 1989). This report presents a replication of part of the earlier analysis based on data from the Dominican Republic surveys. In addition, there is an analysis of the reliability of the questionnaire used to reinterview several hundred women in the Dominican Republic. As noted in Chapter 1, the present study does not replicate all of the analyses carried out for Peru. In general, the most important topics and those analyses which led to inconclusive findings in Peru are included. The results of the Dominican Republic study are summarized below for: fertility, contraception, reproductive attitudes, child health, and reliability.

8.2 Fertility

The idea of a truncated birth history arose because of the presumed economy that could be realized by avoiding the collection of full birth histories when the primary interest of the investigation was recent fertility and child mortality. Moreover, evidence from survey experience indicated that recent events are reported more accurately than those in earlier years. However, there was concern that a truncated history might lead to a different type of response error: namely, a displacement of recent births backward in time in order to reduce the workload of the interviewer.

The analysis in Peru provided mixed support for the truncated history. The results indicated that the total fertility rate for the period 1980-86 was virtually identical for the two questionnaires; however, the questionnaires revealed differences in fertility trends within this period. These discrepancies were consistent with the hypothesized backward displacement of birth dates. Replication of this analysis in the Dominican Republic revealed no such differences. The findings suggest that both the full birth history and the truncated birth history yield the same quality of information on recent births. The decision was made to retain the full birth history in the second round of DHS surveys (DHS-II) on the grounds that the richness of the data for earlier years outweighed any gains in economy from the use of a truncated history.

The experimental questionnaire also included questions about fetal deaths in the past six years in order to determine whether this information would improve data on fertility and infant (i.e., neonatal) mortality. However, neither the Peru nor the Dominican Republic studies showed any such improvements: in both experimental surveys, no fetal deaths were apparently misclassified as live births. In addition, it appears that infertile pregnancies were underreported in the experimental questionnaire in both countries.

8.3 Contraception

Many experimental evaluations were introduced into the contraception section of the questionnaires. The most important was the use of a calendar in the experimental survey to record all segments of use in the most recent six-year period, along with reasons for discontinuation of use. Less

complete information on use was collected from a tabular format in the core questionnaire. The analyses for Peru and the Dominican Republic yielded the following conclusions:

- Although the Peru survey indicates that knowledge or awareness of different contraceptive methods is not affected by the order in which the methods are presented to the respondent, results from the Dominican Republic indicate differently. In the latter survey, methods presented at the end of the list frequently receive greater acknowledgment.

- Estimates of ever use of specific contraceptive methods are unaffected by the order in which methods are presented to the respondent.

- The two questions used to measure the acceptability of family planning appear to be inadequate.

- The two questions used to measure availability or source of supply for specific methods yield similar results.

- Estimates of current use of contraception are similar for the core and experimental questionnaires.

- Estimates of contraceptive prevalence for years prior to the survey appear to be inadequate when derived from the core questionnaire. This is particularly true for estimates of use of ineffective methods. In addition, estimates of prevalence for the recent past are very difficult to derive from the core because of the lack of information on specific dates of use. By contrast, the calendar format readily provides estimates of prevalence for dates within the most recent six-year period. Estimates of use reconstructed from the experimental calendars in Peru and in the Dominican Republic are in relatively close agreement with estimates of current use reported in the CPS surveys (Contraceptive Prevalence Surveys) in Peru (1981) and the Dominican Republic (1983).

- In spite of the omission of certain segments of contraceptive use in the core questionnaire, the two questionnaires produce generally similar estimates of contraceptive failure.

- In the Peru study and, to a lesser extent, the Dominican Republic study, rates of discontinuation of contraceptive use are significantly higher for the experimental survey. This difference results from the fact that more segments of use are reported in the calendar than in the tabular format of the core questionnaire.

- In both studies, there is evidence that the calendar produces fewer heaped responses (i.e., for reported durations of use) and that information is more internally consistent than the corresponding data from the core questionnaire. One drawback of the calendar in both countries is a high frequency of missing responses regarding reason for discontinuation of contraception.

8.4 Reproductive Attitudes

The Peru analysis demonstrated that the revised questions on ideal or desired family size used in the first phase of the DHS program (DHS-I) were superior to those used in the WFS and CPS surveys. Specifically, the DHS questions greatly reduced the occurrence of women rationalizing unwanted births as wanted. This result was replicated in the Dominican Republic, but the improvement was less dramatic.

The measurement of reproductive intentions was assessed with different sets of questions in the two questionnaires. The results for the Dominican Republic, as well as those for Peru, indicated generally consistent findings: i.e., for both questionnaires, similar proportions of women wanted more children and no more children.

A frequently voiced comment in the field of demography is that if researchers want to know why women are not using contraception, why not just ask them for the reason. This was tried in the DHS surveys, with different questions; the conclusion from both the Peru and the Dominican Republic studies

was that this direct approach yields predictable responses which add little to the knowledge of family planning behavior.

Whether women who are not currently using contraception intend to use in the future has been analyzed in both studies with the questions presented in a different order. The results indicate important differences in estimates of the proportion of women intending to use contraception.

The subject of sterilization regret was included in the Dominican Republic study because of the large number of women who rely on that method. About one-quarter of sterilized women expressed regret at having had the operation; three-quarters of these women reported that they would like to have had another child. The questions on regret have been expanded in the DHS-II questionnaire.

8.5 Child Health

The core and experimental questionnaires used different questions to determine the prevalence of diarrhea among young children and the nature of treatment, if any. Results from both countries indicate that when respondents are asked a question (in the experimental questionnaire) about the timing of the most recent episode, a higher prevalence of the illness is reported than when they are asked about a fixed reference period (the past 24 hours or the last two weeks). In addition, information on types of treatment appears to be sensitive to the questions used, i.e., the listing or description of specific treatments by the interviewer seems to result in greater frequency of reported treatment.

Analyses from the core surveys in both countries indicate that estimates of immunization coverage which are derived solely from health cards are restricted to a select group of children. The resulting estimates—e.g., of the prevalence of specific immunizations or of the ages at which children are immunized—are likely to be biased, but the extent of bias is unknown. Although the Dominican Republic survey attempted to improve the data obtained from the core questionnaire by the addition of questions on immunization campaigns, the survey failed to include a general question to determine whether the child had ever received an immunization. The resulting estimates, therefore, are difficult to interpret. The experimental approach to the collection of immunization data was to use a woman's own report of the immunization status of her child, and not use the health card at all. The findings suggest that these coverage estimates may also be biased because of the tendency of respondents to acknowledge having done something positive for their children in response to successive questions and probes. The overall conclusion is that neither approach has been very successful and that immunization information may not be obtainable from multipurpose retrospective surveys—except perhaps in populations where the majority of women have health cards, can locate them, and are willing to show them to the interviewer.

Only the experimental questionnaires included questions on birthweight and maturity status. The experimental questionnaires in both countries included a question on numerical birthweight for all children born since January 1981. In addition, respondents in Peru were asked to describe the relative size of the child at birth, while respondents in the Dominican Republic were asked whether the child was full-term or premature. The results from Peru indicate that the inability of many of women to provide numerical birthweights for their children can lead to substantial bias, particularly in regard to estimates of the prevalence of low birthweight babies and of the correlates of low birthweight. The data on relative size, however, provide a rough estimate of the extent and impact of these biases—even though the reports of relative size are only moderately correlated with the reported numerical birthweights. The Dominican Republic analysis indicates that the question on maturity status should have been asked *in addition to* (not instead of) the question on relative size. Moreover, the question would have been more useful had it made reference to the gestational age of the birth.

8.6 Reliability

In the Dominican Republic, but not in Peru, a supplementary inquiry was developed to assess the comparative reliability of the components of the two questionnaires. The results of this analysis are described in this report only for those measures featured in the experimental evaluation. The reliability study was based on two samples of women who were reinterviewed several months after the first interview. A total of 208 women were reinterviewed with the core questionnaire and 215 with the experimental questionnaire. Both subsamples had been interviewed initially with the same instrument. In order to evaluate the full complexity of the questionnaires, only women with children under five years of age were selected for the reinterview. Reliability was assessed for aggregate as well as for individual consistency of response. The principal findings include:

- Dates of birth in the past five years are reported with a high degree of consistency in both the full and truncated birth histories.
- Infertile pregnancies are reported consistently but the year of occurrence and length of gestation are inconsistent.
- Reporting of the duration of breastfeeding, postpartum amenorrhea, and postpartum abstinence shows high aggregate but low individual consistency.
- Current and past use of different contraceptive methods are reported with high reliability in both questionnaires, except for rhythm and withdrawal.
- Reasons for contraceptive discontinuation are not reported with high consistency in either questionnaire.
- Reproductive attitudes, in particular the ideal number of children and the planning status of recent births, show high aggregate but low individual consistency. In contrast, the questions on whether or not women want more children show high reliability at both aggregate and individual levels.

8.7 Concluding Remarks

The experimental field trials in Peru and in the Dominican Republic have demonstrated the importance of evaluating and modifying questionnaires in order to obtain high quality data which yield the maximum amount of information. The replication of the experiment in a second setting was a particularly important feature of this project and one which is too often ignored in the social sciences. Comparisons between Peru and the Dominican Republic have made it possible to determine the advantages and disadvantages of particular experimental approaches to data collection.

Several recommendations which emerged from the analyses of the experimental studies have already been incorporated into the new questionnaires designed for the second phase of the DHS project (DHS-II). The most important change in the DHS core questionnaire is the inclusion of a monthly calendar which is similar to that in the experimental questionnaires.[1] Another change is the expansion of types of information collected on child health. DHS-II will provide opportunities to evaluate the calendar, as well as other variations in questionnaire design, in countries in Africa, Asia, the Near East and Latin America. From this will come a better understanding of which questions are most effective in collecting demographic and health data, and equally important, how survey findings vary according to the cultural setting and demographic and socioeconomic characteristics of the population.

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[1] In DHS-II, the calendar will be used only in countries which have a significant level of contraceptive use. In countries with low levels of contraceptive use a questionnaire similar to the DHS-I core questionnaire will be used, but with additional questions on health practices. Both questionnaires will include the full birth history.

References

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APPENDIX A

DOMINICAN REPUBLIC
CORE QUESTIONNAIRE

DOMINICAN REPUBLIC BASIC QUESTIONNAIRE (ENGLISH)

IDENTIFICATION	
QUESTIONNAIRE NUMBER.....	☐☐☐☐
PROVINCE.....	Prov. ☐☐
MUNICIPALITY OR MUNICIPAL DISTRICT.....	_____
ZONE (1=URBAN 2=RURAL).....	Zone ☐
STREET_____	Selected HH No. ☐☐☐
HOUSE OR APARTMENT NUMBER_____	_____
BARRIO_____	
AREA IDENTIFICATION.....	Area ID ☐☐☐
NAME OF HEAD OF HOUSEHOLD_____	
LINE NUMBER OF WOMAN.....	Line ☐☐

INTERVIEWER VISITS	1	2	3	FINAL VISIT
DATE	_____	_____	_____	MO ☐☐ YR ☐☐
INTERVIEWER'S NAME	_____	_____	_____	Interv'wr ☐☐
RESULT*	_____	_____	_____	Result ☐
NEXT VISIT DATE: TIME:				No. of VISITS ☐

* RESULT CODES:
1 COMPLETED
2 NOT AT HOME
3 DEFERRED
4 REFUSED
5 PARTLY COMPLETED
6 OTHER

	FIELD EDITED BY	OFFICE EDITED BY	PUNCHED BY	PUNCHED BY
NAME	_____	_____	_____	☐☐
DATE	_____	_____	_____	

SECTION 1. RESPONDENT'S BACKGROUND

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP TO
101	RECORD NUMBER OF PEOPLE LISTED IN THE HOUSEHOLD SCHEDULE	NUMBER OF PEOPLE..[ ][ ]	
101A	RECORD NUMBER OF CHILDREN AGED 5 AND UNDER LISTED IN THE HOUSEHOLD SCHEDULE.	NUMBER OF CHILDREN 5 AND UNDER.....[ ][ ]	
102	RECORD THE TIME	HOUR.....[ ][ ] MINUTES.....[ ][ ]	
	First I would like to ask some questions about yourself and your household.		
103	For most of the time until you were 12 years old, did you live in the countryside, in a town, or in a city?	COUNTRYSIDE.....1 TOWN.....2 CITY.....3	
104	How long have you lived here in _____ (NAME OF VILLAGE, TOWN, CITY)?	ALWAYS.....96-- VISITOR.....97-- YEARS.....[ ][ ]	→106 →106
105	Just before you moved here, did you live in the countryside, in a town, or in a city?	COUNTRYSIDE.....1 TOWN.....2 CITY.....3	
106	In what month and year were you born?	MONTH.....[ ][ ] DK MONTH.....98 YEAR.....[ ][ ]	
107	How old were you at your last birthday? COMPARE AND CORRECT 106 AND/OR 107 IF INCONSISTENT.	AGE IN COMPLETED YEARS.....[ ][ ]	
108	Have you ever attended school?	YES.....1 NO.....2--	→112
109	What was the highest year of school you completed?	PRIMARY.....[1][ ] INTERMEDIATE.....[2][ ] SECONDARY.....[3][ ] UNIVERSITY.....[4][ ]	→113
112	Can you read a letter or newspaper easily, with difficulty or not at all?	EASILY.....1 WITH DIFFICULTY.....2 NOT AT ALL.....3--	→114
113	How many days of the week do you read a newspaper?	DAYS.....[ ]	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP TO
114	How many days of the week do you watch television?	DAYS.....[ ]	
114A	Do you listen to the radio every day?	YES.....1 NO.....2	
115	What is the principal source of drinking water used by the members of your household?	TAP INSIDE THE HOUSE...01 TAP OUTSIDE THE HOUSE..02 CISTERN.....03 PURIFIED WATER.....04 SPRING, RIVER, STREAM..05 RAIN, WATER TANK.....06 WELL.....07 WATER SUPPLY TRUCK.....08 OTHER _____ (SPECIFY) 09	
115A	What is the principal source of water for other uses in the household (such as washing hands, bathing, cooking)?	TAP INSIDE THE HOUSE...01 CISTERN.....02 TAP OUTSIDE THE HOUSE..03 SPRING, RIVER, STREAM..04 RAIN, WATER TANK.....05 WELL.....06 WATER SUPPLY TRUCK.....07 OTHER _____ (SPECIFY) 08	▶116
115B	How much time does it take to go there, get water and return?	MINUTES.....[ ][ ]	
116	What type of sanitary facilities does your household have?	INDIVIDUAL INDOOR.....01 COLLECTIVE INDOOR.....02 INDIVIDUAL LATRINE WITH SEAT.....03 COLLECTIVE LATRINE WITH SEAT.....04 INDIVIDUAL LATRINE WITHOUT SEAT.....05 COLLECTIVE LATRINE WITHOUT SEAT.....06 NONE.....07 OTHER_____ (SPECIFY) 08	
116A	Do you have in your house right now soap which is used to wash hands (bath soap)?	YES.....1 NO.....2	
117	Does your house have: Electricity? A radio? A television? A refrigerator?	YES NO ELECTRICITY.....1 2 RADIO.....1 2 TELEVISION.....1 2 REFRIGERATOR.....1 2	
118	Does any member of your household own: A bicycle? A motorcycle? A car? A tractor? (IF URBAN AREA CIRCLE 2)	YES NO BICYCLE.....1 2 MOTORCYCLE.....1 2 CAR.....1 2 TRACTOR.....1 2	
119	MAIN MATERIAL OF THE FLOOR	MOSAIC, GRANITE OR MARBLE.....1 CEMENT.....2 BRICK.....3 WOOD.....4 EARTH.....5 OTHER _____ (SPECIFY) .6	
119A	MAIN MATERIAL OF THE WALLS	CEMENT.....01 WOOD.....02 PALM.....03 ASBESTOS CEMENT.....04 BARK.....05 SHINGLE.....06 ZINC.....07 CARDBOARD.....08 OTHER _____ (SPECIFY) 09	
119B	MAIN MATERIAL OF THE CEILING	CONCRETE.....01 ZINC.....02 SHINGLE.....03 ASBESTOS CEMENT.....04 CORRUGATED BOARD.....05 CANE.....06 BARK.....07 OTHER _____ (SPECIFY) 08	
120	What is the prinicipal fuel you use to cook?	PROPANE GAS.....1 FIREWOOD.....2 COAL.....3 ELECTRICITY.....4 OTHER _____ (SPECIFY) .5	

