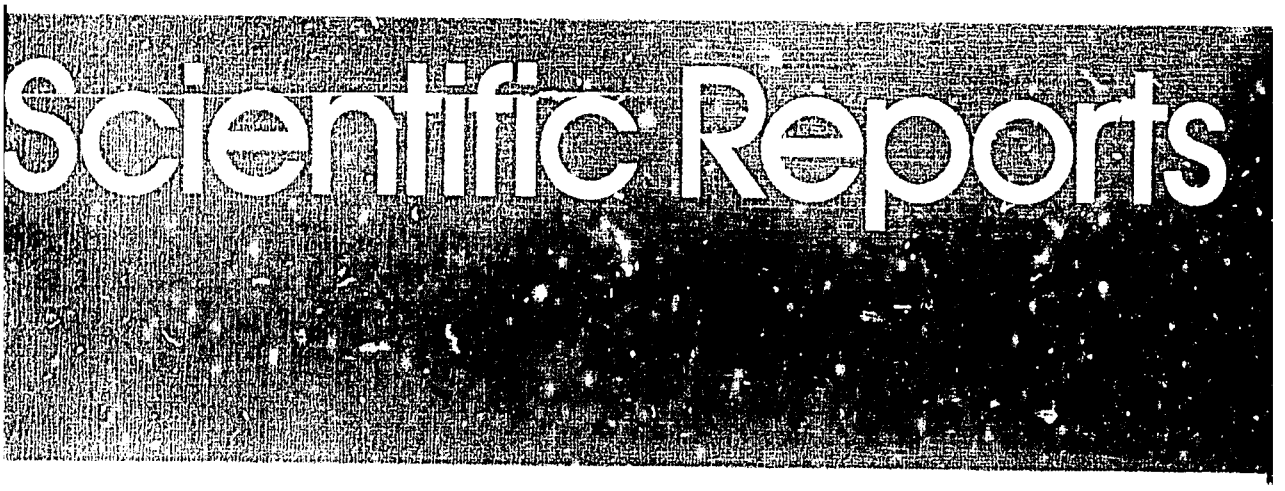


NUMBER 3 - OCTOBER 1978

A. J. MACDONALD, P. M. SIMPSON AND
A. M. WHITFIELD

An Assessment of the Reliability of the Indonesia Fertility Survey Data

INTERNATIONAL STATISTICAL INSTITUTE
Permanent Office, Director: C. Lunenberg
428 Prinses Beatrixlaan
Voorburg, The Hague
Netherland.

WORLD FERTILITY SURVEY
Project Director:
Sir Maurice Kendall, Sc. D., F.B.A.
35-37 Grosvenor Gardens
London SW1W 0BS, U.K.

The World Fertility Survey is an international research programme whose purpose is to assess the current state of human fertility throughout the world. This is being done principally through promoting and supporting nationally representative, internationally comparable, and scientifically designed and conducted sample surveys of fertility behaviour in as many countries as possible.

The WFS is being undertaken, with the collaboration of the United Nations, by the International Statistical Institute in cooperation with the International Union for the Scientific Study of Population. Financial support is provided principally by the United Nations Fund for Population Activities and the United States Agency for International Development.

This publication is part of the WFS Publications Programme which includes the WFS Basic Documentation, Occasional Papers and auxiliary publications. For further information on the WFS, write to the Information Office, International Statistical Institute, 428 Prinses Beatrixlaan, Voorburg, The Hague, Netherlands.

L'Enquête Mondiale sur la Fécondité (EMF) est un programme international de recherche dont le but est d'évaluer l'état actuel de la fécondité humaine dans le monde. Afin d'atteindre cet objectif, des enquêtes par sondage sur la fécondité sont mises en oeuvre et financées dans le plus grand nombre de pays possible. Ces études, élaborées et réalisées de façon scientifique, fournissent des données représentatives au niveau national et comparables au niveau international. L'Institut International de Statistique avec l'appui des Nations Unies, a été chargé de la réalisation de ce projet en collaboration avec l'Union Internationale pour l'Etude Scientifique de la Population. Le financement est principalement assuré par le Fonds des Nations Unies pour les Activités en matière de Population et l'Agence pour le Développement International des Etats-Unis.

Cette publication fait partie du programme de publications de l'EMF, qui comprend la Documentation de base, les Documents Non-Périodiques et des publications auxiliaires. Pour tout renseignement complémentaire, s'adresser au Bureau d'Information, Institut International de Statistique, 428 Prinses Beatrixlaan, Voorburg, La Haye, Pays-Bas.

La Encuesta Mundial de Fecundidad (EMF) es un programa internacional de investigación cuyo propósito es determinar el estado actual de la fecundidad humana en el mundo. Para lograr este objetivo, se están promoviendo y financiando encuestas de fecundidad por muestreo en el mayor número posible de países. Estas encuestas son diseñadas y realizadas científicamente, nacionalmente representativas y comparables a nivel internacional.

El proyecto está a cargo del Instituto Internacional de Estadística en cooperación con la Unión Internacional para el Estudio Científico de la Población y con la colaboración de las Naciones Unidas. Es financiado principalmente por el Fondo de las Naciones Unidas para Actividades de Población y por la Agencia para el Desarrollo Internacional de los Estados Unidos.

Esta publicación ha sido editada por el Programa de Publicaciones de la EMF, el que incluye Documentación Básica, Publicaciones Ocasionales y publicaciones auxiliares. Puede obtenerse mayor información sobre la EMF escribiendo a la Oficina de Información, Instituto Internacional de Estadística, 428 Prinses Beatrixlaan, Voorburg-La Haya, Países Bajos.

Scientific Reports

An Assessment of the Reliability of the Indonesia Fertility Survey Data

Prepared by:

A.L. MACDONALD, P.M. SIMPSON AND
A.M. WHITFIELD

WFS Central Staff
International Statistical Institute
35–37 Grosvenor Gardens
London SW1W 0BS, U.K.

CONTENTS

ACKNOWLEDGEMENTS

We would like to express our appreciation to our colleagues for their useful comments. Special thanks is due to Sam Suharto of the Central Bureau of Statistics Indonesia; and Iqbal Alam, John Ireland, Rod Little, German Rodriguez and Christopher Scott of the WFS Central Office, London.

The good humoured and efficient way in which the typing staff, especially Ana Lennon and Christina Atkinson, coped with the tedious task of preparing the draft is highly appreciated.

PREFACE

This report is a result of the study by the Central Bureau of Statistics, Government of Indonesia, in cooperation with the World Fertility Survey. It was our desire that a study on the reliability of responses on fertility, dates of events, ages and other population characteristics collected during the Indonesia Fertility Survey be undertaken. Thanks to the assistance in terms of funds and consultants from the World Fertility Survey this study has been possible.

For reasons of shortage in technical staff at the Central Bureau of Statistics this report has been prepared by the World Fertility Survey staff in London. I would like to thank the authors of this report who have prepared a very valuable analysis, which will not only be very useful to those using the data from the Indonesia Fertility Survey but, I feel, can also serve as a guide in assessing the quality of future surveys in Indonesia in general.

It is our hope that this document will also be of benefit to other developing countries where data on age, dates of events and other characteristics of the population are not easily known by the respondents and where no factual records are available.

This report marks the culmination of a fruitful cooperation between the World Fertility Survey and the Central Bureau of Statistics, Government of Indonesia; I very much hope that this cooperation can be further expanded.

M. Abdulmadjid
Director General
Central Bureau of Statistics
Government of Indonesia

November 1977

1 The Indonesia Reliability Study

1.1 INTRODUCTION

Indonesia participated in the World Fertility Survey (WFS) as part of the Intercensal Survey 1975-1976. Little information is available on the reliability of data obtained through surveys, and in Indonesia such information is lacking altogether. A special study was therefore conceived as a follow-up of the Indonesian Fertility Survey/WFS, to obtain an indication of the reliability of the data generated by that survey.
In consultation with WFS headquarters, it was decided to carry out a reliability study in all six provinces covered by the IFS/WFS, using a sub-sample of the successfully interviewed respondents.

1.2 OBJECTIVES

The primary objective of the Indonesia Reliability Study (IRS) was to measure the reliability of data on fertility, dates and ages. Another objective was to measure the reliability of some additional selected variables. These were factual data (background variables and data on marital status and situation) and opinion and attitudinal data. Finally, it was intended that the study should obtain indications of the possible sources of response discrepancies.
It was decided that the study would measure the reliability of the data in their crude form, that is as data collected in the field. The data were therefore not office edited, and hence differences reported could be attributed to the field operation. However, this report is based on coded and punched data, and it is thus possible that there are some coding and punching errors. The procedures used to minimize these errors will be described later (see Appendix III). The study is thus basically concerned with response variability and to a lesser degree with the sources of discrepancies.

1.3 THE DESIGN

1.3.1 THE DESIGN CHOSEN

To measure the reliability of data through response variability[1] one needs to obtain an independent replication of the field procedures.
To obtain an indication of the source of the discrepancies reconciliation of discrepant results is needed. The design chosen for this Study was therefore a re-interview of a subsample of the IFS with reconciliation of discrepant results.
To reduce the probability that interviewers might remember the answers a respondent had given in the IFS, it was decided that interviewers should not interview the respondents they had interviewed in the original study, and in addition, they should not have previous knowledge of the results of the original interview. To enhance the validity of the reconciliation interview, it would be carried out by field supervisors who were considered to be more suited to this difficult task.