SECTION 2. REPRODUCTION

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP TO
202	Now I would like to ask about all the births you have had during your life. I am referring only to children that you gave birth to and not to children adopted or raised by you. Have you ever given birth?	YES.....1 NO.....2--	→207
203	Do you have any son or daughter you have given birth to who is now living with you?	YES.....1 NO.....2--	→205
204	How many sons live with you? And how many daughters live with you? IF NONE ENTER ZEROS.	SONS AT HOME.....[ ][ ] DAUGHTERS AT HOME.[ ][ ]	
205	Do you have any son or daughter you have given birth to who is not living with you?	YES.....1 NO.....2--	→207
206	How many sons do not live with you? And how many daughters do not live with you? IF NONE ENTER ZEROS.	SONS ELSEWHERE.....[ ][ ] DAUGHTERS ELSEWHERE[ ][ ]	
207	Have you ever given birth to a boy or a girl who was born alive but later died? PROBE: Any other boy or girl who was born alive but only survived a few hours or days?	YES.....1 NO.....2--	→209
208	How many boys have died? And how many girls have died? IF NONE ENTER ZEROS.	BOYS DEAD.....[ ][ ] GIRLS DEAD.....[ ][ ]	
209	SUM ANSWERS TO 204, 206 AND 208 AND ENTER TOTAL.	TOTAL.....[ ][ ]	
210	Just to make sure that I have this right, you have had in TOTAL _____ live births during your life. Is that correct? YES [ ] NO [ ] (PROBE AND CORRECT 204, 206 OR 208)		
211	CHECK: ONE OR MORE LIVE BIRTHS [ ] NO LIVE BIRTHS [ ] (SKIP TO 223) Now I would like a list of all your births, whether still alive or not, starting with the first one you had. (RECORD NAMES OF ALL THE BIRTHS IN 215)		

215 What name was given to your (first, next) baby? RECORD TWINS ON SEPARATE LINES AND MARK WITH BRACKET	216 Is (NAME) a boy or a girl?	217 Is (NAME) still alive?	218 In what month and year was (NAME) born? PROBE: What is his/her birthday	219 IF DEAD: How old was (NAME) when he/she died? RECORD DAYS IF LESS THAN ONE MONTH, MONTHS IF LESS THAN TWO YEARS, OR YEARS IF TWO YEARS OR MORE.	220 IF ALIVE: How old is (NAME) in completed years?	221 IF ALIVE: Is (NAME) living with you?
1._____	BOY.....1 GIRL.....2	YES.....1 NO.....2	MONTH [ ][ ] YEAR [ ][ ]	DAYS 1 [ ][ ] MONTHS 2 [ ][ ] YEARS 3 [ ][ ]	[ ][ ] AGE	YES.....1 NO.....2
2._____	BOY.....1 GIRL.....2	YES.....1 NO.....2	MONTH [ ][ ] YEAR [ ][ ]	DAYS 1 [ ][ ] MONTHS 2 [ ][ ] YEARS 3 [ ][ ]	[ ][ ] AGE	YES.....1 NO.....2
3._____	BOY.....1 GIRL.....2	YES.....1 NO.....2	MONTH [ ][ ] YEAR [ ][ ]	DAYS 1 [ ][ ] MONTHS 2 [ ][ ] YEARS 3 [ ][ ]	[ ][ ] AGE	YES.....1 NO.....2
4._____	BOY.....1 GIRL.....2	YES.....1 NO.....2	MONTH [ ][ ] YEAR [ ][ ]	DAYS 1 [ ][ ] MONTHS 2 [ ][ ] YEARS 3 [ ][ ]	[ ][ ] AGE	YES.....1 NO.....2
5._____	BOY.....1 GIRL.....2	YES.....1 NO.....2	MONTH [ ][ ] YEAR [ ][ ]	DAYS 1 [ ][ ] MONTHS 2 [ ][ ] YEARS 3 [ ][ ]	[ ][ ] AGE	YES.....1 NO.....2
6._____	BOY.....1 GIRL.....2	YES.....1 NO.....2	MONTH [ ][ ] YEAR [ ][ ]	DAYS 1 [ ][ ] MONTHS 2 [ ][ ] YEARS 3 [ ][ ]	[ ][ ] AGE	YES.....1 NO.....2
7._____	BOY.....1 GIRL.....2	YES.....1 NO.....2	MONTH [ ][ ] YEAR [ ][ ]	DAYS 1 [ ][ ] MONTHS 2 [ ][ ] YEARS 3 [ ][ ]	[ ][ ] AGE	YES.....1 NO.....2
8._____	BOY.....1 GIRL.....2	YES.....1 NO.....2	MONTH [ ][ ] YEAR [ ][ ]	DAYS 1 [ ][ ] MONTHS 2 [ ][ ] YEARS 3 [ ][ ]	[ ][ ] AGE	YES.....1 NO.....2
9._____	BOY.....1 GIRL.....2	YES.....1 NO.....2	MONTH [ ][ ] YEAR [ ][ ]	DAYS 1 [ ][ ] MONTHS 2 [ ][ ] YEARS 3 [ ][ ]	[ ][ ] AGE	YES.....1 NO.....2
10._____	BOY.....1 GIRL.....2	YES.....1 NO.....2	MONTH [ ][ ] YEAR [ ][ ]	DAYS 1 [ ][ ] MONTHS 2 [ ][ ] YEARS 3 [ ][ ]	[ ][ ] AGE	YES.....1 NO.....2
11._____	BOY.....1 GIRL.....2	YES.....1 NO.....2	MONTH [ ][ ] YEAR [ ][ ]	DAYS 1 [ ][ ] MONTHS 2 [ ][ ] YEARS 3 [ ][ ]	[ ][ ] AGE	YES.....1 NO.....2
12._____	BOY.....1 GIRL.....2	YES.....1 NO.....2	MONTH [ ][ ] YEAR [ ][ ]	DAYS 1 [ ][ ] MONTHS 2 [ ][ ] YEARS 3 [ ][ ]	[ ][ ] AGE	YES.....1 NO.....2

222 COMPARE 209 WITH NUMBER OF BIRTHS IN HISTORY ABOVE AND CHECK:

NUMBERS ARE THE SAME [ ] ↓ RECONCILE

NUMBERS ARE DIFFERENT [ ] ↓ PROBE AND

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP TO
223	Are you pregnant now?	YES.....1 NO.....2-- UNSURE.....8--	 →228 →228
224	In which month of pregnancy are you?	MONTH.....☐☐	
225	Since you have been pregnant, have you been given any injection to prevent the baby from getting tetanus, that is, convulsions after birth?	YES.....1 NO.....2 DK.....8	
226	Did you see anyone for a check on this pregnancy?	YES.....1 NO.....2--	 →229
227	Whom did you see?	DOCTOR.....1 TRAINED NURSE/MIDWIFE...2 TRADITIONAL NURSE/ MIDWIFE.....3 OTHER_____.4 (SPECIFY)	→229
228	When did your last menstrual period begin?	DAYS AGO.....1 ☐☐ WEEKS AGO.....2 ☐☐ MONTHS AGO.....3 ☐☐ BEFORE LAST PREGNANCY.996 NEVER MENSTRUATED.....997	
229	What do you think are the days between one period and another when a woman has the greatest chance of becoming pregnant?	DURING HER PERIOD.....1 RIGHT AFTER HER PERIOD..2 IN THE MIDDLE OF THE TIME BETWEEN ONE PERIOD AND ANOTHER.....3 JUST BEFORE HER PERIOD BEGINS.....4 AT ANY TIME.....5 OTHER_____..6 (SPECIFY) DK.....8	
230	PRESENCE OF OTHERS AT THIS POINT	YES NO CHILDREN UNDER 10..1 2 HUSBAND.....1 2 OTHER MALES.....1 2 OTHER FEMALES.....1 2	

SECTION 3. CONTRACEPTION

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP TO
302	Now I would like to talk about a different topic. There are various ways or methods that a couple can use to delay or avoid a pregnancy. Which of these ways or methods have you heard about? TURN TO NEXT PAGE, CIRCLE CODE 1 IN 303 FOR EACH METHOD MENTIONED SPONTANEOUSLY. FOR EACH METHOD NOT MENTIONED READ THE NAME AND DESCRIPTION, ASK 303 AND CIRCLE CODE 2 IF METHOD IS RECOGNIZED. OTHERWISE, CIRCLE CODE 3 AND CONTINUE WITH THE NEXT METHOD. THEN ASK 304-307 FOR EACH METHOD AS APPROPRIATE.		

	303 Do you know or have you heard of this method?	304 Have you ever used (METHOD)?	305 Where would you go to obtain (METHOD)? (CODES BELOW)	307 What do you think is the main problem with using (METHOD)? (CODES BELOW)
*PILL 'Women can take a pill every day'	YES, SPONT..1 YES, PROBED.2 NO.....3→	YES....1 NO.....2	☐☐	☐☐ OTHER_____(SPECIFY)
IMPLANT 'Women can have a doctor place 6 capsules under the skin in their arm which prevent pregnancy for 5 years'	YES, SPONT..1 YES, PROBED.2 NO.....3→	YES....1 NO.....2	☐☐	☐☐ OTHER_____(SPECIFY)
IUD 'Women can have a loop or coil placed inside them by a doctor or nurse'	YES, SPONT..1 YES, PROBED.2 NO.....3→	YES....1 NO.....2	☐☐	☐☐ OTHER_____(SPECIFY)
INJECTIONS 'Women can have an injection by a doctor or nurse which stops them from becoming pregnant for several months'	YES, SPONT..1 YES, PROBED.2 NO.....3→	YES....1 NO.....2	☐☐	☐☐ OTHER_____(SPECIFY)
DIAPHRAGM, FOAM, JELLY 'Women can place a sponge or suppository or diaphragm or jelly or cream inside them before intercourse'	YES, SPONT..1 YES, PROBED.2 NO.....3→	YES....1 NO.....2	☐☐	☐☐ OTHER_____(SPECIFY)
CONDOM 'Men can use a rubber sheath during sexual intercourse'	YES, SPONT..1 YES, PROBED.2 NO.....3→	YES....1 NO.....2	☐☐	☐☐ OTHER_____(SPECIFY)
FEMALE STERILIZATION 'Women can have an operation to avoid having any more children'	YES, SPONT..1 YES, PROBED.2 NO.....3→	YES....1 NO.....2	☐☐	☐☐ OTHER_____(SPECIFY)
MALE STERILIZATION 'Men can have an operation to avoid having any more children'	YES, SPONT..1 YES, PROBED.2 NO.....3→	YES....1 NO.....2	☐☐	☐☐ OTHER_____(SPECIFY)
RHYTHM (PERIODIC) ABSTINENCE 'Couples can avoid having sexual intercourse on particular days of the month when the woman is more likely to become pregnant'	YES, SPONT..1 YES, PROBED.2 NO.....3→	YES....1 NO.....2	Where would you go to obtain advice about periodic abstinence? ☐☐	☐☐ OTHER_____(SPECIFY)
WITHDRAWAL 'Men can be careful and pull out before climax'	YES, SPONT..1 YES, PROBED.2 NO.....3→	YES....1 NO.....2		☐☐
ANY OTHER METHODS 'Have you heard of any other ways or methods that couples can use to avoid pregnancy? SPECIFY(_____)	YES, SPONT..1 YES, PROBED.2 NO.....3→	YES....1 NO.....2	CODES FOR 305 PUBLIC HOSPITAL OR FAMILY PLANNING CLINIC.....01 IDSS OR FPAA HOSPITAL.....02 PRIVATE CLINIC...03 DOCTOR/OBSTETRICS OFFICE.....04 PHARMACY.....05 HEALTH PROMOTER..06 PROFAMILIA CLINIC OR PROMOTER.....07 CHURCH.....08 FRIENDS/FAMILY...09 OTHER.....10 NO PLACE.....11 DK.....98	CODES FOR 307 NONE.....01 FEAR, FORGETFULNESS.....02 DISAPPROVAL OF SPOUSE.....03 FEAR OF CANCER...04 NAUSEA.....05 VAGINAL INFECTION.....06 WEIGHT PROBLEMS..07 IUD EXPULSION....08 INTERFERES WITH SEX.....09 ACHES/PAIN.....10 BLEEDING/HEAVY MENSTRUATION....11 STOMACH PROBLEMS.12 SKIN BLEMISHES...13 DIMINISHED SEXUALITY.....14 HEALTH WORRIES...15 ACCESSIBILITY....16 COST.....17 INEFFECTIVE.....18 IRREVERSIBLE.....19 OTHER.....20 DK.....98

308 AT LEAST ONE "YES" IN 304 [ ] (EVER USED) ↓

NOT A SINGLE "YES" IN 304 [ ] (NEVER USED) ↓ (SKIP TO 330)

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP TO
311	CHECK 304: EVER USED PERIODIC ABSTINENCE ☐ → 312 NEVER USED PERIODIC ABSTINENCE ☐ (SKIP TO 313)		
312	The last time that you were using periodic abstinence, how did you determine on which days you had to avoid sexual relations?	BASED ON CALENDAR.....1 BASED ON BODY TEMPERATURE.....2 BASED ON CERVICAL MUCUS (BILLINGS) METHOD.....3 BASED ON BODY TEMPERATURE AND MUCUS.....4 OTHER_____ (SPECIFY).....5	
312A	Where or from whom did you learn for the first time about (TYPE MENTIONED IN 312)?	PUBLIC HOSPITAL OR FAMILY PLANNING CLINIC.....01 PRIVATE CLINIC, DOCTOR'S OFFICE, OBSTETRICIAN..02 PHARMACY.....03 PRIVATE INSTITUTION, RELIGIOUS ORGANIZATION..04 HEALTH PROMOTER.....05 PROFAMILIA CLINIC OR DISTRIBUTOR.....06 FRIENDS, NEIGHBORS, FAMILY.....07 OTHER USERS OF RHYTHM..08 RADIO, TV, MAGAZINE, NEWSPAPERS.....09 OTHER.....10 DK.....98	
312B	Were you ever taught how to use (TYPE MENTIONED IN 312)?	YES.....1 NO.....2 → 313 CURRENTLY RECEIVING INSTRUCTION.....3	
312C	Where were you taught to use (TYPE MENTIONED IN 312)?	PUBLIC HOSPITAL OR FAMILY PLANNING CLINIC....1 IDSS OF FFAA HOSPITAL...2 PRIVATE CLINIC.....3 DOCTOR, OBSTETRICIAN....4 PHARMACY.....5 HEALTH PROMOTER.....6 PROFAMILIA CLINIC OR PROMOTER.....7 OTHER.....8 DK.....98	
312D	In what year were you taught how to use (TYPE MENTIONED IN 312)?	YEAR..... ☐☐ DK.....98	
313	How many children did you have when you first did something or used a method to avoid getting pregnant? IF NONE RECORD 00	NUMBER OF CHILDREN..... ☐☐	
314	CHECK 223 AND 304: SHE/HE STERILIZED ☐ → 315 NOT STERILIZED ☐ PREGNANT ☐ (SKIP TO 319) NOT PREGNANT ☐ (SKIP TO 316)		
315	In what month and year did you (your spouse) have the operation in order not to have any more children?	MONTH..... ☐☐ YEAR..... ☐☐	→ 320
316	Are you currently doing something or using any method to avoid getting pregnant?	YES.....1 NO.....2 → 319	
317	Which method are you using?	PILL.....01 IMPLANT.....02 IUD.....03 INJECTIONS.....04 VAGINAL METHODS.....05 CONDOM.....06 RHYTHM.....09 TEMPERATURE.....10 CERVICAL MUCUS.....11 TEMPERATURE AND CERVICAL MUCUS.....12 WITHDRAWAL.....13 → 323 OTHER_____ (SPECIFY).....14 → 323	→ 320
318	Would you please show me the box of pills which you are using?	NAME OF PILL:_____ _____ NOT SEEN.....97	
318A	How much do you pay for one box or cycle of pills?	COST IN PESOS ☐☐☐ FREE.....997 DK.....998	→ 320

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP TO
319	Have you obtained a method or advice about how to avoid pregnancy from a hospital, health center, clinic or a doctor, in the past twelve months?	YES.....1 NO.....2—	—322
320 320A	Where did you obtain (advice for) (METHOD) the last time? Where did the operation take place?	PUBLIC HOSPITAL OR FAMILY PLANNING CLINIC.....01 IDSS OR FFAA HOSPITAL..02 PRIVATE CLINIC.....03 DOCTOR, OBSTETRICIAN...04 PROFAMILIA CLINIC OR DISTRIBUTOR.....05 PHARMACY.....06 HEALTH PROMOTER.....07 FAMILY.....08 FRIENDS.....09 OTHER.....10 DK.....98	→321 →322
321	Was there anything you particularly disliked about the services you received there?	NO.....1 WAIT TOO LONG.....2 DISCOURTEOUS.....3 EXPENSIVE.....4 DIDN'T GET METHOD OR INFORMATION WANTED....5 OTHER_____.6 (SPECIFY)	
321A	What is the reason you go (went) to that family planning place and not another?	NEAREST.....01 GOOD CARE.....02 SHORT WAIT.....03 EASY TO GET THERE.....04 FREE SERVICE.....05 INEXPENSIVE SERVICE....06 RECOMMENDATION OF FRIENDS, FAMILY.....07 OTHER_____08 (SPECIFY)	
322	CHECK 223, 315, 316: NOT PREGNANT ☐ PREGNANT ☐ (SKIP TO 338) CURRENT USER ☐ (SKIP TO 324) SHE/HE STERILIZED ☐ (SKIP TO 332) NOT USING ☐ (SKIP TO 332)		
323	For how long have you been using (CURRENT METHOD) continuously?	MONTHS.....☐☐ YEARS.....☐☐ SINCE LAST BIRTH.....97	
324	Have you experienced any problems from using (CURRENT METHOD)?	YES.....1 NO.....2—	→325A
325	What is the main problem you experienced or are having now?	NONE.....01 FEAR, FORGETFULNESS....02 DISAPPROVAL OF SPOUSE..03 HEADACHE.....04 NAUSEA.....05 VAGINAL INFECTIONS.....06 WEIGHT PROBLEMS.....07 IUD EXPULSION.....08 INTERFERES WITH SEX....09 ACHES/PAIN.....10 BLEEDING/HEAVY MENSTRUATION.....11 STOMACH PROBLEMS.....12 SKIN BLEMISHES.....13 DIMINISHED SEXUALITY...14 ACCESSIBILITY.....15 COST.....16 INEFFECTIVE.....17 OTHER.....18 DK.....98	
325A	SHE/HE STERILIZED ☐ (SKIP TO 328) OTHER ☐		
326	Do you regularly use any other method than (CURRENT METHOD) during the same month?	YES.....1 NO.....2—	→328

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP TO
327	Which method is that?	PILL.....01 IMPLANT.....02 IUD.....03 INJECTIONS.....04 VAGINAL METHODS.....05 CONDOM.....06 CALENDAR.....09 TEMPERATURE.....10 CERVICAL MUCUS.....11 TEMPERATURE AND CERVICAL MUCUS.....12 WITHDRAWAL.....13 OTHER_____.14 (SPECIFY)	
328	(Since your last birth) have you used any method other than (CURRENT METHOD) to avoid getting pregnant?	YES.....1 NO.....2--	→342
329	Which method did you use before (CURRENT METHOD)?	PILL.....01 IMPLANT.....02 IUD.....03 INJECTIONS.....04 VAGINAL METHODS.....05 CONDOM.....06 CALENDAR.....09 TEMPERATURE.....10 CERVICAL MUCUS.....11 TEMPERATURE AND CERVICAL MUCUS.....12 WITHDRAWAL.....13 OTHER_____.14 (SPECIFY)	
329A	In what month and year did you begin to use this method?	MONTH..... YEAR.....	
330	For how long had you been using this method before you stopped using it (last time)?	MONTHS..... YEARS.....	
331	What was the main reason you stopped using (METHOD BEFORE CURRENT) then?	NONE.....01 METHOD FAILED.....02 INFREQUENT SEX.....03 FEAR, FORGETFULNESS....04 DISAPPROVAL OF SPOUSE...05 FEAR OF CANCER.....06 NAUSEA.....07 VAGINAL INFECTION.....08 WEIGHT PROBLEMS.....09 IUD EXPULSION.....10 INTERFERES WITH SEX....11 ACHES/PAINS.....12 BLEEDING/HEAVY MENSTRUATION.....13 STOMACH PROBLEMS.....14 SKIN BLEMISHES.....15 DIMINISHED SEXUALITY...16 HEALTH WORRIES.....17 ACCESSIBILITY.....18 COST.....19 INEFFECTIVE.....20 OTHER.....21 DK.....98	→342
332	CHECK 209: ANY LIVE BIRTHS? YES ☐ NO ☐ (SKIP TO 334)		
333	Since your last birth have you done anything or used any method to avoid getting pregnant?	YES.....1 NO.....2--	→338
334	Which was the last method you used?	PILL.....01 IMPLANT.....02 IUD.....03 INJECTIONS.....04 VAGINAL METHODS.....05 CONDOM.....06 CALENDAR.....09 TEMPERATURE.....10 CERVICAL MUCUS.....11 TEMPERATURE AND CERVICAL MUCUS.....12 WITHDRAWAL.....13 OTHER.....14	
334A	In what month and year did you begin to use this method?	MONTH..... YEAR.....	
335	For how long had you been using before you stopped using it (last time)?	MONTHS..... YEARS.....	
336	When you stopped using this method, did someone advise or recommend that you stop using it? IF YES: Who was that person?	NO.....1 SPOUSE.....2 OTHER FAMILY.....3 FRIENDS.....4 PRIEST.....5 HEALTH PERSONNEL.....6 OTHER_____..7 (SPECIFY)	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP TO
337	What was the main reason you stopped using (LAST METHOD)?	TO GET PREGNANT.....01 METHOD FAILED.....02 INFREQUENT SEX.....03 FEAR, FORGETFULNESS....04 DISAPPROVAL OR SPOUSE...05 FEAR OF CANCER.....06 NAUSEA.....07 VAGINAL INFECTION.....08 WEIGHT PROBLEMS.....09 IUD EXPULSION.....10 INTERFERES WITH SEX....11 ACHES/PAINS.....12 BLEEDING/HEAVY MENSTRUATION.....13 STOMACH PROBLEMS.....14 SKIN BLEMISHES.....15 DIMINISHED SEXUALITY...16 HEALTH WORRIES.....17 ACCESSIBILITY.....18 COST.....19 INEFFECTIVE.....20 INFECUND/MENOPAUSAL....21 OTHER.....22 DK.....98	
338	Do you intend to use a method to avoid pregnancy at any time in the future?	YES.....1 NO.....2-- DK.....8--	→342 →342
339	Which method would you prefer to use?	PILL.....01 IMPLANT.....02 IUD.....03 INJECTIONS.....04 VAGINAL METHODS.....05 CONDOM.....06 FEMALE STERILIZATION...07 MALE STERILIZATION.....08 CALENDAR.....09 TEMPERATURE.....10 CERVICAL MUCUS.....11 TEMPERATURE AND CERVICAL MUCUS.....12 WITHDRAWAL.....13 OTHER_____.14 (SPECIFY) UNSURE.....15	
341	Do you intend to use (PREFERRED METHOD) in the next 12 months?	YES.....1 NO.....2 DK.....8	
342	Have you ever heard of women who breastfeed as a way to avoid pregnancy?	YES.....1 NO.....2	
343	In the last month, have you ever heard or seen a message about family planning on the radio or television? IF YES: How many times did you hear it or see it?	NO OR DON'T REMEMBER....1 ONCE.....2 MORE THAN ONCE.....3	
343A	Did you hear it on the radio or see it on television?	RADIO.....1 TELEVISION.....2 BOTH.....3	
343B	Do you remember the name of the radio or television program where you heard or saw the family planning message? PROBE: Any other? CIRCLE ALL THOSE MENTIONED	RADIO PROGRAM "HACIA UNA NUEVA FAMILIA".....1 PROGRAM MUJER "2000" (HACIA UNA NUEVA FAMILIA).....1 "POR LA MAÑANA EN EL 4".1 PROGRAM "BUENOS DIAS" (QUE PASA?).....1 PROGRAM "HOY MISMO" (PROFAMILIA HOY).....1 OTHER PROGRAMS.....1 DON'T REMEMBER.....8 DK/DON'T REMEMBER.....8	
343C	Do you currently listen to the radio program "Hacia una nueva familia" produced by PROFAMILIA? IF YES: On what station?	DOESN'T LISTEN.....1-- RADIO CLARIN.....2 RADIO ANTILLAS.....3 ONDAS DEL YAQUE.....4 RADIO PUERTO PLATA.....5 RADIO BARAHONA.....6	→344A
344	How often do you listen?	EVERY DAY.....1 ONCE IN A WHILE.....2 AT TIMES.....3	
344A	Do you currently watch a television program which has a family planning message? IF YES: How often?	DOESN'T WATCH.....1 EVERY DAY.....2 ONCE IN A WHILE.....3 AT TIMES.....4	
345	Do you think it is acceptable for family planning information to be provided on radio or television?	YES.....1 NO.....2-- DK.....8--	→347 →347
346	What themes related to family planning would you like to hear on the radio or see on television? PROBE: Any other? CIRCLE ALL THOSE MENTIONED	CONTRACEPTIVE METHODS...1 FAMILY PLANNING.....1 SEX EDUCATION.....1 EDUCATION OF CHILDREN, CHILDHOOD.....1 PATERNAL & MATERNAL RESPONSIBILITY, MARRIAGE.1 STERILIZATION.....1 VASECTOMY.....1 ADOLESCENT PREGNANCY....1 MENSTRUATION.....1 SEXUAL RELATIONS.....1 VENEREAL DISEASES.....1 PREGNANCY & BIRTH.....1 MALE & FEMALE REPRODUCTIVE SYSTEMS.....1 FAMILY HEALTH.....1 BREASTFEEDING.....1 CARE OF CHILDREN.....1 OTHER_____.1 (SPECIFY)	

347 CHECK 218, 223

HAD BIRTH SINCE JAN. 1981 OR PREGNANT [ ] ↓ NO BIRTH SINCE JAN. 1981 AND NOT PREGNANT [ ] (SKIP TO SECTION 5)

347A Now I would like to get some more information about (your pregnancy and) the children you had since JAN. 1981.

CHECK WHETHER PREGNANT AND RECORD NAMES OF BIRTHS SINCE JAN 1981. THEN ENTER EVER USE OF CONTRACEPTION.

CHECK 308: EVER USED A METHOD [ ] (ASK 348-355 FOR EACH COLUMN)

NEVER USED A METHOD [ ] (ASK 354 FOR EACH COLUMN)