1.3.2 THE QUESTIONNAIRE AND OTHER FIELD DOCUMENTS

The questionnaire used for the IRS was a shortened version of the one used during the Indonesia Fertility Survey.
The questionnaire consisted of the following sections from the IFS questionnaire:

Section 1:	Respondent's Background
Section 2:	Marriage History
Section 3:	Maternity History
Section 5:	Fertility Regulation, 7 selected questions only
Section 8:	Current (Last) Husband's Background, 1 question only

With the exception of Section 5, the section and question numbers used in the IRS questionnaire were the same as those used in the IFS. An English version of the former is included in Appendix I. Normally, WFS questionnaires are printed in the language of the interview and the interviewer is not allowed to make her own translation. In Indonesia, the questionnaire was printed only in the national language, Bahasa Indonesia. Thus, unlike in other WFS surveys, the interviewer had to translate the questionnaire in the field into the local languages and dialects spoken by the respondents. However, in urban areas most interviews were carried out in the national language.
Since it had been decided that the interviewers for the re-interview should not have previous knowledge of the results of the original interview, it was sufficient that only the coded data of the original interview should be available in the field for reconciliation. Special coding sheets were designed by WFS London staff for the reliability study (See Appendix I for an example and description); and the original interviews were coded in Jakarta, before the field work started. The data were to be used in their crude form and any office-editing done was disregarded. The coding was checked by supervisors.

1.3.3 CRITERIA FOR THE RECONCILIATION INTERVIEW

The reconciliation interview involved only selected questions. In line with the objectives of the IRS, most important were the group of questions on fertility, age and dates. For the fertility questions, whenever a discrepancy was found reconciliation was attempted. For the age and date questions, reconciliation was attempted only if the difference between the results of the two interviews was more than two years. Background variables are generally considered to be simple data, not subject to change, and it was thought that they might therefore serve as a standard of comparison for the reliability of the fertility questions. Before the field work it was decided that any discrepancy in the background variables and in opinion and attitude questions should be reconciled.
During the field work this policy was modified. Owing to the large number of reconciliation interviews which would have had to be held, it was decided that if the only inconsistency found was of a background variable no

[1] Other procedures may be used to measure response error and its components. Currently, WFS has a project in progress to measure interviewer error.

reconciliation interview would be held. If other inconsistencies were found which required reconciliation, then inconsistencies in the background variables, if any, would also be reconciled. This restriction had to be introduced in view of the shortage of time available for the field work. This is regrettable because the results on background variables from the reconciliation interviews were interesting.

The questions involved in the reconciliation interview were the following:

Section 1.	**Background Variables**	
Q. 102	Residence	
Qs. 103-105	Type of area while growing up	
Qs. 106-107	Year of birth or age (only if difference is more than two years)	
Qs. 110-111	School attendance of the type of schooling completed	
Q. 118	Language spoken at home	
Section 2.	**Marriage History**	
Q. 201	Current marital status	
Q. 203	Year of marriage (only if difference is more than two years)	
Q. 206	Currently living with husband	
Qs. 211-212	Number of times married	
Section 3.	**Maternity History**	
Qs. 301-312	Questions to establish number of children	
Qs. 318-319	Questions to establish number of multiple births	
Qs. 322-325	Questions to establish number of abortions	
Qs. 326-334	Pregnancy History:	
	Q. 328	Sex of child
	Qs. 329-332	Questions to establish date of birth (only if difference is more than two years)
	Q. 333	Question about live status of child
	Q. 334	Date of death (only if difference is more than two years)
Section 5.	**Fertility Regulation**	
Q. 505 or 507	Want to have (more) children	
Q. 506 or 508	Sex preference for (first, next) child	
Q. 599	Number of children wanted	

1.3.4 THE SAMPLE

The Indonesia Fertility Survey was based on a probability sample of noninstitutional households resulting in individual interviews with ever-married women between the ages of 10 and 49 years. In the 10,504 households selected, 9,136 eligible respondents were found and interviewed in detail.

The sample for the IRS was a sub-sample of the main survey. It had been decided that the number of interviews should be evenly spread over the six provinces covered in the IFS. The total sample size was determined at approximately 500 respondents, on the basis of the available time and man-power. Except for Jakarta, which is wholly urban, the sample was evenly distributed over urban and rural areas in each province. Because the size of the urban and rural clusters differ, different numbers of clusters were selected for rural and urban areas.

In each province the required number of clusters was selected purposively from those selected for the IFS. Special care was taken to select clusters that were "typical" for the urban and rural population of the province. In each selected cluster all of the respondents successfully interviewed in the IFS were included for the IRS interview. Therefore, the sample of the IRS is not a probability sample but is well spread among the provinces and the urban and rural areas.

TABLE 1

NUMBER OF SELECTED CLUSTERS AND RESPONDENTS BY PROVINCE

Province	Total No. of Clusters	Urban	Rural	Total No. of Respondents Selected
Jakarta	5	5	*	91
West Java	5	3	2	87
Central Java	5	3	2	87
Yogyakarta	5	3	2	77
East Java	5	3	2	87
Bali	5	3	2	103
Total	30	20	10	532

* Jakarta has no rural areas.

1.4 THE FIELD WORK

1.4.1 ORGANIZATION OF FIELD WORK

The field organization of the reliability study was the same as that of the IFS. However, a number of senior staff from the Statistical Office who had already participated in the IFS were involved full time in the reliability study (See Appendix II). Supervisors, interviewers and coders were selected by the Provincial Statistical Officers; all of those chosen had had previous experience as they had participated in the Indonesia Fertility Survey. There were no selection criteria laid down as it was not thought to be in the interests of the study to select those interviewers who had been best at their work. The selection depended on who was available for work during the period required. The six provincial teams each consisted of a minimum of:

1 Supervisor
1 Coder-Editor
4 Interviewers (minimum)

Depending on the available personnel, the numbers in the different teams varied considerably (See Appendix II). The headquarters staff and a member of the WFS staff had a one-day meeting in Jakarta prior to the start of the study at which training and organization of the field work were discussed. Since all participants in the study were familiar with the questionnaire, it was decided that a one-day retraining session would suffice for both supervisors and interviewers. The coders used in the field work had no previous experience, and therefore it was decided to give them extra training during the first day in the field.

In all six provinces the pattern of training was the same:

1) Description of objectives of the study;
2) Review of the shortened questionnaire;
3) Description of control documents;
4) Establishment of re-interview criteria;

5) Procedures for the reconciliation interview: special problems, probing;
6) Field organization; and
7) Training of coders.

The training was carried out by the headquarters staff member assigned to the respective province. He was assisted in the arrangements of field logistics by the Provincial Statistical Officer.

1.4.2 FIELD PROCEDURES

The Indonesia Reliability Study was carried out from August to September 1976. The following table gives dates of the two interviews for each province.

TABLE 2

MONTHS IN WHICH THE FIELD WORK OF THE IFS AND THE IRS WAS CARRIED OUT

Province	Indonesia Fertility Survey 1976	Indonesia Reliability Study 1976	Interval Between IFS and IRS: Months
Central Java	April	August	4
West Java	April	August	4
East Java	May	August	3
Jakarta	May	August-Sept.	3½
Yogyakarta	March-Aug.	August	4½
Bali	April	August	4

The field procedures for the reliability study resembled as closely as possible those for the IFS. After the re-interview, the data collected were transcribed onto coding sheets and the discrepancies noted and entered in the Reconciliation Interview Sheet by the HQ staff or the supervisor. The question numbers which required re-interviews were entered on this. Where a whole section required a re-interview this was noted under the question number column, e.g., 'Re-do Section 2'. In this case, a blank copy of the relevant section of the questionnaire was issued to the reconciliation interviewer. An explanation for the discrepancies was entered in the remarks column. See page ten for a specimen Reconciliation Interview Sheet.
Although originally it was planned that only supervisors should carry out the reconciliation interview, this was not possible because of the great number of re-interviews requiring reconciliation. Interviewers had to be used for the reconciliation interviews, but strict control ensured that the same interviewer did not conduct both the re-interview and the reconciliation interview with a respondent. The results of the reconciliation interview were entered onto the coding sheets. Initially, it was hoped to tape-record approximately 30 re-interviews and 30 reconciliation interviews. However, owing to difficulties with transcription of tapes and their translation into English, it was decided to restrict the tape recording to reconciliation interviews only. Field work was successfully completed in early September 1976. Table 3 gives the dates of the different phases of the reliability study.

TABLE 3

DATES OF MAIN ACTIVITIES OF THE IRS, BY PROVINCE

Province	Training	Field Work Started	Field Work Finished
East Java	August 9	August 9	August 12
Central Java	August 21	August 21	August 28
West Java	August 12	August 13	August 19
Yogyakarta	August 19	August 20	August 23
Bali	August 26	August 27	August 31
Jakarta	August 16	August 16	September 4

1.4.3 SAMPLE OUTCOME

Of the 532 respondents selected for re-interview, 498[2] gave a complete re-interview. The response rate of 94 per cent is very high for this kind of study. The respondents had been interviewed at least twice already in the preceding six months. The non-response was caused mainly by temporary migration (23 respondents had moved away looking for employment elsewhere) and absence due to visits to relatives (7 cases). Three respondents refused to be interviewed: two refused the re-interview and one refused the reconciliation interview. One could not be located by the re-interview team.
The results of the field work are shown in Table 4.

[2] In the analysis 497 cases were used, since the tape sent to London contained only 497 cases.