	CURRENTLY PREGNANT YES [ ] NO [ ] →	LAST BIRTH NAME______	NEXT TO LAST BIRTH NAME______	SECOND FROM LAST BIRTH NAME______	THIRD FROM LAST BIRTH NAME______
348 Before you became pregnant (with NAME) (but after the birth of ________) had you used any method to avoid getting pregnant, even for a short time?	YES....1 NO....2 (SKIP TO 354)	YES....1 NO....2 (SKIP TO 354)	YES....1 NO....2 (SKIP TO 354)	YES....1 NO....2 (SKIP TO 354)	YES....1 NO....2 (SKIP TO 354)
349 Which was the last method you used then?	LAST NONE....00 PILL....01 IMPLANT....02 IUD....03 INJECTIONS....04 VAGINAL METHOD..05 CONDOM....06 MALE STERIL....07 FEM. STERIL....08 CALENDAR....09 TEMPERATURE....10 CERVICAL MUCUS..11 TEMPERATURE AND CERVICAL MUCUS.12 WITHDRAWAL....13 OTHER______14 (SPECIFY)	LAST NONE....00 PILL....01 IMPLANT....02 IUD....03 INJECTIONS....04 VAGINAL METHOD..05 CONDOM....06 MALE STERIL....07 FEM. STERIL....08 CALENDAR....09 TEMPERATURE....10 CERVICAL MUCUS..11 TEMPERATURE AND CERVICAL MUCUS.12 WITHDRAWAL....13 OTHER______14 (SPECIFY)	LAST NONE....00 PILL....01 IMPLANT....02 IUD....03 INJECTIONS....04 VAGINAL METHOD..05 CONDOM....06 MALE STERIL....07 FEM. STERIL....08 CALENDAR....09 TEMPERATURE....10 CERVICAL MUCUS..11 TEMPERATURE AND CERVICAL MUCUS.12 WITHDRAWAL....13 OTHER______14 (SPECIFY)	LAST NONE....00 PILL....01 IMPLANT....02 IUD....03 INJECTIONS....04 VAGINAL METHOD..05 CONDOM....06 MALE STERIL....07 FEM. STERIL....08 CALENDAR....09 TEMPERATURE....10 CERVICAL MUCUS..11 TEMPERATURE AND CERVICAL MUCUS.12 WITHDRAWAL....13 OTHER______14 (SPECIFY)	LAST NONE....00 PILL....01 IMPLANT....02 IUD....03 INJECTIONS....04 VAGINAL METHOD..05 CONDOM....06 MALE STERIL....07 FEM. STERIL....08 CALENDAR....09 TEMPERATURE....10 CERVICAL MUCUS..11 TEMPERATURE AND CERVICAL MUCUS.12 WITHDRAWAL....13 OTHER______14 (SPECIFY)
350 Did you use any method before that?	PRECEDING METHOD [ ][ ]	PRECEDING METHOD [ ][ ]	PRECEDING METHOD [ ][ ]	PRECEDING METHOD [ ][ ]	PRECEDING METHOD [ ][ ]
351 For how long had you been using (LAST METHOD) at that time?	MONTHS...[ ][ ] YEARS....[ ][ ]	MONTHS...[ ][ ] YEARS....[ ][ ]	MONTHS...[ ][ ] YEARS....[ ][ ]	MONTHS...[ ][ ] YEARS....[ ][ ]	MONTHS...[ ][ ] YEARS....[ ][ ]
352 Were you using (LAST METHOD) at the time you became pregnant?	YES....1 (SKIP TO 355) NO....2	YES....1 (SKIP TO 355) NO....2	YES....1 (SKIP TO 355) NO....2	YES....1 (SKIP TO 355) NO....2	YES....1 (SKIP TO 355) NO....2
353 What was the main reason you stopped using (LAST METHOD)?	BECOME PREGNANT.01 (GO TO NEXT COL) INFREQUENT SEX..02 PARTNER DISAPPROVED...03 HEALTH CONCERNS.04 HEALTH PROBLEMS.05 METHOD NOT AVAILABLE....06 COST....07 FATALISTIC....08 INCONVENIENT....09 OTHER______10 (SPECIFY)	BECOME PREGNANT.01 (GO TO NEXT COL) INFREQUENT SEX..02 PARTNER DISAPPROVED...03 HEALTH CONCERNS 04 HEALTH PROBLEMS.05 METHOD NOT AVAILABLE....06 COST....07 FATALISTIC....08 INCONVENIENT....09 OTHER______10 (SPECIFY)	BECOME PREGNANT.01 (GO TO NEXT COL) INFREQUENT SEX..02 PARTNER DISAPPROVED...03 HEALTH CONCERNS.04 HEALTH PROBLEMS.05 METHOD NOT AVAILABLE....06 COST....07 FATALISTIC....08 INCONVENIENT....09 OTHER______10 (SPECIFY)	BECOME PREGNANT.01 (GO TO NEXT COL) INFREQUENT SEX..02 PARTNER DISAPPROVED...03 HEALTH CONCERNS.04 HEALTH PROBLEMS.05 METHOD NOT AVAILABLE....06 COST....07 FATALISTIC....08 INCONVENIENT....09 OTHER______10 (SPECIFY)	BECOME PREGNANT.01 (GO TO NEXT COL) INFREQUENT SEX..02 PARTNER DISAPPROVED...03 HEALTH CONCERNS.04 HEALTH PROBLEMS.05 METHOD NOT AVAILABLE....06 COST....07 FATALISTIC....08 INCONVENIENT....09 OTHER______10 (SPECIFY)
354 Just before you became pregnant (with NAME) did you want to have (more) children then, did you want to wait longer, or did you want no more children?	THEN....1 WAIT....2 NO MORE....3 (GO TO NEXT COL.)	THEN....1 WAIT....2 NO MORE....3 (GO TO NEXT COL.)	THEN....1 WAIT....2 NO MORE....3 (GO TO NEXT COL.)	THEN....1 WAIT....2 NO MORE....3 (GO TO NEXT COL.)	THEN....1 WAIT....2 NO MORE....3 (SKIP TO 402)
355 Did you want to have more children but later or did you want no more children?	LATER....1 (GO TO NEXT COL) NO MORE....2	LATER....1 (GO TO NEXT COL) NO MORE....2	LATER....1 (GO TO NEXT COL) NO MORE....2	LATER....1 (GO TO NEXT COL) NO MORE....2	LATER....1 (GO TO NEXT COL) NO MORE....2

SECTION 4. HEALTH AND BREASTFEEDING

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP TO
402	CHECK 218: ONE OR MORE LIVE BIRTHS SINCE JAN. 1981 [ ] ↓ NO LIVE BIRTHS SINCE JAN.1981 [ ] ↓ (SKIP TO SECTION 5) ENTER NAME AND SURVIVAL STATUS OF EACH BIRTH SINCE JAN. 1981 IN TABLE. BEGIN WITH LAST BIRTH.		

	LAST BIRTH NAME ________ ALIVE [ ] DEAD [ ]	NEXT-TO-LAST BIRTH NAME ________ ALIVE [ ] DEAD [ ]	SECOND FROM LAST BIRTH NAME ________ ALIVE [ ] DEAD [ ]	THIRD FROM LAST BIRTH NAME ________ ALIVE [ ] DEAD [ ]
403 When you were pregnant with (NAME) were you given any injection to prevent the baby from getting tetanus, that is, convulsions after birth?	YES............1 NO.............2 DK.............8	YES............1 NO.............2 DK.............8	YES............1 NO.............2 DK.............8	YES............1 NO.............2 DK.............8
404 When you were pregnant, did you see anyone for a check on this pregnancy? IF YES: Whom did you see? PROBE FOR TYPE OF PERSON AND RECORD MOST QUALIFIED	DOCTOR............1 TRAINED NURSE.....2 TRADITIONAL NURSE/ MIDWIFE...........3 OTHER.............4 NO CHECK..........5	DOCTOR............1 TRAINED NURSE.....2 TRADITIONAL NURSE/ MIDWIFE...........3 OTHER.............4 NO CHECK..........5	DOCTOR............1 TRAINED NURSE.....2 TRADITIONAL NURSE/ MIDWIFE...........3 OTHER.............4 NO CHECK..........5	DOCTOR............1 TRAINED NURSE.....2 TRADITIONAL NURSE/ MIDWIFE...........3 OTHER.............4 NO CHECK..........5
405 Who assisted with the delivery? PROBE FOR TYPE OF PERSON AND RECORD MOST QUALIFIED	DOCTOR............1 TRAINED NURSE.....2 TRADITIONAL NURSE/ MIDWIFE...........3 RELATIVE..........4 OTHER.............5 NO ONE............6	DOCTOR............1 TRAINED NURSE.....2 TRADITIONAL NURSE/ MIDWIFE...........3 RELATIVE..........4 OTHER.............5 NO ONE............6	DOCTOR............1 TRAINED NURSE.....2 TRADITIONAL NURSE/ MIDWIFE...........3 RELATIVE..........4 OTHER.............5 NO ONE............6	DOCTOR............1 TRAINED NURSE.....2 TRADITIONAL NURSE/ MIDWIFE...........3 RELATIVE..........4 OTHER.............5 NO ONE............6
405A Where did you have the birth?	HOSPITAL OR PUBLIC HEALTH CENTER.....1 IDSS OR FFAA HOSPITAL..........2 PRIVATE CLINIC OR CENTER...........3 AT HOME...........4 OTHER.............5	HOSPITAL OR PUBLIC HEALTH CENTER.....1 IDSS OR FFAA HOSPITAL..........2 PRIVATE CLINIC OR CENTER...........3 AT HOME...........4 OTHER.............5	HOSPITAL OR PUBLIC HEALTH CENTER.....1 IDSS OR FFAA HOSPITAL..........2 PRIVATE CLINIC OR CENTER...........3 AT HOME...........4 OTHER.............5	HOSPITAL OR PUBLIC HEALTH CENTER.....1 IDSS OR FFAA HOSPITAL..........2 PRIVATE CLINIC OR CENTER...........3 AT HOME...........4 OTHER.............5
406 Did you ever feed (NAME) at the breast?	YES............1 NO.............2 (SKIP TO 410)←	YES............1 NO.............2 (SKIP TO 410)←	YES............1 NO.............2 (SKIP TO 410)←	YES............1 NO.............2 (SKIP TO 410)←
407 Are you still breastfeeding (NAME)?	YES............1 (SKIP TO 410) NO.............2 CHILD DIED......3			
408 How many months did you breastfeed (NAME)?	MONTHS [ ][ ] TILL DEATH.....97	MONTHS [ ][ ] TILL DEATH 97	MONTHS [ ][ ] TILL DEATH 97	MONTHS [ ][ ] TILL DEATH 97
410 How many months after the birth of (NAME) did your period return?	NOT RETURNED...98 [ ][ ] MONTHS	NOT RETURNED...98 [ ][ ] MONTHS	NOT RETURNED...98 [ ][ ] MONTHS	NOT RETURNED..98 [ ][ ] MONTHS
411 Have you resumed sexual relations since the birth of (NAME)?	YES (OR PREGNANT).1 NO...............2 (GO TO NEXT COL)←			
412 How many months after the birth of (NAME) did you resume sexual relations?	[ ][ ] MONTHS (GO TO NEXT COL)	[ ][ ] MONTHS (GO TO NEXT COL)	[ ][ ] MONTHS (GO TO NEXT COL)	[ ][ ] MONTHS (GO TO 413)

413 CHECK 407:

BREASTFEEDING [ ] ↓   NOT BREASTFEEDING [ ] (SKIP TO 419).

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP TO
414	How many times did you breastfeed last night, between sundown and sunrise?	NUMBER OF TIMES...[ ][ ] AS OFTEN AS CHILD WANTED.....97	
415	How many times did you breastfeed yesterday during the daylight hours?	NUMBER OF TIMES...[ ][ ] AS MANY TIMES AS CHILD WANTED.....97	
416	At any time yesterday or last night, was (NAME OF LAST CHILD) given any of the following? READ OUT CODING CATEGORIES	YES NO PLAIN WATER.....1 2 JUICE.....1 2 POWDERED MILK.....1 2 PASTURIZED MILK....1 2 COWS OR GOATS MILK.1 2 OTHER MILK.....1 2 ANY OTHER LIQUID _____...1 2 (SPECIFY) ANY SOLID OR MUSHY FOOD.....1 2	
417	CHECK 416: NO OTHER FOODS OR LIQUIDS GIVEN...[ ] (SKIP TO 419) WAS GIVEN OTHER FOODS OR LIQUIDS..[ ]		
418	Were any of these given in a bottle with a nipple?	YES.....1 NO.....2	

419 SEE 215 AND 402: ENTER NAME AND SURVIVAL STATUS OF EACH BIRTH SINCE JAN.1981 BELOW. BEGIN WITH THE LAST BIRTH. THE HEADING IN THE TABLE SHOULD BE EXACTLY THE SAME AS PREVIOUS TABLE. ASK QUESTIONS ONLY FOR LIVING CHILDREN.

	LAST BIRTH	NEXT-TO-LAST BIRTH	SECOND FROM LAST BIRTH	THIRD FROM LAST BIRTH
	NAME ____ ALIVE [ ] DEAD [ ]→	NAME ____ ALIVE [ ] DEAD [ ]→	NAME ____ ALIVE [ ] DEAD [ ]→	NAME ____ ALIVE [ ] DEAD [ ]→
420 Do you have a health card for (NAME)? IF YES: May I see it please?	YES, SEEN....1 YES, NOT SEEN....2 (SKIP TO 421A)← NO CARD....8	YES, SEEN....1 YES, NOT SEEN...2 (SKIP TO 421A)← NO CARD....8	YES, SEEN....1 YES, NOT SEEN...2 (SKIP TO 421A)← NO CARD....8	YES, SEEN....1 YES, NOT SEEN...2 (SKIP TO 421A)← NO CARD....8
421 RECORD DATES OF IMMUNIZATIONS FROM HEALTH CARD	DA MO YR NO BCG ... 1 DPT1 ... 1 POLIO1 ... 1 DPT2 ... 1 POLIO2 ... 1 DPT3 ... 1 POLIO3 ... 1 MEASLES ... 1	DA MO YR NO 1 1 1 1 1 1 1 1	DA MO YR NO 1 1 1 1 1 1 1 1	DA MO YR NO 1 1 1 1 1 1 1 1
421A Has (NAME) been vaccinated in any of the vaccination campaigns?	YES....1 NO....2 (SKIP TO 422)← DON'T KNOW....8	YES....1 NO....2 (SKIP TO 422)← DON'T KNOW....8	YES....1 NO....2 (SKIP TO 422)← DON'T KNOW....8	YES....1 NO....2 (SKIP TO 422)← DON'T KNOW....8
421B In which vaccination campaign(s) was (NAME) vaccinated?	POLIO, JUN 1983....01 POLIO, AUG 1983....02 POLIO, JUN 1984....03 POLIO, SEP 1984....04 DPT, MAY 1985....05 POLIO, JUN 1985....06 POLIO, OCT 1985....07 MEASLES, OCT 85....08 DPT, FEB 1986....09 POLIO, APR 1986....10 POLIO, JUN 1986....11 DPT, JUN 1986....12 DON'T REMEMBER....13 DON'T KNOW....98	POLIO, JUN 1983...01 POLIO, AUG 1983...02 POLIO, JUN 1984...03 POLIO, SEP 1984...04 DPT, MAY 1985....05 POLIO, JUN 1985...06 POLIO, OCT 1985...07 MEASLES, OCT 85...08 DPT, FEB 1986....09 POLIO, APR 1986...10 POLIO, JUN 1986...11 DPT, JUN 1986....12 DON'T REMEMBER....13 DON'T KNOW....98	POLIO, JUN 1983..01 POLIO, AUG 1983..02 POLIO, JUN 1984..03 POLIO, SEP 1984..04 DPT, MAY 1985....05 POLIO, JUN 1985..06 POLIO, OCT 1985..07 MEASLES, OCT 85..08 DPT, FEB 1986....09 POLIO, APR 1986..10 POLIO, JUN 1986..11 DPT, JUN 1986....12 DON'T REMEMBER...13 DON'T KNOW....98	POLIO, JUN 1983..01 POLIO, AUG 1983..02 POLIO, JUN 1984..03 POLIO, SEP 1984..04 DPT, MAY 1985....05 POLIO, JUN 1985..06 POLIO, OCT 1985..07 MEASLES, OCT 85..08 DPT, FEB 1986....09 POLIO, APR 1986..10 POLIO, JUN 1986..11 DPT, JUN 1986....12 DON'T REMEMBER...13 DON'T KNOW....98
422 Has (NAME) had diarrhea in the last 24 hours?	YES....1 (SKIP TO 424) NO....2 DK....8	YES....1 (SKIP TO 424) NO....2 DK....8	YES....1 (SKIP TO 424) NO....2 DK....8	YES....1 (SKIP TO 429) NO....2 DK....8
423 Has (NAME) had diarrhea in the last two weeks?	YES....1 NO....2 (GO TO NEXT COLUMN)← DK....8	YES....1 NO....2 (GO TO NEXT COLUMN)← DK....8	YES....1 NO....2 (GO TO NEXT COLUMN)← DK....8	YES....1 NO....2 (GO TO 429)← DK....8
424 Did you bring (NAME) to a doctor, hospital or clinic, to treat the diarrhea? IF THE ANSWER IS "YES," ASK: Where did you bring him/her?	HOSPITAL OR PUBLIC HEALTH CENTER....1 IDSS OR FFAA HOSPITAL....2 DOCTOR OR PRIVATE CLINIC....3 OTHER____4 (SPECIFY) DID NOT BRING....5	HOSPITAL OR PUBLIC HEALTH CENTER...1 IDSS OR FFAA HOSPITAL....2 DOCTOR OR PRIVATE CLINIC....3 OTHER____4 (SPECIFY) DID NOT BRING....5	HOSPITAL OR PUBLIC HEALTH CENTER..1 IDSS OR FFAA HOSPITAL....2 DOCTOR OR PRIVATE CLINIC....3 OTHER____4 (SPECIFY) DID NOT BRING...5	HOSPITAL OR PUBLIC HEALTH CENTER..1 IDSS OR FFAA HOSPITAL....2 DOCTOR OR PRIVATE CLINIC....3 OTHER____4 (SPECIFY) DID NOT BRING...5
425 Was (NAME) given an oral rehydration packet (suero bebido) to treat the diarrhea?	YES....1 NO....2 DK....8	YES....1 NO....2 DK....8	YES....1 NO....2 DK....8	YES....1 NO....2 DK....8
426 Did you or others do anything (else) to treat the diarrhea? IF THE ANSWER IS "YES," ASK: What was done?	HOMEMADE SOLUTION OF SUGAR, SALT AND WATER....1 TABLETS, INJECTION, SYRUP....1 INCREASED LIQUIDS....1 INCREASED SOLIDS....1 OTHER....1 NOTHING....1 (GO TO NEXT COLUMN)	HOMEMADE SOLUTION OF SUGAR, SALT AND WATER....1 TABLETS, INJECTION, SYRUP....1 INCREASED LIQUIDS...1 INCREASED SOLIDS....1 OTHER....1 NOTHING....1 (GO TO NEXT COLUMN)	HOMEMADE SOLUTION OF SUGAR, SALT AND WATER....1 TABLETS, INJECTION, SYRUP....1 INCREASED LIQUIDS..1 INCREASED SOLIDS...1 OTHER....1 NOTHING....1 (GO TO NEXT COLUMN)	HOMEMADE SOLUTION OF SUGAR, SALT AND WATER....1 TABLETS, INJECTION, SYRUP....1 INCREASED LIQUIDS..1 INCREASED SOLIDS...1 OTHER....1 NOTHING....1 (GO TO NEXT COLUMN)