TABLE 4

SAMPLE OUTCOME OF THE IRS, BY PROVINCE

Province	No. of Households selected for IFS	No. of Women successfully interviewed in IFS	No. of Women successfully interviewed in IRS	No. of IRS Non-Responses	No. of IRS Refusals	No. of Women with whom a reconciliation interview was held
East Java	109	87	85	2	0	48
Central Java	109	87	82	5	0	71
West Java	100	87	80	6	1	70
Yogyakarta	107	77	75	1	1	37
Bali	110	103	95	8	0	63
Jakarta	100	91	81	9	1	38
Totals	635	532	498	31	3	327

SPECIMEN RECONCILIATION SHEET

INDONESIA RELIABILITY STUDY
DAFTAR REKAPITULASI WAWANCARA.

30522
R2 = 052
R_3 = 054

NAMA PENCACAH : Sri Nirbito

PROPINSI : JAWA TIMUR

Nomor Pertanyaan	R_1	R_2	R_3	KETERANGAN
107	36	42	40	Estimate interviewer Interviewer estimation
203	54	DK	54	Surat Kawin ([illegible], Surat Kawin) Based on marr. certificate
204		18	19	[illegible] Setelah ada surat kawin, dihitung oleh pencacah after seeing the birth certificate than calculated by interv[illegible]
302	4	3	4	Satu Responden salah menyebutkan / salah menyebutkan. ~~Respondent~~ wrong answered of 1, R.
312	10	9	10	Yang benar 10 orang, karena [illegible] the right is 10 person based on birth certificate
CHECK COMPLETE PREGNANCY HISTORY				

1.5 DATA PREPARATION AND DATA PROCESSING

1.5.1 DATA PREPARATION

As has been mentioned earlier (p. 7) the data for the interviews that were to be used in the reliability study were transcribed onto the specially designed coding-sheets in Jakarta. Before the coding sheets were sent to the field they were verified by the coding-supervisors. In the field after the re-interview was obtained the results were coded immediately on the coding-sheets, and the coding was verified by the supervisor. If a reconciliation interview was required, the results of this third interview were also entered on to the same coding-sheet, and verified.

In Jakarta after the field work, headquarters staff who had been involved in the field operations checked the coding of the re-interview and the reconciliation interview. A number of coding errors were found and corrected. Unfortunately, the coding of the original interview was not verified again after the field work.

After checking for coding errors, the data were punched and verified, province by province, at the Data Processing Division of the Central Bureau of Statistics. Listings were obtained for each province. A sorted ICL tape was prepared and sent together with the Supervisors' Reconciliation Sheets to London for analysis.

1.5.2 DATA PROCESSING

The data were to be used without subjecting them to office editing. However, on examination of the listing of the sorted tape, it was discovered that some further editing was needed because of mispunching. The stages of data processing for the analysis were thus editing, recoding, tabulation and calculation of a consistency index. Details of the first three stages are given in Appendix III.

2 Measuring Reliability

2.1 INTRODUCTION

This chapter gives a brief methodological discussion on the concept and measurement of reliability. The use of reconciliation of discrepant results is discussed. Some indices of agreement, and a particular index of consistency are presented.

2.2 THE CONCEPT OF RELIABILITY

In general terms, reliability can be defined as "the extent to which a measurement remains constant as it is repeated under conditions taken to be constant".[3] From this definition it becomes clear that when analysing reliability the individual measurements must be considered; that is, if the measurement is reliable the distribution over the different categories of the variable studied will also be constant. However, constancy does not guarantee reliability. In social surveys, measuring reliability adequately is further complicated by the fact that the respondent may recall her previous response, and may simply repeat this. This effect cannot be eliminated in social surveys, but is partly dealt with in the design of the reliability study.

The above description of reliability is based on two crucial assumptions: constancy of the phenomena and constancy of conditions. In general for surveys constancy of the phenomena is assumed, or taken into consideration, when designing an instrument (in this case, a questionnaire). Constancy of conditions is difficult to achieve because many conditions affecting the execution of a survey cannot be controlled by the researcher. Nevertheless, some conditions can be influenced by the researcher. These are the proper organization of the field work, adequate training of the field staff, and appropriate field and survey documents and procedures.

2.3 MEASURING RELIABILITY

To measure the reliability of an instrument at least two independent readings must be obtained. In survey practice, one replication is considered sufficient. When the same respondent is interviewed twice, and consistent answers are obtained, then the answers are considered, for lack of other criteria, to be reliable. Consistency is taken as an indication of reliability.

The consistency of the data can be studied best from a table in which the results of the two interviews are cross-tabulated. By examination it can be determined how many units are classified differently in each category, and the patterns of shifts, if any, can be detected. To obtain an indication of the reliability of the instrument, in social surveys reliability of each question is considered. Summary measures have been developed, some of which take into consideration the level of measurement of the variable involved.

Generally, if the same respondent is re-interviewed after some time and different answers are recorded, then this can be explained by one of the following:

1) Change in situation

The respondent gives a different answer because the objective situation has changed. The variable measured may be time-dependent: for example, if there is a question on age in completed years, and if the re-interview takes place two months after the original interview, then approximately one sixth of the respondents should declare their age as one year older than in the original interview. Also, a variable may be subject to other legitimate changes; for example, if there is a question on number of children at home, and if a child has been away at the time of the original interview, but has returned home before the re-interview, then the number of children at home will be different by one. These different answers are not real discrepancies, but reflect the changing situation. For the analysis of the reliability of the data they have to be taken into consideration to allow proper interpretation of the results.

2) Change of attitude or opinion

The respondent gives a different answer because she has changed her attitude or opinion about a certain topic; for example, the respondent may for some reason change her opinion about the ideal number of children, or she may change her attitude towards a family planning programme. Also there are cases of different age or date estimates in societies where dates are generally not correctly known. Although the difference in response can be legitimate, the fact that a number of questions refer to topics that are unstable should be of concern to the survey designer and the survey data user. If data are unstable – that is, subject to unpredictable or frequent changes – the results of a survey are of limited value as they reflect a chance situation at a specific time. Thus, if the data are too time-specific they are of limited value for long-term use. The survey designer and the survey analyst will therefore, other things being equal, prefer questions that are not susceptible to (easy) change of mind on the part of the respondent.

3) Errors

A different answer is recorded because an error is made. The error may be committed by the respondent or the interviewer. It may or may not be caused by a faulty design in the questionnaire. Even if the questionnaire is properly designed it is possible that the interviewer will commit errors. This can be remedied partly by better training and it is, therefore, important for the survey designer to know whether some errors are attributable to interviewers. Even when the interviewer is properly trained, errors may be made by the respondent, either because the respondent does not know the correct answer and guesses, or because the respondent deliberately gives a wrong answer. Errors caused by the respondent are of concern to both the survey designer and the data user. Improvements in questioning techniques, better probing, and the like, can partly reduce this form of error. It is, therefore, important to know not only the nature of the error but also why it occurred.

2.4 USE OF THE RECONCILIATION INTERVIEW

To obtain an indication about the nature and source of the discrepancies, reconciliation of discrepant answers is needed. If discrepant results are found when a respondent is

---

[3] Kaplan, A., *The Conduct of Inquiry, Methodology for Behavioural Science*, San Francisco (Chandler), 1964, p. 200.

interviewed twice, and legitimate changes in the situation have been accounted for, it is assumed that either the respondent has changed her opinion or an error has been committed. To clarify this, a reconciliation interview is carried out in which the respondent is confronted with the two discrepant results and an attempt is made to establish whether the respondent has changed her opinion or whether a mistake was made. Because reconciliation interviews are often conducted by better qualified interviewers, it is sometimes assumed that a correct answer is obtained in the reconciliation interview in the sense that it is (closer to) the true value of the characteristic measured. If this assumption is accepted then by comparing the results of the original interview with those of the reconciliation interview, an indication of the response bias can be obtained. In the present study the results of the reconciliation interview are used mainly to establish the nature and source of the discrepancy, and not to measure response bias.

2.5 INDICES OF RELIABILITY

Different summary measures have been considered for indicating the consistency of the results of the two interviews. Some of these measures or indices take into consideration the level of measurement of the variable involved; thus, there are indices for attributes and unordered categorized data, and for ordered categorized and metric variables.

For the following discussion the notation, defined below, is used:

n_{ij} , $i,j = 1, \ldots, L$ is the data matrix,

$n_{i.} = \sum_{j=1}^{L} n_{ij}$ is the ith row sum,

$n_{.j} = \sum_{i=1}^{L} n_{ij}$ is the jth column sum,

$n = \sum_{i=1}^{L} \sum_{j=1}^{L} n_{ij}$ is the total number of elements.

It is desirable to have a single index of reliability which would allow the assessment and comparison of reliability of questions. However, this is not possible for reasons which will be clarified below.

Inconsistencies between answers in the two interviews are reflected by non-zero counts n_{ij} off the diagonal of the data matrix, that is, with $i \neq j$. This in turn may lead to differences in the marginal distribution of counts for the two questions, $\{n_{i.},\ i = 1, \ldots, L\}$ and $\{n_{.j},\ j = 1, \ldots, L\}$.

However, the attainment of identical marginal distributions of counts does not imply consistency, since this can be achieved, for example, by one or more respondents switching from category i to category j and an equal number switching from category j to category i.

The indices of reliability considered here do not measure changes in the marginal distribution. That is, they assume that conditions at the interview and re-interview are constant, and there is no shift in the distribution of responses between interviewers. This assumption is sometimes called marginal homogeneity, and can be verified by comparing the observed margins of the table.

A simple and natural measure of reliability is the *index of crude agreement:*

$$P_c = \sum_{i=1}^{L} n_{ii}/n \qquad (1)$$

which represents the proportion of correctly classified units. Although this index has considerable descriptive value, there are two reasons why it is not suitable as a single analytic measure of reliability. The first is that no allowance is made for the fact that some units will be classified correctly by chance even if there is no association between the two responses. This proportion of agreement "expected by chance" depends on the marginal distribution of the variable under study. For example, the following two tables give the expected number classified correctly out of 100 units, for two marginal distributions, (90, 10) and (50, 50):

81	9	90
9	1	10
90	10	

25	25	50
25	25	50
50	50	

The first table gives $P_c = 0.82$ and the second table gives $P_c = 0.50$, although in both cases there is no association between the two measures, and so the reliability is effectively zero.

One way of overcoming this deficiency is to define an index of the form:

$$1 - \frac{\text{observed disagreement}}{\text{expected disagreement}} = 1 - \frac{(1-P_o)}{(1-P_e)} = \frac{P_o - P_e}{1-P_e}, \qquad (2)$$

where P_o = sum of observed proportions reflecting agreement, P_e = sum of expected proportions reflecting agreement. One such measure is Kappa defined as:

$$\hat{K} = 1 - \frac{\sum_{i \neq j} n_{ij}}{\frac{1}{n} \sum_{i \neq j} n_{i.}\, n_{.j}} = \frac{\sum_{i=1}^{L} \frac{n_{ii}}{n} - \sum_{i=1}^{L} \frac{n_{i.}}{n} \frac{n_{.i}}{n}}{1 - \sum_{i=1}^{L} \frac{n_{i.}}{n} \frac{n_{.i}}{n}} \qquad (3)$$

Both the tables above yield $\hat{K}=0$, as required.

This adjustment does not answer the second weakness of the index of crude agreement as a measure of reliability, namely, that for ordinal or metric variables the index does not take into account the distance between categories, that is, the magnitude of disagreement. A related problem is that for variables such as age at marriage the value of P_c or $\hat{K}$ is highly sensitive to the choice of grouping of the variable. For comparative purposes it is useful to have an index which is not sensitive to the choice of grouping.

This leads to a generalization of Kappa to a weighted form $\hat{K}_w$, which is given by:

$$\hat{K}_w = \frac{P_o^* - P_e^*}{1 - P_e^*}, \qquad (4)$$

where $P_o^* = \frac{1}{n} \sum_{i=1}^{L} \sum_{j=1}^{L} w_{ij}\, n_{ij}$

and $P_e^* = \frac{1}{n} \sum_{i=1}^{L} \sum_{j=1}^{L} w_{ij}\, n_{i.}\, n_{.j}$ (5)

Landis and Koch[4] discuss a number of choices of weights. The unweighted Kappa (3) clearly corresponds to the weights:

$$w_{ij} = 1, \text{ for } i = j$$
$$= 0, \text{ otherwise}$$

For ordered categorized data, Cichetti has suggested using weights of the form:

$$w_{ij} = 1 - \frac{|i - j|}{L - 1} \qquad (6)$$

For metric variables a suitable form of the weights is:

$$w_{ij} = 1 - (i - j)^2 \qquad (7)$$

To facilitate the analysis an interactive program was written to calculate consistency indices. In the program, six options are available. The first three options are for $\hat{K}_w$ using the basic form as given in (2) and the weighted form (4) with weights as defined in (6) and (7) for ordered categorized data and variables respectively. The fourth option was an adaptation of the unweighted form (3) and developed especially for dates and age data. In age and date reporting an error margin of two years was considered acceptable, "agreement" was defined if the difference between the two interviews was two years or less. The weights were defined as follows:

$$w_{ij} = 1, \text{ if } |i - j| \leq 2 \qquad (8)$$
$$= 0, \text{ otherwise.}$$

For completeness the variances of $\hat{K}_w$ for the four options were also calculated. Option 5 and 6 are the calculations of the product-moment correlation and the intraclass correlation coefficient respectively.
This program is written in FORTRAN and is easily adaptable to all interactive systems. There are built-in checks on the consistency of input data. Nevertheless, when large tables are to be analysed the input process is tedious and prone to error. Thus, a non-interactive program was also written which uses data from two interviews, composes a table, calculates and prints out all six options.

2.6 CONSISTENCY INDEX USED

Weighted Kappa with weights given by (7), $w_{ij} = 1-(i-j)^2$ has the following properties[5]

a) For a 2 x 2 table it is identical to the unweighted Kappa.

b) For metric variables with identical observed margins, it is exactly equal to the product-moment correlation coefficient calculated on the integer-valued categories.

c) If it is assumed that the observer effect is random, weighted Kappa is asymptotically equal to the intraclass correlation coefficient.[6]

This weighted Kappa is suitable for metric variables. In this report only binary or metric variables are concerned. Hence, there are no tables with more than two categories with no ordering among the categories and so weighted Kappa – using weights as given by (7) – is used for all variables considered.
In view of the relation with the intraclass correlation coefficient, for metric variables, weighted Kappa has the following important interpretation: it reflects the proportion of the total variance which is due to the inherent variance attributable to differences between subjects; the remaining proportion being attributable to within subject response variance.
To summarize, it is proposed that the following two measures be used:

1) The crude index of agreement, P_c, which is a simple descriptive measure.
2) The weighted Kappa (4) with weights given by (7), which has the analytic property just mentioned.

Both measures are insensitive to the sample size n, although clearly their sampling error decreases as n increases. For metric variables the product-moment correlation and the intraclass correlation coefficient were also calculated; however, in all cases these were both very similar to the Kappa, as predicted by the properties given above. Hence, they are only given in one table (Table 7) to show the high degree of similarity and not elsewhere in the text.

---

[4] Landis J.R. and Koch G.G., "A Review of Statistical Methods in the Analysis of Data Arising from Observer Reliability Studies". In: *Statistica Neerlandica*, vol. 29, 1976; pp. 101-123, and pp. 151-161.
[5] Landis J.R. and Koch G.G., op. cit., p. 154.
[6] Fleiss, J.L. and Cohen, "The Equivalance of Weighted Kappa and the Intraclass Correlation Coefficients as Measures of Reliability". In: *Education and Psychological Measurement*, vol. 33, 1973, pp. 613-619.

3 Analysis

3.1 INTRODUCTION

This reliability study is limited to evaluating the consistency of answers and indicating the nature and the sources of discrepancies. The study cannot explain precisely why particular types of mis-reporting take place.
Two factors which can influence the answers obtained in the second interview complicate the analysis of reliability studies:

1) The interviewers have had more training; those selected may simply be better than those who carried out the first interview, and by being more experienced they are better equipped to deal with difficult situations.

2) In the second interview the respondents may have learned how to behave in an interview situation, or the first interview may have acted as a memory activator and the respondents may then provide better or more accurate information.

In this study, the effect of these factors cannot be taken into consideration when analyzing the results because the study was not designed to allow this.
Attempts were made to ensure that the field work conditions of the reliability study resembled those of the main survey, but there are indications that the quality of the field force in the reliability study was better. Interviewers from the main survey were selected to participate in this study and were, therefore, experienced; the supervisory staff were also of better quality.
Also, it is possible that the interviewers of the IRS were more careful when probing was required because the questionnaire used in the IRS was shorter than the one used in the IFS. There is therefore an expectation that the results of the reliability study will be somewhat better than those of the main survey but this hypothesis can be only partially tested by using the results of the reconciliation interviews.
When inconsistent answers are reconciled, the results show that the data of the reconciliation interview more often agree with those of the re-interview than with those of the original interview. The impression is that the results of the re-interview are better than those of the original interview. Perhaps the interviewers were more careful while probing and made more use of supplementary information. However, it is also possible that the results of the re-interview and the reconciliation interview more often coincide because they were held mostly on the same day or the next day, and that the respondents tended to recall and repeat their most recent response.
The results of the reconciliation interview will not be used in the measurement of the consistency of the responses; they will, however, be used to indicate the nature and the source of the discrepancies. Moreover, when a particular variable is used as a control (see for example, Table 10) the value of the variable reported in the reconciliation interview is taken as a basis for evaluating inconsistent responses. In order to facilitate analysis and interpretation of the results, the questions[7] are divided into two broad categories: factual data (which are divided into sub-groups according to their content), and attitudes and opinions.
The results will be presented for the following groups and sub-groups:

Factual Data

Background Data

1) Questions 102 (104), 110, 111, 113, 116 and 117 concern the respondent's residence, level of education attained, and literacy status. It is unlikely that these details will change between interviews.

2) Questions 201, 206 and 211, concern the respondent's marital status, whether she is living with her husband, and whether she was married more than once. These details can be subject to change.

Fertility and Related Questions

1) Questions 301, 303, 305, 307 and 310 are used only to introduce the questions in sub-group 2) below about the number of living and live-born children.

2) Questions 302, 304, 306, 308, 309, 311 and 312 are used to obtain data about the number of live-born children.

Ages and Dates

1) Questions 106, 107 and 108 refer to age and date of birth of the respondent.

2) Questions 203, 204 and 205 refer to age at, and date of current marriage of the respondent. Questions 213, 214 and 215 refer to the same data for the first marriage.