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP TO
427	CHECK 425: MENTIONED REHYDRATION [ ] (SKIP TO 502) DID NOT MENTION REHYDRATION [ ] ↓		
428	Have you heard of a special product called oral rehydration packet or "suero bebido" which you could obtain to treat diarrhea?	YES....1 NO....2	

SECTION 5. MARRIAGE

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP TO
502	Have you ever been married or lived with a man?	YES.....1 NO.....2 -->	>520
503	Are you now married, living with a man, widowed, divorced or separated?	MARRIED.....1 LIVING TOGETHER.....2 WIDOWED.....3 DIVORCED.....4 SEPARATED.....5	
508	Have you been married or lived with a man only once or more than once?	ONCE.....1 MORE THAN ONCE.....2	
509	In what month and year did you start living with your (first) husband or partner?	MONTH.....[ ][ ] DK MONTH.....98 YEAR.....[ ][ ] DK YEAR.....98	
510	How old were you when you started living with him?	AGE.....[ ][ ]	
511	Are your father and mother still alive?	YES NO WOMAN'S FATHER.....1 2 WOMAN'S MOTHER.....1 2	
512	Are your (first) husband's/partner's father and mother still alive?	YES NO DK FIRST HUSBAND'S FATHER.....1 2 8 FIRST HUSBAND'S MOTHER.....1 2 8	
513	CHECK 511 AND 512: ALL ALIVE [ ] (SKIP TO 516) OTHER [ ]		
514	Was (MENTION PARENTS NOT ALIVE NOW) alive at the time you began living together with your (first) husband or partner?	YES NO WOMAN'S FATHER.....1 2 WOMAN'S MOTHER.....1 2 FIRST HUSBAND'S FATHER.....1 2 FIRST HUSBAND'S MOTHER.....1 2	
515	CHECK 514: SOME PARENT ALIVE AT MARRIAGE [ ] NO PARENT ALIVE AT MARRIAGE [ ] (SKIP TO 519)		
516	At the time you began living together, did you and your (first) husband (or partner) live with any of these parents for at least six months?	YES.....1 NO.....2 -->	>518

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP TO
517	For about how many years did you live together with a parent or in-law at that time?	YEARS.....[ ][ ] UP TO THE PRESENT.....97--	→519
518	Are you now living with any parents?	YES.....1 NO.....2	
519	In how many different localities have you lived since you were first married (started living together)?	NUMBER OF LOCALITIES.....[ ][ ]--	→521
520	Have you ever had sexual intercourse?	YES.....1 NO.....2--	--528
521	Now I would like to talk with you in more detail about your sexual activity in order to get a better understanding of contraception and fertility.		
522	How old were you when you first had sexual intercourse?	AGE.....[ ][ ]	
523	Have you had sexual intercourse in the last four weeks?	YES.....1 NO.....2--	→528
524	How many times?	TIMES.....[ ][ ]	
525	CHECK 223, 314 AND 316: NOT USING A METHOD AND NOT PREGNANT [ ] ↓ USING A METHOD OR PREGNANT [ ] (SKIP TO 528)		
526	If you became pregnant in the next few weeks, would you be happy, would you not care or would you be unhappy?	HAPPY.....1-- INDIFFERENT.....2 UNHAPPY.....3 DK.....8	→528

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP TO
527	What is the main reason that you are not using a method to avoid pregnancy?	INFREQUENT SEX.....01 ABSTINENCE, POSTPARTUM/ BREASTFEEDING.....02 MENOPAUSE/SUBFECUND....03 LACK OF KNOWLEDGE/ SOURCE.....04 DIFFICULT ACCESS TO METHODS.....05 RELIGION.....06 PARTNER'S OPPOSITION...07 HEALTH WORRIES.....08 FATALISTIC.....09 OPPOSED TO FAMILY PLANNING.....10 COST.....11 OTHER_____12 (SPECIFY) DK.....98	
528	PRESENCE OF OTHERS AT THIS POINT	YES NO CHILDREN UNDER 10..1 2 HUSBAND OR PARTNER.1 2 OTHER MALES.....1 2 OTHER FEMALES.....1 2	

602	CHECK 209: HAS HAD CHILDREN → [ ] HAS NOT HAD CHILDREN → [ ] (SKIP TO 602B)		
602A	Was your (last) child born by a caesarean operation?	YES.....1 NO.....2	
602B	CHECK 504 AND 503: HUSBAND STERILIZED → [ ] (SKIP TO 610) WOMAN STERILIZED → [ ] (SKIP TO 608) OTHER → [ ] CURRENTLY MARRIED OR LIVING TOGETHER → [ ] OTHER → [ ] (SKIP TO 614)		
603	I now have some questions about the future. CHECK 223: NOT PREGNANT [ ] Would you like to have a (another) child or would you prefer not to have any (any more) children? PREGNANT [ ] After the child you are expecting, would you like to have another child or would you prefer not to have any more children?	HAVE ANOTHER.....1 →606 NO MORE.....2 UNDECIDED OR DK.....3 →605	
604	Would you say that you definitely do not want to have (more) children, or are you not sure?	DEFINITELY NO MORE.....1 →614 NOT SURE.....2 →614	
605	Are you more inclined towards having a (another) child or towards not having a (another) child?	HAVE ANOTHER.....1 →607 NOT HAVE ANOTHER.....2 →614 UNDECIDED.....8 →614	
606	Would you say that you definitely want a (another) child, or are you not sure?	DEFINITELY WANT.....1 NOT SURE.....2	
607	How long would you like to wait before you have a (another) child?	TIME TO WAIT: MONTHS.....1 [ ][ ] →614 YEARS.....2 [ ][ ] →614 DK.....998	
607A	CHECK 217: SURVIVING CHILDREN AND NOT PREGNANT → [ ] NO SURVIVING CHILD OR PREGNANT → [ ] (SKIP TO 614)		
607B	How old would you like your youngest child to be?	AGE OF YOUNGEST: YEARS.....[ ][ ] DK.....98	→614
608	CHECK 602A: HAD CAESAREAN → [ ] DID NOT HAVE CAESAREAN → [ ] (SKIP TO 609A)		
609	Was the operation for not having more children performed at the same time as the caesarean?	YES.....1 NO.....2	
609A	Did you have the operation to have no more children in a Public Health establishment or in a private establishment?	PUBLIC HEALTH.....1 PRIVATE.....2 DON'T KNOW.....8	
609B	Did you discuss the operation with your spouse (partner) before having it?	YES.....1 NO.....2	
609C	Who influenced you most in your decision to have the operation?	WOMAN HERSELF.....1 SPOUSE.....2 FAMILY.....3 OTHER STERILIZED WOMAN..4 PROMOTER.....5 DOCTOR.....6 OTHER _____ (SPECIFY) 7	
609D	Why did you decide to have the operation and not for some other contraceptive method?	MORE EFFECTIVE.....01 BETTER FOR HEALTH.....02 EASY TO USE.....03 WAS AVAILABLE.....04 RECOMMENDED BY PROMOTER..05 RECOMMENDED BY DOCTOR....06 ANOTHER STERILIZED WOMEN.07 CHEAPER.....08 MORE CONVENIENT.....09 OTHER _____ (SPECIFY) 10	
609E	Do you think the operation is forever or do you think that you can still have children if you want them?	FOREVER.....1 CAN HAVE MORE.....2 DK.....8	
610	Do you (your partner) regret having had the operation for not having more children?	YES.....1 NO.....2 →614	
611	Would you like to have another child or do you prefer not to have any more children?	WOULD LIKE CHILD.....1 NO MORE CHILDREN.....2 UNDECIDED OR DK.....8	
614	CHECK 209: NO CHILDREN [ ]: If you could choose exactly the number of children to have in your whole life, how many would that be? HAS CHILDREN [ ]: If you could go back to the time you did not have any children and could choose exactly the number of children to have in your whole life, how many would that be? RECORD SINGLE NUMBER, RANGE OR OTHER ANSWER	NUMBER.....[ ][ ] RANGE: BETWEEN___ AND___ OTHER ANSWER _____ (SPECIFY)	

SECTION 7. HUSBAND'S BACKGROUND AND WOMAN'S WORK

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP TO
702	SEE 502 AND CHECK: EVER MARRIED OR LIVED WITH A MAN ☐ ↓ ALL OTHERS ☐ (SKIP TO 716) ASK QUESTIONS ABOUT CURRENT OR MOST RECENT HUSBAND/PARTNER.		
703	Now I have some questions about your most recent husband/partner. Did your husband/partner ever attend school?	YES.....1 NO.....2--	→707
704	What was the highest level of school he completed: primary, intermediate, secondary or university?	PRIMARY.....1 INTERMEDIATE.....2 SECONDARY.....3 UNIVERSITY.....4 DK.....8--	→707
705	What was the highest year he attended at this level?	YEAR.....☐☐ DK.....8	
706	CHECK: PRIMARY ☐ ↓ INTERMEDIATE, SECONDARY, UNIVERSITY ☐ (GO TO 707A)		
707	Can (could) he read a letter or newspaper easily, with difficulty or not at all? (IF WIDOW SKIP TO 707B)	EASILY.....1 WITH DIFFICULTY.....2 NOT AT ALL.....3	
707A	Is your husband (partner) currently working?	YES.....1-- NO.....2	→708
707B	Did your husband (partner) ever work?	YES.....1 NO.....2--	→713
708	What kind of work does (did) your husband/partner mainly do?	_____ ☐☐ _____ _____	
709	CHECK: DOES (DID) NOT WORK IN AGRICULTURE ☐ ↓ WORKS (WORKED) IN AGRICULTURE ☐ (SKIP TO 711)		
710	Does (did) he earn a regular weekly wage or monthly salary?	YES.....1 NO.....2 DK.....8	→713
711	Does (did) your husband/partner work mainly on his land, family land, or on someone else's land?	HIS LAND.....1-- FAMILY LAND.....2 SOMEONE ELSE'S LAND.....3	→713
712	Does (did) he work mainly for money or does (did) he work for a share of the crops?	MONEY.....1 A SHARE OF THE CROPS....2 BOTH.....3	
713	Before you married your (first) husband, did you yourself ever work regularly to earn money, other than on a farm or in a business run by your family?	YES.....1 NO.....2--	→715

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP TO
714	When you were earning money then, did you turn most of it over to your family or did you keep most of it yourself?	SELF.....1 FAMILY.....2	
715	Since you were first married, have you ever worked regularly to earn money other than on a farm or in a business run by your family?	YES.....1-- NO.....2--	→718 →719
716	Have you ever worked regularly to earn money other than on a farm or in a business run by your family?	YES.....1 NO.....2--	→719
717	During the time when you have earned money, have you turned most of it over to your family or have you kept most of it yourself?	SELF.....1 FAMILY.....2	
718	Are you currently working to earn money other than on a farm or in a business run by your family?	YES.....1 NO.....2	
719	RECORD THE TIME	HOUR.....☐☐ MINUTES.....☐☐	

SECTION 8. HEIGHT AND WEIGHT

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP TO
901	FOR EACH CHILD 6-36 MONTHS, ENTER HEIGHT AND WEIGHT. WRITE THE NAMES BEGINNING WITH THE YOUNGEST. ORDER NUMBER ☐☐ NAME:_____	MONTH OF BIRTH ☐☐ YEAR OF BIRTH ☐☐ HEIGHT IN CMS ☐☐.☐ WEIGHT IN KILOS ☐☐.☐ COULDN'T MEASURE: _____ (REASONS)	
	ORDER NUMBER ☐☐ NAME:_____	MONTH OF BIRTH ☐☐ YEAR OF BIRTH ☐☐ HEIGHT IN CMS ☐☐.☐ WEIGHT IN KILOS ☐☐.☐ COULDN'T MEASURE: _____ (REASONS)	
	ORDER NUMBER ☐☐ NAME:_____	MONTH OF BIRTH ☐☐ YEAR OF BIRTH ☐☐ HEIGHT IN CMS ☐☐.☐ WEIGHT IN KILOS ☐☐.☐ COULDN'T MEASURE: _____ (REASONS)	

INTERVIEWER'S OBSERVATIONS
(To be filled in after completing interview)

Person interviewed: _____

_____

_____

Specific questions: _____

_____

_____

Other aspects: _____

_____

Name of interviewer: _____ Date: _____

_____

SUPERVISOR'S OBSERVATIONS

_____

_____

_____

_____

Supervisor: _____ Date: _____

_____

EDITOR'S/PUNCHER'S OBSERVATIONS

_____

_____

_____

_____

Editor: _____ Date: _____

Puncher: _____ Date: _____

23935

APPENDIX B

DOMINICAN REPUBLIC EXPERIMENTAL QUESTIONNAIRE

DEMOGRAPHIC/HEALTH SURVEYS 10/13/86

DOMINICAN REPUBLIC [redacted] QUESTIONNAIRE (ENGLISH)

EXPERIMENTAL

IDENTIFICATION

NUMBER OF QUESTIONNAIRE ☐☐☐☐

PROVINCE Prov. ☐☐

MUNICIPALITY OR MUNICIPAL DISTRICT _____

ZONE 1=URBAN 2=RURAL ☐

STREET_____ ☐☐☐

HOUSE OR APARTMENT NUMBER_____

AREA IDENTIFICATION ☐☐☐

NAME OF HEAD OF HOUSEHOLD_____

LINE NUMBER OF WOMAN ☐☐

INTERVIEWER VISITS	1	2	3	FINAL VISIT
DATE				MO ☐☐ YR ☐☐
INTERVIEWER'S NAME				Interv'wr ☐☐☐
RESULT*				Result ☐☐
NEXT VISIT DATE: TIME:				No. of VISITS ☐☐