3) Questions 329, 330 and 331 refer to the date of the first live birth, or how long ago it occurred.

Attitudes and opinions

Questions 103, 503 and 599 refer to classification of childhood residence, perceived fecundability, and desired number of children.

The analysis will consist of a comparison of the data obtained in the original interview and the re-interview. For some questions, there can be legitimate differences between answers obtained in the two interviews. The fertility data, age data and data on marital status and situation could change legitimately in the period between the interviews. The fertility data have all been corrected to represent the situation at the first interview, i.e., the interview of the Indonesia Fertility Survey. Age and date did not require adjustments because in both interviews and in the analysis, 1 January 1976 was used as the reference point. The data on marital status and situation could not be corrected to represent the situation at the original interview. As has been stated earlier (p. 7), discrepancies in the background variables were not always reconciled. For each question the number and percentage of discrepancies (based on the relevant sample size) will be presented. This first crude measure of reliability gives the reader an idea of the overall reliability of the data. The discrepancies are by no means all errors: some will represent a change in opinion or attitude;

[7] For more details of the questions see the questionnaire reproduced in Appendix I.

but some will indeed be caused by errors committed by either the respondent or the interviewer.

Some questions are inter-related and a discrepancy in a particular question (e.g., if a different skip pattern is followed) will influence the number of discrepancies in subsequent questions. It is not possible to determine exactly the sub-sample for which the particular question is relevant, for these types of questions. The sub-sample of respondents who have given substantive answers in both interviews is taken, thus excluding the Not Applicable cases. This procedure gives an indication of the reliability of the substantive responses, and these data are used in the analysis.

An analytical index of consistency is calculated and presented for each question. Weighted Kappa[8] has been calculated and presented for all questions, except when otherwise stated.

In Appendix IV, detailed tables showing the results of the two interviews are presented for the majority of the questions treated in this analysis.

In the case of questions related to fertility, age and dates, the results of the reconciliation interview are always available. As previously stated, due to time limitations the reconciliation interview was not always carried out for the other questions. Therefore, the results of the reconciliation interview will be used systematically only for the above-mentioned questions. If, for other questions, the reasons for the discrepancies are available, then in some cases, these will be used.

3.2 ANALYSIS OF BACKGROUND DATA

Factual data, and especially the background data, can be considered stable as they tend not to be subject to change. Marital status and situation are, of course, more changeable. It becomes clear from Table 5, that for these supposedly stable questions a wide range of discrepancies was found. The percentage of inconsistent answers ranges from 1.60 per cent (Q.206) to 12.93 per cent (Q.113).

Q.102: "Have you always lived in (Place of Interview)? ", which seems a straightforward question, has about 9 per cent inconsistent answers. It seems that some respondents misunderstood the term "always" in the question.

The results of the reconciliation interview are available for some of the respondents who gave inconsistent data.

For Question 102, "Have you always lived in (Place of Interview)? ", some respondents stated that they took it to mean "since they were married". As the questionnaire was not printed in all the Indonesian languages or dialects, it is not possible to establish whether this misunderstanding was due to the interviewer's interpretation of the Bahasa Indonesia text.

In Question 110, "Have you ever attended school? ", out of 16 discrepancies a reconciliation interview was done for eight. In five of these cases the respondent misunderstood the question, and in four of these five she said she had attended for only a few months and did not think it counted. In two other cases the respondent admitted having given wrong information: the reason was that she was embarrassed to admit she had had no schooling. In one case the question was answered by the husband in the original interview, while at the re-interview the woman answered.

For Question 111, "What was the highest level of school you attended — primary, junior high, senior high, academy or university? ", there were 32 respondents with discrepant answers; information for 22 of these was available from the reconciliation interview:

In 12 cases the interviewer apparently misclassified the information given by the respondent.

In 4 cases the respondent attended only a religious school.

---

[8] Using weights $w_{ij} = 1 - (i-j)^2$

TABLE 5

DISCREPANCIES BETWEEN THE ORIGINAL INTERVIEW AND THE RE-INTERVIEW, AND VALUES OF WEIGHTED KAPPA FOR BACKGROUND VARIABLES

Question Number	Question	Percentage of Discrepancies	Number of Cases	Consistency Index $\hat{K}_w$
102	Have you always lived in .....? (Place name)	9.49	495	0.9101
110	Have you ever attended school?	3.23	495	0.9281
111	What was the highest level of school you attended — primary, junior high, senior high, academy or university?	10.06	318	0.9314*
113	Did you graduate from (HIGHEST LEVEL ATTENDED)?	12.93	317	0.7192
116	Can you read, in any language, say a simple letter?	9.23	314	0.8137
117	Can you write, in any language, say a simple letter?	9.38	128	0.4051
201	Are you married, widowed, divorced or separated?	2.41	495	0.8481
206	Does your husband live in this household?	1.60	436	0.5252
211	Have you been married more than once?	4.98	442	0.8453

* Treated as a grouped metric variable.

In 4 cases the respondent admitted to having given wrong information.
In one case the respondent claimed the interviewer had wrongly classified the information.
In another case the respondent admitted to having misunderstood the question.

Of the 32 discrepancies, in 18 cases primary school was confused with junior high school.
For Question 113, "Did you graduate from (HIGHEST LEVEL ATTENDED)? ", information was available from the reconciliation interview for 23 cases out of 41 cases with discrepancies:

In 9 cases the respondent had attended but not graduated from that level.
In 6 cases the respondent gave incorrect information.
In 4 cases the respondent claimed to have misunderstood the question.
In 3 cases the respondents claimed that their answers had been wrongly recorded by the interviewer.
In another case the question was answered by the husband in the original interview.

The series of questions concerning marital status, and whether the respondent was currently living with the husband (201, 206 and 211), showed, in general, a low number of discrepancies; the range is from 1.60 per cent (Q.206) to 4.98 per cent (Q.211).
The percentage of inconsistencies for the data on marital status and situation is lower than that for the questions about residence and educational achievement. This is a somewhat surprising result because the former questions are subject to legitimate changes and can also be considered intimate questions that can cause embarrassment to the respondent. It is possible that the interviewers were more careful when they asked these supposedly embarrassing questions. Also, because the questions were embarrassing it is possible that the respondents remembered the answers they gave in the original interview.
For Question 201, "Are you now married, widowed, divorced or separated? ", of 13 cases with discrepant results, information from the reconciliation interview is available for 9:

One respondent had re-married since the original interview; another was divorced since the original interview.
One respondent did not know whether she was widowed or separated.
In 5 cases the respondent misunderstood the question or gave wrong information: three respondents were divorced and not widowed, one was separated and not divorced, and another was separated and not married.
In one case the respondent claimed that the interviewer wrongly recorded the information.

The first two cases are, of course, not real discrepancies because the different answers were reflecting a change in the situation of the respondents. Since not all discrepancies were dealt with in the reconciliation interview, it is not possible to correct the number of discrepancies for legitimate changes in answers to these questions.
Given the results for the background variables, one can conclude that these questions yield relatively consistent results, and hence the data seem to be reasonably reliable.

3.3 ANALYSIS OF FERTILITY DATA

3.3.1 GENERAL ANALYSIS

In the Indonesia Fertility Survey, the WFS recommended procedures were followed. Special attention was paid to the way in which the fertility data were obtained. To obtain the total number of live births, the respondent was asked if she had given birth to any boys who were living with her

TABLE 6

PERCENTAGE OF DISCREPANCIES BETWEEN THE ORIGINAL INTERVIEW AND THE RELIABILITY STUDY AND VALUES OF WEIGHTED KAPPA FOR FERTILITY DATA

Question Number	Question	Percentage of Discrepancies	Consistency Index $\hat{K}_w$
301	Do you have any sons you have given birth to now living with you?	2.21	0.9472
303	Do you have any sons you have given birth to who do not live with you?	3.42	0.8328
305	Do you have any daughters you have given birth to now living with you?	1.21	0.9716
307	Do you have any daughters you have given birth to who do not live with you?	2.62	0.9007
310	Have you ever given birth to any boy or girl who later died, even if the child lived only a short time, maybe a few hours, a few days, or a few months?	5.23	0.8806
302	How many (of your sons) live with you?	5.84	0.9764
304	How many (of your sons) do not live with you?	4.22	0.8660
306	How many (of your daughters) live with you?	6.04	0.9812
308	How many (of your daughters) do not live with you?	4.43	0.9337
309	Total number of living children	3.22	0.9940
311	How many (of your children) have died in all?	7.85	0.8977
312	Total number of live births.	9.62	0.9836

and to any boys living somewhere else. The same procedure was repeated for girls. By using this procedure the possibility of omission either by sex or because the child was living elsewhere was minimized. After each introductory question the respondent was asked to give the number of children in each category and then, by adding up these answers the total number of living children was obtained. The number of deceased children was obtained in the same way and finally, by adding up these two totals, the grand total, number of live births, for the respondent was obtained; this was then verified with the respondent (See Section 3 of Appendix I, for details in the questionnaire).

The questions in this sub-group can be classified into two groups: the introductory questions (301, 303, 305, 307 and 310) which only detect whether or not the respondent has, or had, children of a particular category; and the questions (302, 304, 306, 308, 309, 311 and 312) which give the number of children in each category. A reconciliation interview was always held for any discrepancies on these questions. A number of discrepancies could be explained by legitimate changes: for example, a child could have been away at the time of the original interview but had returned by the re-interview; or a child was born in the interval between the two interviews. These cases were not counted as discrepancies and the data have been adjusted to reflect the situation at the time of the original interview. The remaining discrepancies are thus a result of differently reported numbers, possibly due to errors committed either by the respondent or the interviewers.