* RESULT CODES:
1 COMPLETED
2 NOT AT HOME
3 DEFERRED
4 REFUSED
5 PARTLY COMPLETED
6 OTHER

	FIELD EDITED BY	OFFICE EDITED BY	PUNCHED BY	PUNCHED BY
NAME				☐☐
DATE				

SECTION 1. RESPONDENT'S BACKGROUND

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP TO
100	RECORD NUMBER OF PEOPLE LISTED IN THE HOUSEHOLD SCHEDULE	NUMBER OF PEOPLE.. [ ][ ]	
101	RECORD THE TIME	HOUR..... [ ][ ] MINUTES..... [ ][ ]	
102	For most of the time until you were 12 years old, did you live in the countryside, in a town, or in a city?	COUNTRYSIDE.....1 TOWN.....2 CITY.....3	
103	In what month and year were you born?	MONTH..... [ ][ ] DK MONTH.....98 YEAR..... [ ][ ]	
104	How old were you at your last birthday? COMPARE AND CORRECT 103 AND/OR 104 IF INCONSISTENT.	AGE IN COMPLETED YEARS..... [ ][ ]	
105	Have you ever attended school?	YES.....1 NO.....2--	→107
106	What was the highest year of school you completed?	PRIMARY..... [1][ ] INTERMEDIATE..... [2][ ] SECONDARY..... [3][ ] UNIVERSITY..... [4][ ]	→108
107	Can you read a letter or newspaper easily, with difficulty or not at all?	EASILY.....1 WITH DIFFICULTY.....2 NOT AT ALL.....3--	→109
108	How many days of the week do you read a newspaper?	DAYS..... [ ][ ]	
109	How many days of the week do you watch television?	DAYS..... [ ][ ]	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP TO
110	What is the principal source of drinking water used by the members of your household?	TAP INSIDE THE HOUSE...01 TAP OUTSIDE THE HOUSE..02 CISTERN.....03 PURIFIED WATER.....04 SPRING, RIVER, STREAM..05 RAIN, WATER TANK.....06 WELL.....07 WATER SUPPLY TRUCK.....08 OTHER _____09 (SPECIFY)	
111	What is the major source of water for other uses besides drinking (such as washing hands, bathing, cooking)?	TAP INSIDE THE HOUSE...01 TAP OUTSIDE THE HOUSE..02 CISTERN.....03 SPRING, RIVER, STREAM..04 RAIN, WATER TANK.....05 WELL.....06 WATER SUPPLY TRUCK.....07 OTHER _____08 (SPECIFY)	
112	Do you have, right now, a cake of soap for washing hands on the premises?	YES.....1 NO.....2	
113	What kind of toilet facility does your household have?	INDIVIDUAL INDOOR.....01 COLLECTIVE INDOOR.....02 INDIVIDUAL LATRINE WITH SEAT.....03 COLLECTIVE LATRINE WITH SEAT.....04 INDIVIDUAL LATRINE WITHOUT SEAT.....05 COLLECTIVE LATRINE WITHOUT SEAT.....06 NONE.....07 OTHER _____08 (SPECIFY)	
114	Does your house have: Electricity? A radio? A television? A refrigerator?	YES NO ELECTRICITY.....1 2 RADIO.....1 2 TELEVISION.....1 2 REFRIGERATOR.....1 2	
115	Does any member of your household own: A bicycle? A motorcycle? A car? A tractor? (IF URBAN AREA CIRCLE 2)	YES NO BICYCLE.....1 2 MOTORCYCLE.....1 2 CAR.....1 2 TRACTOR.....1 2	
116	MAIN MATERIAL OF THE FLOOR	MOSAIC, GRANITE OR MARBLE.....1 CEMENT.....2 BRICK.....3 WOOD.....4 EARTH.....5 OTHER _____.6 (SPECIFY)	
117	MAIN MATERIAL OF THE WALLS	CEMENT.....01 WOOD.....02 PALM.....03 ASBESTOS CEMENT.....04 BARK.....05 SHINGLE.....06 ZINC.....07 CARDBOARD.....08 OTHER _____09 (SPECIFY)	
118	MAIN MATERIAL OF THE CEILING	CONCRETE.....01 ZINC.....02 SHINGLE.....03 ASBESTOS CEMENT.....04 CORRUGATED BOARD.....05 CANE.....06 BARK.....07 OTHER _____08 (SPECIFY)	
119	What is the prinicipal fuel you use for cooking?	PROPANE GAS.....1 FIREWOOD.....2 COAL.....3 ELECTRICITY.....4 OTHER _____.5 (SPECIFY)	

SECTION 2. REPRODUCTION

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP TO
202	Now I would like to ask about all the births you have had during your life. I am referring only to children that you gave birth to and not to children adopted or raised by you. Have you ever given birth?	YES.....1 NO.....2--	→207
203	Do you have any son or daughter you have given birth to who is now living with you?	YES.....1 NO.....2--	→205
204	How many sons live with you? And how many daughters live with you? IF NONE ENTER ZEROS.	SONS AT HOME.....☐☐ DAUGHTERS AT HOME.☐☐	
205	Do you have any son or daughter you have given birth to who is not living with you?	YES.....1 NO.....2--	→207
206	How many sons do not live with you? And how many daughters do not live with you? IF NONE ENTER ZEROS.	SONS ELSEWHERE.....☐☐ DAUGHTERS ELSEWHERE☐☐	
207	Have you ever given birth to a boy or a girl who was born alive but later died? PROBE: Any other boy or girl who was born alive but only survived a few hours or days?	YES.....1 NO.....2--	→209
208	How many boys have died? And how many girls have died? IF NONE ENTER ZEROS.	BOYS DEAD.....☐☐ GIRLS DEAD.....☐☐	
209	SUM ANSWERS TO 204, 206 AND 208 AND ENTER TOTAL.	TOTAL.....☐☐	
210	Just to make sure that I have this right, you have had in TOTAL _____ live births during your life. Is that correct? YES ☐ NO ☐ (PROBE AND CORRECT 202-210)		
211	CHECK: ONE OR MORE LIVE BIRTHS ☐ NO LIVE BIRTHS ☐ (SKIP TO 223) Now I would like a list of all your recent births, whether still alive or not, starting with the last one you had.		

		LAST BIRTH	NEXT-TO-LAST BIRTH	SECOND-FROM-LAST BIRTH	THIRD-FROM-LAST BIRTH
221	What name was given to your (last, next to last,...) child?	NAME	NAME	NAME	NAME
222	In what month and year was this child born?	MONTH ☐☐ YEAR ☐☐	MONTH ☐☐ YEAR ☐☐	MONTH ☐☐ YEAR ☐☐	MONTH ☐☐ YEAR ☐☐
223	Is (NAME) a boy or a girl?	BOY.....1 GIRL.....2	BOY.....1 GIRL.....2	BOY.....1 GIRL.....2	BOY.....1 GIRL.....2
224	Is (NAME) alive?	YES, ALIVE.....1 (SKIP TO 226) NO, DEAD.....2	YES, ALIVE.....1 (SKIP TO 226) NO, DEAD.....2	YES, ALIVE.....1 (SKIP TO 226) NO, DEAD.....2	YES, ALIVE.....1 (SKIP TO 226) NO, DEAD.....2
225	How old was (NAME) when he/she died? RECORD DAYS IF LESS THAN ONE MONTH, MONTHS IF LESS THAN TWO YEARS, OR YEARS IF TWO YEARS OR MORE.	DAYS....1 ☐☐ MONTHS..2 ☐☐ YEARS...3 ☐☐	DAYS....1 ☐☐ MONTHS..2 ☐☐ YEARS...3 ☐☐	DAYS....1 ☐☐ MONTHS..2 ☐☐ YEARS...3 ☐☐	DAYS....1 ☐☐ MONTHS..2 ☐☐ YEARS...3 ☐☐
226	CHECK YEAR OF BIRTH	1981 AND LATER ☐ (SKIP TO NEXT COLUMN) BEFORE 1981 ☐ (SKIP TO 228)	1981 AND LATER ☐ (SKIP TO NEXT COLUMN) BEFORE 1981 ☐ (SKIP TO 227)	1981 AND LATER ☐ (SKIP TO NEXT COLUMN) BEFORE 1981 ☐ (SKIP TO 227)	1981 AND LATER ☐ BEFORE 1981 ☐ (SKIP TO 227)

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP TO
227	ENTER "B" FOR EACH BIRTH IN CALENDAR (COLUMN 1) IN MONTH OF BIRTH (IF SINCE JANUARY 1981) AND A "P" IN EACH OF THE 8 PRECEDING MONTHS.		
228	In what month and year was your first child born? IF FIRST BIRTH RECORDED IN 222, USE THIS AS A CHECK	MONTH..☐☐ YEAR...☐☐	
229	Did you have your menstrual period in the last four weeks?	YES.....1 NO.....2---	➤230
229A	How many days ago did your last menstrual period start?	DAYS.....☐☐---	➤232
230	Are you pregnant now?	YES.....1 NO.....2--- UNSURE.....8---	➤232 ➤232
231	In which month of pregnancy are you? ENTER "P" IN CALENDAR (COLUMN 1) IN MONTH OF INTERVIEW AND IN EACH PRECEDING MONTH PREGNANT.	MONTHS ☐	
232	What do you think are the days between one period and another on which a woman has the greatest probability (risk) of becoming pregnant?	DURING HER PERIOD.....1 IMMEDIATELY AFTER HER PERIOD.....2 IN THE MIDDLE OF THE TIME BETWEEN ONE PERIOD AND ANOTHER.....3 JUST BEFORE HER PERIOD BEGINS.....4 AT ANY TIME.....5 OTHER _____ (SPECIFY).....6 DK.....8	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP TO
233	We now would like to know about any (other) pregnancies you have had (NOT INCLUDING CURRENT PREGNANCY) which you have not told me about yet, that is, those pregnancies which may have miscarries, been aborted, or ended in stillbirth. CHECK 209: NUMBER OF BIRTHS 0 ☐ (SKIP TO 235) 1 ☐ (SKIP TO 237A) 2+ ☐		
234	Have you ever had such a pregnancy, even for a short period of time?	YES.....1-- NO.....2--	>240 >302
235	Since the birth of you child, have you ever had such a pregnancy, even for a short period of time?	YES.....1 NO.....2	
236	Before the birth of your child, have you ever had such a pregnancy, even for a short period of time?	YES.....1 NO.....2	
237	"NO" IN 235 AND 236 ☐ (SKIP TO 302) "YES" IN 235 OR 236 ☐ (SKIP TO 240)		
237A	Since your last birth, did you have such a pregnancy, even for a short period of time?	YES.....1 NO.....2	
237B	Between your last two births, did you have such a pregnancy, even for a short period of time?	YES.....1 NO.....2	
237C	"NO" IN 237A AND 237B ☐ (SKIP TO 302) "YES" IN 237A OR 237B ☐ (SKIP TO 240)		

		"OTHER PREGNANCY TABLE"		
		LAST PREGNANCY	NEXT-TO-LAST PREGNANCY	SECOND-FROM-LAST PREGNANCY
240	In what month and year did your last (next-to-last,...) pregnancy end?	MONTH ☐☐ YEAR ☐☐ IF BEFORE 1981, SKIP TO 302,	MONTH ☐☐ YEAR ☐☐ IF BEFORE 1981, SKIP TO 302	MONTH ☐☐ YEAR ☐☐ IF BEFORE 1981, SKIP TO 302
241	How many months pregnant were you when the pregnancy ended?	MONTHS ☐ IF LESS THAN 7, SKIP TO 243	MONTHS ☐ IF LESS THAN 7, SKIP TO 243	MONTHS ☐ IF LESS THAN 7, SKIP TO 243
242	At the time the the pregnancy ended, did the baby cry or show any sign of life?	YES.....1 (SKIP TO 244) NO.....2	YES.....1 (SKIP TO 244) NO.....2	YES.....1 (SKIP TO 244) NO.....2
243		ENTER "P" IN CALENDAR (COLUMN 1) IN MONTH PREGNANCY ENDED AND IN EACH PRECEDING MONTH PREGNANT. SKIP TO NEXT PREGNANCY. IF NO FURTHER PREGNANCIES, SKIP TO 302.		
244		ENTER "B" IN CALENDAR (COLUMN 1) IN MONTH PREGNANCY ENDED AND "P" IN EACH PRECEDING MONTH PREGNANT.		
245	Was this baby a boy or a girl?	BOY.....1 GIRL.....2	BOY.....1 GIRL.....2	BOY.....1 GIRL.....2
246	How old was the baby when he/she died? RECORD DAYS IF LESS THAN ONE MONTH, MONTHS IF LESS THAN TWO YEARS, OR YEARS IF TWO YEARS OR MORE.	DAYS.....1 ☐☐ MONTHS...2 ☐☐ YEARS....3 ☐☐ (GO TO NEXT COL.)	DAYS.....1 ☐☐ MONTHS...2 ☐☐ YEARS....3 ☐☐ (GO TO NEXT COL.)	DAYS.....1 ☐☐ MONTHS...2 ☐☐ YEARS....3 ☐☐ (GO TO 302)

SECTION 3. CONTRACEPTION

302 Now I would like to talk about a different topic. There are various ways or methods that a couple can use to delay or avoid a pregnancy. Which ways or methods do you know or have you heard about? CIRCLE CODE 1 IN 303 FOR EACH METHOD SPONTANEOUSLY MENTIONED. THEN READ THE NAME AND DESCRIPTION OF THE METHODS NOT MENTIONED AND ASK 303.

	303 Do you know or have you heard of this method?	304 Have you ever used this (METHOD)?	304A If a woman did not want to become pregnant, would you advise her to use this method? If no, why not? RECORD CODE FROM BELOW	305 What is the nearest place or person from which you can obtain (METHOD)? RECORD CODE FROM BELOW
RHYTHM 'Couples can avoid having sexual intercourse on particular days of the month when the woman is more likely to become pregnant'	YES, SPONT....1→ YES, PROBED...2→ NO.....3	YES.....1 NO.....2	☐☐	☐☐
WITHDRAWAL 'Man can be careful and pull out before climax'	YES, SPONT....1→ YES, PROBED...2→ NO.....3	YES.....1 NO.....2	☐☐	
CONDOM 'Man can use a rubber sheath during sexual intercourse'	YES, SPONT....1→ YES, PROBED...2→ NO.....3	YES.....1 NO.....2	☐☐	☐☐
MALE STERILIZATION 'Man can have an operation to avoid having any more children'	YES, SPONT....1→ YES, PROBED...2→ NO.....3	YES.....1 NO.....2	If a couple did not want any more children, would you advise them to use this method? ☐☐	☐☐
FEMALE STERILIZATION 'Woman can have an operation to avoid having any more children'	YES, SPONT....1→ YES, PROBED...2→ NO.....3	YES.....1 NO.....2	If a couple did not want any more children, would you advise them to use this method? ☐☐	☐☐
INJECTIONS 'Woman can have an injection by a doctor or nurse which stops them from becoming pregnant for several months'	YES, SPONT....1 YES, PROBED...2 NO.....3	YES.....1 NO.....2	☐☐	☐☐
DIAPHRAGM, FOAM, JELLY 'Woman can place a sponge or suppository or diaphragm or jelly or cream inside them before intercourse'	YES, SPONT....1→ YES, PROBED...2→ NO.....3	YES.....1 NO.....2	☐☐	☐☐
IUD 'Woman can have a loop or coil placed inside them by a doctor or nurse'	YES, SPONT....1→ YES, PROBED...2→ NO.....3	YES.....1 NO.....2	☐☐	☐☐
IMPLANT 'Woman can have a doctor place 6 capsules under the skin in their arm which prevent pregnancy for 5 years'	YES, SPONT....1→ YES, PROBED...2→ NO.....3	YES.....1 NO.....2	☐☐	☐☐
*PILL 'Woman can take a pill every day'	YES, SPONT....1→ YES, PROBED...2→ NO.....3	YES.....1 NO.....2	☐☐	☐☐
ANY OTHER METHODS 'Couples can use ways other than the ones already mentioned to avoid pregnancy. Do you know or have you heard of those methods?' SPECIFY 1. _____ 2. _____ 3. _____	YES, SPONT....1→ YES, PROBED...2→ NO.....3	YES.....1 NO.....2 YES.....1 NO.....2 YES.....1 NO.....2 YES.....1 NO.....2		