As shown in Table 6, the percentage of discrepancies varies from 1.21 per cent (Q.305) to 5.23 per cent (Q.310) for the introductory questions, whereas for the questions reporting numbers the range of percentages is from 3.22 per cent (Q.309) to 9.62 per cent (Q.312). For both sets of questions the values of the consistency index are high, indicating that the data produced by these questions are consistent and reliable. (See also Table 7).

The conclusions that can be drawn from these data are not surprising:

1) The questions about children of either sex living at home produce more consistent results than those about children who are not living with the respondent. This is the case both for the introductory questions and the questions obtaining the numbers.

2) Question 311, about the number of dead children, yields less consistent results than the questions about the number of children at home, but has the same level of consistency as the questions about the number of children away from home.

3) Question 309, which produces the total number of living children, has a higher level of consistency than Question 311 which yields the number of dead children.

4) In addition, the level of consistency of Question 312, which gives the number of live births, is lower than that of Question 309, about the number of living children, and is similar to that of question 311 about the number of children who died.

For these questions, if discrepancies were found between original interview and the reliability study a reconciliation interview was always carried out and as far as possible the reasons for the discrepancies were established. As mentioned above the data had been corrected for legitimate changes, and hence the discrepancies found can only be explained by other factors, i.e., errors committed by the respondent or the interviewer.

The interviewers of the reconciliation interview knew that discrepant results had been obtained and it was their task to clarify the discrepancy. Moreover, the reconciliation interview was generally carried out by the supervisors. Therefore, the results of the reconciliation interview can be taken to be closer to the true situation and it seems reasonable to accept them as criteria for the assessment of validity. However, the reconciliation interview is not infallible and there also remains the problem mentioned earlier (p.14) that the correspondence between the results of the re-interview and the reconciliation interview may be due to the fact that the interval between the two interviews was very short (often less than one day). The data will not be used to evaluate the quality of the original interview against the re-interview. However, they will be used to gain insight into the nature of the discrepancies.

To illustrate the reasons for the discrepancies, the results of Question 310 (the introductory question for the number of dead children) will be given, followed by an extensive treatment of the discrepancies and errors of Question 312 (the total number of live births).

For the question on whether the respondent had had a dead

TABLE 7

VALUES OF WEIGHTED KAPPA, THE PRODUCT-MOMENT CORRELATION (r) AND THE INTRACLASS CORRELATION (r_i) FOR FERTILITY DATA

Question Number	Questions	Values of:		
		$\hat{K}_w$	r	r_i
302	How many (of your sons) live with you?	0.9764	0.9766	0.9764
304	How many (of your sons) do not live with you?	0.8660	0.8673	0.8660
306	How many (of your daughters) live with you?	0.9812	0.9815	0.9812
308	How many (of your daughters) do not live with you?	0.9337	0.9350	0.9337
309	Total number of living children	0.9940	0.9941	0.9940
311	How many (of your children) have died in all?	0.8977	0.8982	0.8977
312	Total number of live births	0.9836	0.9836	0.9836

child (Q.310) 26 discrepancies were found and covered in the reconciliation interview. After the reconciliation interview, it was discovered that in 14 cases a mistake had been made during the original interview, either by the respondent or by the interviewer and in 12 cases an error was made during the re-interview.

TABLE 8

ERRORS IN PARITY REPORTING IN THE ORIGINAL INTERVIEW AND THE RE-INTERVIEW, ASSESSED AGAINST THE RECONCILIATION INTERVIEW AS CRITERION, WITH REASONS FOR THE DISCREPANCY

Errors of over-counting		Errors of under-counting	
(1) Error in original interview		(1) Error in original interview	
3 miscarriages or still-births counted as live birth		13 dead children omitted by respondent	
4 stepchildren counted as live birth		2 dead children omitted by interviewer	
3 adopted children counted as live birth		4 live children omitted by respondent due to absence.	
		1 live child omitted by respondent: child of first husband	
		1 live child omitted: unexplained interviewer's error.	
		1 live child omitted: no information	
(2) Error in re-interview		(2) Error in re-interview	
1 still-birth counted as live birth.		8 dead children omitted by respondent	
		4 dead children omitted by interviewer.	
		1 live child omitted due to absence.	
Total over-counting errors		**Total under-counting errors**	
In original interview	10	In original interview	22
In re-interview	1	In re-interview	13
	11		35

The 14 mistakes of the original interview can be classified as follows:

1 case: the dead child was not a live birth, but an adopted child.
1 case: the dead child was not mentioned because it was from the first husband.
1 case: the respondent reported a miscarriage as a live birth.
2 cases: interviewer's error; she misrecorded the number mentioned by the respondent.
9 cases: the respondent omitted her dead children.

The classification of the 12 cases in which mistakes were made during the re-interview is as follows:

1 case: the respondent was afraid to mention she had had a dead child.
2 cases: the respondent misunderstood the question.
2 cases: the respondent admitted she forgot the dead children.
7 cases: without specification.

For the question on the total number of live births (Q.312) 46 discrepancies were found of which 32 were errors committed during the original interview and 14 were errors in the re-interview.

As can be observed in Table 8, the errors are caused mainly by the omission of dead children: of the 32 cases in which a mistake was made during the original interview, 15 cases involved dead children. Also of the 14 cases in which errors were committed during the re-interview, 12 cases involved dead children.

It is interesting to observe that of the 47 differences, in 35 cases parity was under-reported. However, there were also cases of erroneous inclusion of non-live births. In a number of cases stepchildren and adopted children were counted as live births. Obviously in societies where adoption is widespread special care should be taken to avoid this kind of mistake.

In one case a respondent had reported a parity of four, but in the re-interview and the reconciliation interview it transpired that they were all adopted children. The number involved is, of course, not great, but the proportion is: out of 32 cases with mistakes in the original interview, in 7 cases adopted or stepchildren are involved.

TABLE 9

NUMBER OF CHILDREN EVER-BORN ACCORDING TO THE ORIGINAL INTERVIEW, THE RE-INTERVIEW AND THE RECONCILIATION INTERVIEW (ABSOLUTE NUMBERS)

Number of Children Ever-Born	Original Interview	Re-Interview	Reconciliation Interview
0	45	47	47
1	69	69	68
2	80	79	77
3	63	67	67
4	48	48	48
5	65	56	58
6	36	39	38
7	39	37	37
8	21	19	21
9	7	12	11
10	11	8	10
11	8	12	10
12	3	2	3
13	0	1	0
14	1	0	1
15	0	0	0
16	1	1	1
Total	497	497	497
Mean	3.86	3.86	3.89

The effect of the discrepancies and errors on the reported parity distributions is shown in Table 9.

The total number of live births reported in the original interview was 1919 whereas in the re-interview the total number of reported live births is 1918.

The discrepancies do not affect the mean of these two distributions. However, the distribution of the two variables is slightly different. When the reconciliation figures are

TABLE 10

COMPARISON OF PARITY, AGE, AND LEVEL OF EDUCATION FOR RESPONDENTS WHO REPORTED PARITY CONSISTENTLY IN THE ORIGINAL INTERVIEW AND THE RELIABILITY STUDY, RESPONDENTS WHO REPORTED PARITY INCONSISTENTLY IN THE TWO INTERVIEWS, AND THOSE WHO REPORTED INCORRECT PARITY IN ORIGINAL INTERVIEW ACCORDING TO THE RECONCILIATION INTERVIEW

PARITY*				AGE*					EDUCATION*		
Number of live births	Reported Consistently	Reported Inconsistently	Reported Incorrectly	Age	Reported Consistently	Reported Inconsistently	Reported Parity Incorrectly	Level of Education	Reported Parity Consistently	Reported Parity Inconsistently	Reported Parity Incorrectly
0	44	3	3	10-14	2	0	0	No schooling	140	28	17
1	65	3	2	15-19	27	0	0				
2	75	2	1	20-24	84	3	2				
3	59	8	7	25-29	97	1	1				
4	44	3	3	30-34	77	8	6	Primary	198	17†	15†
5-6	88	9	5	35-39	64	9	3				
7-8	50	8	5	40-44	57	13	11				
9+	26	10	6	45-49	41	12	9	Secondary or higher	113	1	0
	451	46	32		449**	46	32		451	46	32

* Values according to reconciliation interview used; ** 2 cases excluded; † 3 had not completed primary school

taken into account the total number of live births reported is 1935, and this can be considered to be closer to the true parity. In terms of the total number involved the original interview underestimates the results of the reconciliation interview by less than 1 per cent (0.83%). By all standards this is a good result. The mean parity for the reconciliation interview (3.89) is marginally higher than for the original interview (3.86) and the re-interview.

Although interviewer errors cannot be excluded, it seems that most of the discrepancies were caused by the respondents. From Table 10, it can be seen that the respondents most likely to give inconsistent answers in relation to parity are: women with relatively high parity, women who are over 30, and women who have a low level of education or none at all. Age and education seem to have an important effect on the consistency of answers, but because these variables are inter-related their effect cannot be assessed by simple cross-tabulation.