CODES FOR QUESTION 304A
YES.....01
NO, NOT EASILY AVAILABLE...02
NO, TOO EXPENSIVE.....03
NO, HEALTH CONCERNS.....04
NO, INEFFECTIVE.....05
NO, INTERFERES WITH SEX....06
NO, AGAINST CONTRACEPTION..07
NO, OTHER REASON.....08
DK.....98

CODES FOR QUESTION 305
PUBLIC HOSPITAL OR
FAM. PLANNING CLINIC.....01
IPSS OR FTAA HOSPITAL.....02
PRIVATE CLINIC.....03
DOCTOR'S OFFICE.....04
PHARMACY.....05
HEALTH WORKER.....06
PROFAMILIA CLINIC
OR DISTRIBUTOR.....07
OTHER.....96
NO PLACE.....97
DK.....98

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP TO
307	NOT A SINGLE "YES" IN 304 (NEVER USED) ☐ AT LEAST ONE "YES" IN 304 (EVER USED) ☐ (SKIP TO 309)		
308	Have you ever used anything or tried in any way to delay or avoid getting pregnant?	YES.....1-- NO.....2	▶308B
308A	ENTER "0" IN CALENDAR (COLUMN 1) IN EACH BLANK MONTH. THEN SKIP TO 329.		
308B	What have you used or done? CORRECT 303, 304, 304A, 305 AND 307	PILL.....01 IMPLANT.....02 IUD.....03 INJECTIONS.....04 VAGINAL METHODS.....05 CONDOM.....06 RHYTHM.....09 TEMPERATURE.....10 CERVICAL MUCUS.....11 TEMP AND MUCUS.....12 WITHDRAWAL.....13 OTHER METHOD.....14	
309	CHECK 304: EVER USED RHYTHM ☐ NEVER USED RHYTHM ☐ (SKIP TO 311)		
309A	The last time you used rhythm, how did you determine on which days you had to abstain?	BASED ON CALENDAR.....1 BASED ON BODY TEMPERATURE.....2 BASED ON CERVICAL MUCUS (BILLINGS) METHOD.....3 BASED ON BODY TEMPERATURE AND MUCUS.....4 OTHER_____.....5 (SPECIFY)	
310	How many children did you have when you first did something or used a method to avoid getting pregnant? IF NONE RECORD 00	NUMBER OF CHILDREN.....☐☐	
311	CHECK 304 AND 230: HE/SHE STERILIZED ☐ NOT STERILIZED ☐ PREGNANT ☐ (SKIP TO 318) NOT PREGNANT ☐		
313	Are you or your partner currently doing something or using any method to avoid getting pregnant?	YES.....1 NO.....2--	-▶318

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP TO
314	Which method are you using?	PILL.....01 IMPLANT.....02 IUD.....03 INJECTION.....04 VAGINAL METHODS.....05 CONDOM.....06 RHYTHM (CALENDAR).....09 TEMPERATURE.....10 CERVICAL MUCUS.....11 TEMP & CERVICAL MUCUS..12 WITHDRAWAL.....13 OTHER_____..14 (SPECIFY)	
314A	Where did you obtain that method or receive advice about it the last time?	PUBLIC HOSPITAL OR FAMILY PLANNING CLINIC.....01 IDSS OR FFAA HOSPITAL..02 PRIVATE CLINIC.....03 DOCTOR'S OFFICE.....04 PROFAMILIA CLINIC OR DISTRIBUTOR.....05 PHARMACY.....06 HEALTH WORKER.....07 FRIENDS.....08 RELATIVES.....09 OTHER.....10 DK.....98	
315	For how many months have you been using (current method) continuously? ENTER METHOD CODE IN CALENDAR (COLUMN 1) IN MONTH OF INTERVIEW AND FOR EACH PRECEDING MONTH OF CONSECUTIVE USE.		
315A	In what month and year did you begin using this method (this time)?	MONTH.....☐☐ YEAR.....☐☐	
315B	THIS USE BEGAN: SINCE 1981 ☐ (SKIP TO 318) BEFORE 1981 ☐ (SKIP TO 402)		
316	In what month and year did you (he) have the operation to have no more children? ENTER METHOD CODE IN CALENDAR (COLUMN 1) IN MONTH OF INTERVIEW AND IN EACH MONTH BACK TO DATE OF OPERATION OR JAN. 1981, IF OPERATION OCCURRED BEFORE 1981.	MONTH.....☐☐ YEAR.....☐☐	
316A	OPERATION SINCE 1981 ☐ OPERATION BEFORE 1981 ☐ (SKIP TO 402)		

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP TO
318	I would like to ask some questions about all the periods in the last few years during which you or your partner used a method (excluding current). USE CALENDAR TO PROBE FOR ALL PERIODS OF USE AND NON-USE, STARTING WITH THE MOST RECENT, BACK TO JAN. 1981. ASK ABOUT USE AFTER, BEFORE AND BETWEEN ANY BIRTH OR PREGNANCY. ENTER CODE FOR METHOD (INCLUDING "0" FOR NO USE) IN EACH BLANK MONTH IN COLUMN 1. ILLUSTRATIVE QUESTIONS: When was the last time (next to last, ...) you used a method? What method(s) did you use? When did you start to use this method (i.e., how long after a reported birth or pregnancy) and for how many months did you use it continuously? PROBE: Were there any months during this period of use when you were temporarily not using a method? Perhaps because you husband was absent or because of sickness?	318A AT THE END OF EACH PERIOD OF CONTRACEPTIVE USE CONSIDER THE FOLLOWING SITUATIONS: — IF A PREGNANCY APPEARS WITHIN ONE OR TWO MONTHS OF THE END OF USE, ASK: At the time you became pregnant with (NAME), were you or your partner using (METHOD)? — IF "YES" ENTER "1" IN COL. 1A NEXT TO THE LAST MONTH OF USE -- IF "NO" AND ALSO FOR PERIODS OF USE WHICH ARE NOT FOLLOWED BY A PREGNANCY, ASK: Why did you stop using (METHOD)? IN ORDER TO GET PREGNANT.2 OTHER REASON.....3 ENTER THE CODE IN COL. 1A NEXT TO THE LAST MONTH OF USE.	
319	CHECK CALENDAR: METHOD USED IN JAN. 1981 → (SKIP TO 320) NO METHOD USED IN JAN. 1981 → (SKIP TO 328)		
320	RECORD STARTING DATE OF PERIOD OF USE FOR METHOD USED DURING JAN. 1981	MONTH..... YEAR.....	
328	CHECK 311 AND 313: CURRENTLY USING A METHOD? YES (SKIP TO 402) NO		
329	Do you intend to use a method to avoid pregnancy in the next 12 months?	YES.....1— NO.....2 DK.....8	→330
329A	Do you intend to use a method to avoid pregnancy at some time in the future?	YES.....1 NO.....2— DK.....8—	→332 →332
330	Which method would you prefer to use?	PILL.....01 IMPLANT.....02 IUD.....03 INJECTION.....04 VAGINAL METHODS.....05 CONDOM.....06 RHYTHM (CALENDAR).....09 TEMPERATURE.....10 CERVICAL MUCUS.....11 TEMP & CERVICAL MUCUS..12 WITHDRAWAL.....13 OTHER_____..14 (SPECIFY) DK.....98	
332	What are the main reasons you do not intend to use a method? CIRCLE ALL REASONS MENTIONED. PROBE: ANY OTHERS?	INFREQUENT SEX.....1 ABSTAINING, POST-PARTUM, BREASTFEEDING.....1 MENOPAUSAL, SURFECUED...1 DOESN'T KNOW SOURCE.....1 DIFFICULT ACCESS.....1 RELIGIOUS REASONS.....1 SPOUSE OPPOSES.....1 HEALTH WORRIES.....1 FATALISTIC.....1 OPPOSED TO FAMILY PLANNING.....1 COST.....1 OTHER_____.1 (SPECIFY) DK.....8	

SECTION 4. HEALTH AND BREASTFEEDING

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP TO
402	CHECK 221: ONE OR MORE LIVE BIRTHS SINCE JAN.1981 [ ] FILL IN THE NAME AND SURVIVAL STATUS, AT THE TOP OF THE TABLE, OF EACH LIVE BIRTH SINCE JANUARY 1981. BEGIN WITH THE MOST RECENT ONE.	LIVE BIRTH BEFORE JAN.1981 [ ] (SKIP TO 418) NO LIVE BIRTH [ ] (SKIP TO 502)	

	LAST BIRTH NAME ______ ALIVE[ ] DEAD[ ]	NEXT-TO-LAST BIRTH NAME ______ ALIVE[ ] DEAD[ ]	SECOND FROM LAST BIRTH NAME ______ ALIVE[ ] DEAD[ ]	THIRD FROM LAST BIRTH NAME ______ ALIVE[ ] DEAD[ ]
403 When you were pregnant with ______ did you see anyone for a check on this pregnancy? IF YES: Whom did you see? PROBE FOR TYPE OF PERSON AND RECORD MOST QUALIFIED	DOCTOR....1 TRAINED NURSE....2 TRADITIONAL NURSE/ MIDWIFE....3 OTHER....4 NO CHECK....5	DOCTOR....1 TRAINED NURSE....2 TRADITIONAL NURSE/ MIDWIFE....3 OTHER....4 NO CHECK....5	DOCTOR....1 TRAINED NURSE....2 TRADITIONAL NURSE/ MIDWIFE....3 OTHER....4 NO CHECK....5	DOCTOR....1 TRAINED NURSE....2 TRADITIONAL NURSE/ MIDWIFE....3 OTHER....4 NO CHECK....5
404 Who assisted with the delivery? PROBE FOR TYPE OF PERSON AND RECORD MOST QUALIFIED	DOCTOR....1 TRAINED NURSE....2 TRADITIONAL NURSE/ MIDWIFE....3 RELATIVE....4 OTHER....5 NO ONE....6	DOCTOR....1 TRAINED NURSE....2 TRADITIONAL NURSE/ MIDWIFE....3 RELATIVE....4 OTHER....5 NO ONE....6	DOCTOR....1 TRAINED NURSE....2 TRADITIONAL NURSE/ MIDWIFE....3 RELATIVE....4 OTHER....5 NO ONE....6	DOCTOR....1 TRAINED NURSE....2 TRADITIONAL NURSE/ MIDWIFE....3 RELATIVE....4 OTHER....5 NO ONE....6
404A How much did (NAME) weigh at birth?	POUNDS [ ][ ] OUNCES [ ][ ] DK....98	POUNDS [ ][ ] OUNCES [ ][ ] DK....98	POUNDS [ ][ ] OUNCES [ ][ ] DK....98	POUNDS [ ][ ] OUNCES [ ][ ] DK....98
404B When (NAME) was born was he/she ontime or premature?	ONTIME....1 PREMATURE....2 DK....8	ONTIME....1 PREMATURE....2 DK....8	ONTIME....1 PREMATURE....2 DK....8	ONTIME....1 PREMATURE....2 DK....8
404C Has (NAME) ever had any vaccinations, such as for polio, measles, or some other disease?	YES....1 NO....2 DK....3 (SKIP TO 405)	YES....1 NO....2 DK....3 (SKIP TO 405)	YES....1 NO....2 DK....3 (SKIP TO 405)	YES....1 NO....2 DK....3 (SKIP TO 405)
404D Can you tell me whether (NAME) was vaccinated against:	YES NO DK	YES NO DK	YES NO DK	YES NO DK
Tuberculosis?	1 2 8	1 2 8	1 2 8	1 2 8
Diptheria/Pertussis/ Tetanus?	1 2 8	1 2 8	1 2 8	1 2 8
Polio?	1 2 8	1 2 8	1 2 8	1 2 8
Measles?	1 2 8	1 2 8	1 2 8	1 2 8
405 Did you ever feed (NAME) at the breast?	YES....1 (SKIP TO 407) NO....2	YES....1 (SKIP TO 407) NO....2	YES....1 (SKIP TO 407) NO....2	YES....1 (SKIP TO 407) NO....2
406 Why did you not breast-feed (NAME)?	MOTHER ILL/WEAK....1 NO MILK....2 CHILD ILL/WEAK....3 CHILD DIED....4 WORK....5 OTHER....6 (ALL SKIP TO 409)	MOTHER ILL/WEAK....1 NO MILK....2 CHILD ILL/WEAK....3 CHILD DIED....4 WORK....5 OTHER....6 (ALL SKIP TO 409)	MOTHER ILL/WEAK....1 NO MILK....2 CHILD ILL/WEAK....3 CHILD DIED....4 WORK....5 OTHER....6 (ALL SKIP TO 409)	MOTHER ILL/WEAK....1 NO MILK....2 CHILD ILL/WEAK....3 CHILD DIED....4 WORK....5 OTHER....6 (ALL SKIP TO 409)
407 FOR THE LAST BIRTH: Are you still breastfeeding (NAME)? IF "NO" AND FOR PRECEDING BIRTH, ASK: 407A How many months did you breastfeed (NAME)?	STILL BREAST-FEEDING [ ] ENTER "1" IN CALENDAR (COLUMN 2) IN THE MONTH AFTER BIRTH AND IN EACH FOLLOWING MONTH OF BREASTFEEDING. IF STILL BREASTFEEDING SKIP TO 409			
408 Were you able to breast-feed (NAME) as long as you wanted to? IF "NO," Why not?	AS LONG AS WANTED..1 MOTHER ILL/WEAK....2 NO MILK....3 CHILD ILL/WEAK....4 CHILD DIED....5 WORK....6 OTHER....7	AS LONG AS WANTED..1 MOTHER ILL/WEAK....2 NO MILK....3 CHILD ILL/WEAK....4 CHILD DIED....5 WORK....6 OTHER....7	AS LONG AS WANTED.1 MOTHER ILL/WEAK....2 NO MILK....3 CHILD ILL/WEAK....4 CHILD DIED....5 WORK....6 OTHER....7	AS LONG AS WANTED.1 MOTHER ILL/WEAK....2 NO MILK....3 CHILD ILL/WEAK....4 CHILD DIED....5 WORK....6 OTHER....7