3.3.2 SEX-MISREPORTING OF CHILDREN

During the editing, sex-misreporting between the original interview and re-interview was observed and a special computer program was written to analyse this phenomenon. In the re-interview details of up to nine live births (Table 9) were recorded. As can be seen from the distribution of the total number of live births (Table 9) only 24 respondents or about 5 per cent reported a higher parity than nine. The analysis is based on the results from the 95 per cent that have reported up to nine live births in either the original interview or the re-interview.

Of the 473 respondents, those who had inconsistencies in the sex of children were sorted out. After manual editing and comparison with the listing of the complete interviews (the original interview forms were not available in London) the inconsistencies were noted. Inconsistencies could occur because different numbers of live births were reported, so that the *n*-th birth in the original interview would not correspond to the *n*-th birth in the re-interview. Also, in reporting the live births the order of the live births may have been changed, for whatever reason. After carefully verifying all the cases that showed inconsistencies, 28 respondents were found for whom the inconsistencies could not be accounted for by differences in number or order. These were, therefore, considered to be the genuine cases of sex-misreporting.

Thus, 28 respondents out of 473, or 5.1 per cent, had one or more children with inconsistently reported sex. In terms of the total number of live births involved, these 28 cases produced 44 misclassified children out of the 1656 reported live births, i.e., 2.7 per cent of the live births are misclassified by sex.

To look more closely at the patterns in the misreporting, the 44 misclassified children were tabulated according to the sex reported in the three interviews, taking into account whether the child was alive or dead. The results are presented in Table 11. The data obtained in the reconciliation interview are considered to be of better quality than those of the two previous interviews. From the table it can be seen that more mistakes were made in the original interview than in the re-interview. In only five out of the 44 cases did the data of the reconciliation interview coincide with those of the original interview. In 15 cases a boy was wrongly reported as a girl, whereas in 29 cases girls were wrongly reported to be boys. Thus, there was a tendency to misreport girls as boys, rather than the reverse.

There are several possible explanations for the misreporting of sex of a child. For dead children, some misreporting can be attributed to memory errors. Also, the emphasis placed on having male children may be partly responsible. And finally, it is possible that the interviewer made a mistake, that is, either she did not ask the question about the sex of the child but inferred the sex from the name or she ticked the wrong box.

TABLE 11

SEX MISCLASSIFICATION OF CHILDREN IN THE ORIGINAL INTERVIEW AND THE RE-INTERVIEW ASSESSED AGAINST THE RECONCILIATION INTERVIEW (ABSOLUTE NUMBERS)

	Boy Reported as Girl	Girl Reported as Boy	Total
Error in original interview			
Child still living	8	16	24
Child dead	6	9	15
Error in re-interview			
Child still living	1	3	4
Child dead	0	1	1
Total	15	29	44

The results of the analysis of the fertility data indicate that the data reported are reasonably consistent. The introductory questions have low percentages of discrepant results: from 1.21 per cent (Q.305) to 5.23 per cent (Q.310). The values of the consistency index range from 0.83 (Q.303) to 0.97 (Q.305). The questions about numbers of children yield more discrepant results than the introductory questions: the percentages range from 3.22 per cent (Q.309) to 9.62 per cent (Q.312). The range of the consistency index is from 0.87 (Q.304) to 0.99 (Q.309). However, for both types of questions the results can be considered reliable, given the low percentages of discrepant results and the relatively high values of the weighted Kappa. For questions related to numbers of children the product-moment and intraclass correlation coefficients are also presented. Their values are relatively high and confirm that the data generated by the questions about numbers of children are reliable.

3.4 ANALYSIS OF AGE AND DATES

3.4.1 GENERAL ANALYSIS

Age and date reporting in Indonesia is generally acknowledged to be incomplete and unreliable.[7] Thus, in the Indonesia Fertility Survey special attention was paid to the ways in which age and dates were to be obtained.
For all the cases in which a date of a vital event was sought, an attempt was made to obtain the month as well as the year.

Age of Respondent
In order to get the age, or an estimate of the age, of the respondent the following procedure was used:

106. In what year were you born?

19 ____ (YEAR) D.K. [99] → 107. How old are you now? ____ (AGE) (PROBE AND RECORD BEST ESTIMATE. NEVER WRITE D.K.)

108. In what month of the year were you born? ____ (MONTH)

INTERVIEWER: SPECIFY CALENDAR IF MONTH KNOWN
MUSLIM [1] WESTERN [2] OTHER ____ (SPECIFY)

An Events Chart (see Appendix I) was constructed to facilitate the interviewer's task. In the Interviewers' Instructions clear procedures were set out for obtaining date of birth or age of respondents, either directly or indirectly, using the Events Chart.
In those instances where the respondent did not know her date of birth the interviewers were instructed to estimate her age as of 1 January 1976.

Age at (Current) Marriage
As in the case of the age of the respondent, a precise procedure was developed to obtain the year of marriage or, if that was unavailable, the age at marriage of the respondent. As can be seen from the flow of the questions on current marriage the structure is similar to that for the age questions. A similar procedure was followed for the first marriage.

203. In what year were you and your husband married?

19 ____ (YEAR) D.K. [99] → 204. How old were you then? ____ (AGE) (PROBE AND RECORD BEST ESTIMATE)

205. What month of the year was it when you and your husband got married? ____ (MONTH)

INTERVIEWER: SPECIFY CALENDAR IF MONTH KNOWN
MUSLIM [1] WESTERN [2] OTHER ____ (SPECIFY)

Date of the First Live Birth
In order to obtain dates for live births, two different procedures were used. Firstly, the year of birth was asked. If the respondent was unable to give the year she was asked to state "how many years and months ago" the child was

[7] UNITED NATIONS MANUAL IV, *Methods of Estimating Basic Demographic measures for Incomplete Data*, (ST/SOA/Series A/42) New York, 1967, p.11 and p.19; McNicoll, G. and Mamas, St Gde M., *The Demographic Situation in Indonesia* Paper 28, Honolulu, (East-West Population Institute 1973), pp 8-9.

born. An additional check was built in for the date of birth: for each birth the period between the birth concerned and the previous one (or the preceding vital event) was ascertained. (For details see questionnaire Appendix I, Section 3, Questions 326-333). These data can be used to calculate the respondent's age at her first live birth.
The interviewers had been given clear instruction as to how to proceed to obtain the dates of the relevant vital events. There are indications that these instructions were not always followed. In Table 12, details are given about the way in which age, age at (first) marriage and age at first live birth were, in fact, obtained at the two interviews.

TABLE 12

THE WAY IN WHICH CURRENT AGE, AGE AT MARRIAGE AND AGE AT FIRST BIRTH WERE OBTAINED, IN THE ORIGINAL INTERVIEW AND THE RE-INTERVIEW

Original Interview	Year	Year	Age	Age	Numbers of Cases
Re-interview	Year	Age	Year	Age	
Current Age	211	75	24	185	495
Age at(first) marriage	291	82	25	96	494
Age at first live birth	283	60	24	81	448

For 42.6 per cent of the respondents, year of birth was reported in both interviews; 58.9 per cent reported a year of marriage in both interviews and 64.9 per cent of those who had given birth reported a year of birth for their first child in both interviews. It seems that reporting of the year in which a vital event takes place increases with the recency of the event. For the more recent events in the life of a respondent, the year of their occurrence seems to be more often reported than that of more distant events.
As has been said earlier an attempt was always made to obtain the month in which the vital event had taken place, whether a year or age was given. Table 13, gives details about month reporting for the three vital events considered.

TABLE 13

REPORTING OF MONTH OF BIRTH, MONTH OF MARRIAGE AND MONTH OF FIRST LIVE BIRTH IN THE ORIGINAL INTERVIEW AND THE RE-INTERVIEW

	Month of Birth	Month of Marriage	Month of First Live Birth
Original interview	205	369	326
Re-interview	209	371	332
Month reported in both interviews	172	283	297
Number of cases	495	494	448

As in the case of year reporting the percentages of respondents who reported a month for the relevant vital events is variable: 34.7 per cent reported a month of birth on both occasions, 57.3 per cent a month of marriage and 66.3 per cent a month of birth for their first child. Again, as in the case of year reporting, it seems that the more recent the event, the more often a month is reported.
In Appendix IV, detailed tables are presented for the questions on month reporting. From the tables it becomes clear that there is considerable month preference in the original interview as well as in the re-interview.
Generally speaking the month preference is consistent. For month of birth of the respondent in both interviews the most frequently mentioned months are March, August and December; although the order is not the same for the two interviews. For month of first marriage the most frequently reported months are December, August and July, and in both interviews this was the order of preference. For the month of birth of the first child the most mentioned months are April, August and December; but here the order of preference is not the same for the two interviews. These results seem to indicate that although a month is recorded, it is quite possible that the respondent did not report the month of occurrence of the event, but that the interviewer has calculated a month, after probing using significant data. In this respect it is worth mentioning that in August Independence Day is widely celebrated throughout the country.
Because of the large percentage who did not report the dates in terms of month and year, in the analysis no attempt has been made to combine the year and month to obtain a proper date. The results for year and month reporting will be analysed separately.
For each vital event, if the respondent had reported a year it was converted to age. The age data were calculated in years only; that is, if a month was reported it was disregarded in the calculations. In calculating current age if a year of birth was reported, the year of birth was subtracted from 1975 and current age in completed years was obtained. The value obtained for current age was used when calculating age at marriage and age at first live birth. For example, how long ago her first birth occurred was converted into age at first live birth by subtraction from current age. Thus, for each respondent current age, age at first marriage and age at first live birth (if applicable) were obtained, and used in the analysis. *These mixed "age" variables will be distinguished from the age data as reported, by capital letters whenever actual reference is made to them.*
Table 14 gives the results. To make the findings more meaningful for the reported years and ages the data have been limited to the sub-samples that reported the date, or age, in the same way in both interviews. The AGE data (i.e. CURRENT AGE, AGE AT MARRIAGE and AGE AT FIRST LIVE BIRTH) refer, of course, to all respondents for whom data are present.
Of the respondents who reported the year of birth during both interviews, 21.8 per cent reported the year inconsistently, whereas of those respondents who reported their age in both interviews, the percentage of inconsistent answers is 79.0 per cent.
The composite variable AGE yields 56.7 per cent of discrepancies. However, if a difference of two years is considered acceptable, the percentage of discrepancies becomes 22.5 per cent. In other words approximately 78 per cent of the respondents involved in the reliability study reported their age consistently within a margin of two years.
When month of birth was reported in both interviews 16.3 per cent of the answers were inconsistent. The values of the consistency index indicate that the consistency for age