	LAST BIRTH NAME _____ ALIVE[ ] DEAD[ ]	NEXT-TO-LAST BIRTH NAME _____ ALIVE[ ] DEAD[ ]	SECOND FROM LAST BIRTH NAME _____ ALIVE[ ] DEAD[ ]	THIRD FROM LAST BIRTH NAME _____ ALIVE[ ] DEAD[ ]
409 For how many months after the birth of (NAME) did you not have a period?	NOT RETURNED [ ]	NOT RETURNED [ ]	NOT RETURNED [ ]	NOT RETURNED [ ]
	ENTER "0" IN CALENDAR (COLUMN 3) IN THE MONTH AFTER BIRTH AND IN EACH FOLLOWING MONTH WITHOUT A PERIOD.			
410 (FOR LAST BIRTH: Have you resumed sexual relations?) IF "YES" AND FOR OTHER BIRTHS, ASK: For how many months after the birth of (NAME) did you not have sexual relations?	NOT RESUMED SEX [ ]			
	ENTER "0" IN CALENDAR (COLUMN 4) IN THE MONTH AFTER BIRTH AND IN EACH FOLLOWING MONTH WITHOUT SEXUAL RELATIONS.			
411 Before you became pregnant with (NAME) did you want to have a(nother) child <u>at that time</u>, did you want to <u>wait longer</u>, or did you want <u>no more children</u>?	AT THAT TIME.....1 WAIT.....2 NO MORE.....3	AT THAT TIME.....1 WAIT.....2 NO MORE.....3	AT THAT TIME.....1 WAIT.....2 NO MORE.....3	AT THAT TIME.....1 WAIT.....2 NO MORE.....3
414 CHECK TOP OF TABLE	ALIVE [ ] DEAD [ ] (SKIP TO 403 NEXT COLUMN)	ALIVE [ ] DEAD [ ] (SKIP TO 403 NEXT COLUMN)	ALIVE [ ] DEAD [ ] (SKIP TO 403 NEXT COLUMN)	ALIVE [ ] DEAD [ ] (SKIP TO 418)
415 Has (NAME) had diarrhea in the last 24 hours?	YES.....1 (SKIP TO 416) NO.....2 DK.....8	YES.....1 (SKIP TO 416) NO.....2 DK.....8	YES.....1 (SKIP TO 416) NO.....2 DK.....8	YES.....1 (SKIP TO 416) NO.....2 DK.....8
415A When was the last time (NAME) had diarrhea?	DAYS AGO....1 [ ][ ] WEEKS AGO...2 [ ][ ] MONTHS AGO..3 [ ][ ] NEVER.....997 DK.....998 (SKIP TO 403, NEXT COLUMN)	DAYS AGO....1 [ ][ ] WEEKS AGO...2 [ ][ ] MONTHS AGO..3 [ ][ ] NEVER.....997 DK.....998 (SKIP TO 403, NEXT COLUMN)	DAYS AGO...1 [ ][ ] WEEKS AGO..2 [ ][ ] MONTHS AGO.3 [ ][ ] NEVER....997 DK.....998 (SKIP TO 403, NEXT COLUMN)	DAYS AGO...1 [ ][ ] WEEKS AGO..2 [ ][ ] MONTHS AGO.3 [ ][ ] NEVER....997 DK.....998 (SKIP TO 418)
416 Did you or anyone else do something to treat the diarrhea the last time?	YES.....1 NO.....2 (SKIP TO 403, NEXT COLUMN) DK.....8	YES.....1 NO.....2 (SKIP TO 403, NEXT COLUMN) DK.....8	YES.....1 NO.....2 (SKIP TO 403, NEXT COLUMN) DK.....8	YES.....1 NO.....2 (SKIP TO 418) DK.....8
417 Did (NAME) ever have any of the following treatments for diarrhea? READ ALTERNATIVES:	YES NO DK	YES NO DK	YES NO DK	YES NO DK
-"PAQUETE DE REHIDRATACION ORAL"	1 2 8	1 2 8	1 2 8	1 2 8
-HOMEMADE SOLUTION OF SUGAR, SALT, WATER	1 2 8	1 2 8	1 2 8	1 2 8
-INTRAVENOUS SERUM	1 2 8	1 2 8	1 2 8	1 2 8
-TABLETS, INJECTIONS, SYRUPS	1 2 8	1 2 8	1 2 8	1 2 8
-HOSPITALIZATION	1 2 8	1 2 8	1 2 8	1 2 8
-OTHER	1 2 8	1 2 8	1 2 8	1 2 8

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP TO
418	CHECK 226 FOR THE YEAR OF THE LAST BIRTH PRIOR TO 1981: BIRTH BETWEEN 1978 AND 1980 ☐ OTHER ☐ (SKIP TO 502)		
419	Did you ever feed (NAME OF PRIOR BIRTH) at the breast?	YES.....1 NO.....2--	→421
420	For how many months did you breast-feed (NAME OF PRIOR BIRTH)?	MONTHS..... ☐☐ TILL DEATH.....97	
421	For how many months after the birth of (NAME OF PRIOR BIRTH) did you not have a period?	MONTHS..... ☐☐ NOT RETURNED.....97	
422	For how many months after the birth of (NAME OF PRIOR BIRTH) did you not have sexual relations?	MONTHS..... ☐☐ NOT RESUMED.....97	

SECTION 5. MARRIAGE

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP TO
502	Have you ever been married or been in a union?	YES.....1 NO.....2--	➤510
503	Are you now married, in a union, widowed, divorced or separated?	MARRIED.....1 LIVING TOGETHER.....2 WIDOWED.....3 DIVORCED.....4 SEPARATED.....5	
503A	In what month and year did you start living with your current (most recent) husband or partner?	MONTH.....[ ][ ] DK MONTH.....98 YEAR.....[ ][ ] DK YEAR.....98	
503B	How old were you when you started living with him?	AGE.....[ ][ ]	
504	Have you been married or in a union once, or more than once?	ONCE.....1-- MORE THAN ONCE.....2	➤507
505	How many times have you been married or in a union?	TIMES.....[ ]	
506	In what month and year did you start living with your first husband or partner?	MONTH.....[ ][ ] DK MONTH.....98 YEAR.....[ ][ ] DK YEAR.....98	
506A	How old were you when you started living with him?	AGE.....[ ][ ]	
507	ENTER A "1" IN CALENDAR (COLUMN 5) FOR EACH MONTH MARRIED OR IN UNION SINCE JANUARY 1981 FOR WOMEN NOT CURRENTLY IN UNION OR WITH MORE THAN ONE UNION: PROBE FOR DATE COUPLE STOPPED LIVING TOGETHER OR DATE STOPPED LIVING TOGETHER OR DATE WIDOWED, AND FOR STARTING DATE OF SUBSEQUENT UNION (IF ANY) (SKIP TO 511)		

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP TO
510	Now we need some details about your sexual activity in order to get a better understanding of contraception and fertility. CHECK 211, 230 AND 234: CURRENTLY PREGNANT ☐ (SKIP TO 513) NEVER PREGNANT ☐ (CHECK 304) OTHER CASES ☐ (SKIP TO 511)		
510A	Have you ever had sexual intercourse?	YES.....1 NO.....2--	→518
	CHECK 304: HE/SHE STERILIZED ☐ (SKIP TO 513) HAS USED OTHER METHOD ☐ NEVER USED METHOD ☐ (SKIP TO 513)		
512	Did you use a method to avoid pregnancy the last time you had sexual intercourse?	YES.....1 NO.....2	
513	Have you had sexual intercourse in the last 24 hours?	YES.....1-- NO.....2	→517
515	When was the last time you had sexual intercourse?	DAYS AGO.....1 ☐☐ OR WEEKS AGO....2 ☐☐ OR MONTHS AGO...3 ☐☐ BEFORE LAST BIRTH.....998	
517	How old were you when you first had sexual intercourse?	AGE.....☐☐	
518	PRESENCE OF OTHERS AT THIS POINT	YES NO CHILDREN UNDER 10..1 2 HUSBAND OR PARTNER.1 2 OTHER MALES.....1 2 OTHER FEMALES.....1 2	

SECTION 6. FERTILITY PREFERENCES

652	CHECK 503: MARRIED OR IN UNION ☐ → 653 OTHER ☐ (SKIP TO 662)		
653	CHECK 230 AND 304: PREGNANT ☐ (SKIP TO 658) HE/SHE STERILIZED ☐ (SKIP TO 662) OTHER ☐ → 654		
654	I want to ask about your feelings about having children. Would you like to get pregnant in the next 12 months?	YES, GET PREGNANT.....1 — DOES NOT MIND.....2 — MENOPAUSE, STERILE.....3 — NO.....4 OTHER.....5 —	→662 →662 →662 →656
655	Are you very much against getting pregnant in the next 12 months, or only a little against?	VERY MUCH AGAINST.....1 A LITTLE AGAINST.....2 OTHER.....3	
656	Do you want to have (any more) (any) children at any time in the future, or do you want to stop having children?	YES, WANTS MORE CHILDREN 1 UNCERTAIN.....2 - HAS NOT DECIDED.....3 - NO, WANTS TO STOP.....4 -	 →662 →662 →662
657	How long would you like to wait before you have a (another) child?	TIME TO WAIT: MONTHS.....1 ☐☐ — YEARS.....2 ☐☐ — DK.....998	 →662 →662
657A	CHECK 209: AT LEAST ONE LIVE BIRTH ☐ → 657B NO LIVE BIRTH ☐ (SKIP TO 662)		
657B	How old would you like your youngest child to be?	YEARS.....☐☐ NO CHILDREN.....97 DK.....98	→662
	ASK 658-661A ONLY FOR PREGNANT WOMEN		
658	I want you to think back to the time before you got pregnant with the child you are now carrying. At that time did you want to get pregnant?	WANTED TO GET PREGNANT...1 - DID NOT WANT TO GET PREG.2 IS NOT SURE IF WANTED TO OR NOT.....3 -	→660 →660
659	Did you want to stop having children (never have any children) or to have a child at some other time?	DID NOT WANT MORE.....1 WANTED ANOTHER SOMETIME LATER.....2 UNCERTAIN IF WANTED MORE.3 OTHER.....4	
660	After this baby is born, will you want to have another child, or will you want to stop having children?	WILL WANT ANOTHER.....1 UNCERTAIN.....2 WILL WANT TO STOP.....3 HAS NOT DECIDED IF WANTS ANOTHER.....4 OTHER.....5	
661	After this baby is born, how long would you like to wait before you have another child?	MONTHS.....☐☐ - YEARS.....☐☐ - DK.....98	→662 →662
661A	How old would you like the child that you are now expecting to be?	YEARS.....☐☐ DK.....98	
662	If you could choose exactly the number of children to have in your whole life, how many would that be? RECORD SINGLE NUMBER, RANGE OR OTHER ANSWER	NUMBER.....☐☐ RANGE: BETWEEN _____ AND _____ OTHER ANSWER _____ (SPECIFY)	

SECTION 7. HUSBAND'S BACKGROUND AND WOMAN'S WORK

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP TO
701	In how many different communities have you lived since January 1981?	NUMBER [ ][ ]	
701A	LIVED IN ONE PLACE [ ] LIVED IN MORE THAN ONE PLACE [ ] ENTER (IN COL. 6 OF CALENDAR) THE APPROPRIATE CODE FOR CURRENT PLACE OF RESIDENCE ("1" COUNTRYSIDE, "2" TOWN, "3" CITY). BEGIN IN THE MONTH OF INTERVIEW AND CONTINUE WITH ALL PRECEDING MONTHS THROUGH JANUARY 1981. (SKIP TO 702)		
701B	In what month and year did you begin to live in (NAME OF COMMUNITY OF INTERVIEW?) ENTER (IN COL. 6 OF CALENDAR) "0" IN THE MONTH AND YEAR OF THE MOVE, AND IN THE SUBSEQUENT MONTHS ENTER THE APPROPRIATE CODE FOR PLACE OF RESIDENCE ("1" COUNTRY-SIDE, "2" TOWN, "3" CITY). CONTINUE PROBING FOR THE PREVIOUS PLACE OF RESIDENCE AND RECORD MOVES AND PLACE OF RESIDENCE ACCORDINGLY. Where did you live before....? How long did you live there? Is that place in the countryside, a town, or a city?		
702	CHECK 502: EVER MARRIED OR IN UNION [ ] ALL OTHERS [ ] (SKIP TO 707)		
703	Now I have some questions about your (most recent) husband/partner. Did your husband/partner ever attend school?	YES.....1 NO.....2--	→706
704	What was the highest year of school he completed and at what level?	PRIMARY.....[1][ ] INTERMEDIATE.....[2][ ]- SECONDARY.....[3][ ] UNIVERSITY.....[4][ ]- DK.....98	→706A
706	Can (could) he read a letter or newspaper easily, with difficulty or not at all?	EASILY.....1 WITH DIFFICULTY.....2 NOT AT ALL.....3	

NO.	QUESTIONS AND FILTERS	CODING CATEGORIES	SKIP TO
706A	Which of the following (if any) did he own when you first started living together? READ ALTERNATIVES	YES NO DK RADIO..... 1 2 8 TELEVISION.... 1 2 8 REFRIGERATOR.. 1 2 8 BICYCLE..... 1 2 8 MOTORCYCLE.... 1 2 8 CAR..... 1 2 8	
706B	Which of the following (if any) did <u>you</u> own when you first started living together? READ ALTERNATIVES	YES NO DK RADIO..... 1 2 8 TELEVISION.... 1 2 8 REFRIGERATOR.. 1 2 8 BICYCLE..... 1 2 8 MOTORCYCLE.... 1 2 8 CAR..... 1 2 8	
707	Now I would like to ask you some questions about work whether paid in cash or in kind: Are you currently working for payment in cash or in kind?	YES.....1 NO.....2--	→709
708	Are you self-employed, do you work in a family business or farm, or do you work for someone outside your family?	SELF-EMPLOYED.....1 FAMILY.....2 OTHERS.....3 YES.....1	→711
709	Since January, 1981, have you ever worked for cash (or for payment in kind?	YES.....1 NO.....2--	→715
710	Was your most recent work self-employment, work on a farm or business run by your family/relatives, or work for someone outside your family?	SELF-EMPLOYED.....1 WORK WITH FAMILY/ RELATIVES.....2 WORK FOR OTHERS.....3	
711	How many hours do (did) you normally work in an average week?	HOURS..... ☐☐ 90 OR MORE..... 90	
713	I would like to ask some questions about all the periods during which you worked for cash (or for payment in kind) since January 1981. USE CALENDAR TO PROBE FOR ALL PERIODS OF WORK, STARTING WITH CURRENT OR MOST RECENT WORK, BACK TO JANUARY 1981. ENTER CODE FOR TYPE OF WORK IN COLUMN 7. ILLUSTRATIVE QUESTIONS: When did this job begin and when did it end? What did you do before that? How long did you work at that time? Were you self-employed? Was the work done with your family/relatives, or others not related to you?		
719	RECORD THE TIME	HOUR..... MINUTES.....	

INSTRUCTIONS: BEGIN COLLECTING INFORMATION FOR MONTH OF INTERVIEW. ONLY ONE CODE SHOULD APPEAR IN ANY BOX. FOR COLUMNS 1 AND 6 ALL MONTHS SHOULD BE FILLED IN.

INFORMATION TO BE CODED IN EACH COLUMN

COL 1: Fertility, Contraceptive Use

00 NO METHOD
01 PILL
02 IMPLANT
03 IUD
04 INJECTIONS
05 VAGINAL METHODS
06 CONDOM
07 FEMALE STERILIZATION
08 MALE STERILIZATION
09 RHYTHM: CALENDAR
10 RHYTHM: BODY TEMPERATURE
11 RHYTHM: CERVICAL MUCUS
12 RHYTHM: TEMPERATURE AND MUCUS
13 WITHDRAWAL
14 RHYTHM AND CONDOM
15 RHYTHM AND WITHDRAWAL
16 CONDOM AND WITHDRAWAL
17 OTHER

COL 1A: Discontinuation of Contraceptive Use

1 BECAME PREGNANT WHILE USING
2 WANTED TO BECOME PREGNANT
3 OTHER REASON

COL 2: Breastfeeding

1 BREASTFEEDING

COL 3: Post-partum Amenorrhea

0 PERIOD DID NOT RETURN

COL 4: Post-partum Abstinence

0 NO SEXUAL RELATIONS

COL 5: Marriage/Union

1 IN UNION (MARRIAGE OR LIVING TOG)

COL 6: Moves and Places of Residence

0 CHANGE OF RESIDENCE
1 COUNTRYSIDE
2 TOWN
3 CITY

COL 7: Type of Employment

0 CHANGE OF RESIDENCE
1 COUNTRYSIDE
2 TOWN