TABLE 14

DISCREPANCIES BETWEEN THE ORIGINAL INTERVIEW AND THE RE-INTERVIEW FOR DATE OF BIRTH, DATE OF MARRIAGE AND DATE OF FIRST LIVE BIRTH AND VALUES OF WEIGHTED KAPPA

Question Number	Question/Variable	Number of Cases	Percentage of Discrepancies	$\hat{K}_w$
106	In what year were you born?	211	21.3	0.9893
107	How old are you?	185	79.0	0.8883
106/107	CURRENT AGE	495	56.7	0.9398
108*	In what month were you born?	172	16.3	0.9269
203/213	In what year were you and your husband married?	291	24.4	0.9798
204/214	How old were you then (at marriage)?	96	75.0	0.5679
203/204	AGE AT (FIRST) MARRIAGE	494	62.5	0.6960
205*	What month of the year was it when you and your husband got married?	283	30.1	0.6360
329	In what year was (NAME OF CHILD) born?	283	20.5	0.9818
330Y	How many years (.....) ago was (NAME OF CHILD) born?	81	67.1	0.9132
329/330Y	AGE AT FIRST LIVE BIRTH	448	63.3	0.9132
331*	In what month was that child born?	302	26.2	0.6417

* The data produced by these questions are treated as metric variables. For completeness: the values for the unweighted Kappa are 0.8209, 0.6596 and 0.7123 for Questions 108, 205 and 331 respectively.

reporting is relatively low. The consistency for month of birth reporting is relatively high.

For the date of (first) marriage similar results are obtained. Of those who reported a year in both interviews, the percentage of discrepant results is 24.4 per cent while of the respondents who gave their age at their (first) marriage, 75.0 per cent reported this inconsistently. For the variable AGE AT (FIRST) MARRIAGE there are 62.5 per cent discrepancies, which falls to 21.8 per cent if a margin of error of two years is allowed. Although month of marriage was reported by more respondents in both interviews than month of birth, the percentage of discrepancies is higher: 30.1 per cent. The values of the consistency index indicate that year reporting is much more consistent than age reporting. The consistency of the month of marriage is less than the consistency of the month of birth.

The results on date of birth of first child are similar to the two previous variables. To make the data comparable to the two previous cases the results were translated into age at first live birth. Of the respondents who reported year in both interviews, 20.5 per cent gave an inconsistent answer, whereas of those who reported the events in terms of "years ago" 62.1 per cent had inconsistent results. For the composite variable AGE AT FIRST LIVE BIRTH, 63.2 per cent had inconsistent answers, but this falls to 22.8 per cent if a margin of two years is allowed. As in the case of month of marriage, month of first live birth was reported in both interviews for more respondents than month of birth, but the percentage of discrepancies is higher: 26.2 per cent. For this variable the values of the consistency index also indicate that year reporting is better than age reporting. For month reporting the consistency seems relatively low.

The results indicate that the date and age data are not very reliable, although when a margin of two years is allowed approximately 78 per cent of the respondents had reported their age consistently, approximately 78 per cent their age at (first) marriage, and approximately 77 per cent their age at first birth.

In addition, it seems that the data on CURRENT AGE are slightly more reliable than the data on AGE AT (FIRST) MARRIAGE and AGE AT FIRST LIVE BIRTH. It is, however, possible that this is a consequence of the arithmetic manipulation of the data. The data had to be converted to a common base, which in this case was age at that particular event, using as points of reference 1976 (the year of the interview) and the year of birth, or the respondent's current age.

From the reconciliation interview some results are available about the discrepancies in reporting current age, and age at marriage. The results indicate that in the re-interview more use was made of available documentary evidence and probably better probing was done.

3.4.2 DETAILED ANALYSIS OF AGE REPORTING

As it was anticipated that age and date reporting in Indonesia would be poor, a margin of error of two years between the values obtained in the original interview and re-interview was accepted. Only when the difference was larger than two years was a reconciliation interview carried out.

For respondents with complete data the following results (in percentages) were obtained for AGE, AGE AT MARRIAGE and AGE AT FIRST BIRTH.

As can be seen from Table 15, the percentages of consistently reported AGE are 43.3 per cent, 37.5 per cent and 36.7 per cent respectively. The results also indicate

TABLE 15

DIFFERENCES BETWEEN ORIGINAL INTERVIEW AND RE-INTERVIEW FOR CURRENT AGE, AGE AT MARRIAGE AND AGE AT FIRST LIVE BIRTH

	Percentage of cases		
Difference*	AGE	AGE AT MARRIAGE	AGE AT FIRST LIVE BIRTH
- 5 yrs and more	5.8	4.7	5.6
- 4 yrs.	2.2	2.2	1.7
- 3 yrs.	3.0	2.6	3.1
- 2 yrs.	7.5	8.1	7.1
1 yr.	11.3	15.2	13.1
0	43.3	37.5	36.7
1 yr.	10.3	12.1	14.3
2 yrs.	5.1	5.3	6.0
3 yrs.	2.8	3.4	3.3
4 yrs.	2.4	2.8	2.9
5 yrs. and more	6.3	6.1	6.2
Number of cases**	495	494	448

* Difference = Original Interview minus Re-interview
** Only cases with data for both interviews are used.

that for all AGES the bulk of the inconsistent answers have a difference of one or two years. As a two-year error margin was accepted, the percentage of acceptable consistent answers for these variables becomes 77.5 per cent, 78.2 per cent and 77.2 per cent respectively for CURRENT AGE, AGE AT MARRIAGE and AGE AT FIRST BIRTH. In Table 16, the data for CURRENT AGE are presented for the original interview and the re-interview.

Previously (see 3.4.1) it has been shown that the way in which a date of a vital event (as date or as age at that event) was reported is related to the consistency of reporting. To analyse the variability in age reporting in a more detailed way in Tables 17, 18 and 19, the differences in age reporting are cross-tabulated with current age of the respondent and with level of education. The value of these variables are those of the original (adjusted[10]) interview.

From Table 17 can be seen that current age of the respondent is related to the variability of age reporting: younger respondents tend to report their age more consistently than older ones; the threshold seems to be 30 years. As the level of education of the younger respondents is higher than that of the older respondents it is not surprising that it is positively related to consistent age reporting.

The results for AGE AT MARRIAGE (Table 18) are basically the same as for CURRENT AGE. Age and education are all positively related to the consistency of reporting of age at marriage. The results for age at first live birth (Table 19 on page 24) again show that the way the variable has been reported and the level of education are clearly related to consistency of reporting. However, current age does not have a clear relationship with consistency of reporting of AGE AT FIRST LIVE BIRTH.

Generally speaking, consistent date or age reporting is related to current age and level of education of the respondent. In Section 3.4.1 it was established that the way in which the data of a vital event was reported was related to the consistency of reporting. These three variables are inter-related and the most important variable influencing correct AGE reporting (i.e., CURENT AGE, AGE AT MARRIAGE and AGE AT FIRST LIVE BIRTH) could possibly be education. The relatively small sample size does not allow for analysis to establish this.

10 Current Age was reconciled if there was a difference of two or more years. Education was sometimes reconciled. For those with discrepant results, the value obtained in the reconciliation interview was taken.

TABLE 16

CURRENT AGE AS REPORTED IN THE ORIGINAL INTERVIEW AND IN THE RE-INTERVIEW

Age reported in original interview	Age according to Re-interview								
	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	TOTAL
10–14	1	1							2
15–19	1	22	4	1					28
20–24		3	68	12					83
25–29		2	8	80	11	5			106
30–34			2	8	59	7	2		78
35–39			1	2	5	55	11	3	77
40–44				1	5	4	46	14	70
45–49						1	15	35	51
TOTAL	2	28	83	104	80	72	74	52	495*

* 2 cases are excluded: reported to be 50+ in the re-interview.

TABLE 17

DIFFERENCE BETWEEN AGE REPORTED IN ORIGINAL INTERVIEW AND RE-INTERVIEW BY CURRENT AGE OF RESPONDENT AND LEVEL OF EDUCATION AS REPORTED IN ORIGINAL (ADJUSTED) INTERVIEW (IN PERCENTAGES)

Difference between age reported in original interview and Re-interview*	TOTAL	Age of Respondent							Level of Education		
		10-19	20-24	25-29	30-34	35-39	40-44	45-49	No Schooling	Primary School	Secondary or higher
- 3 yrs and more	11.1	3.4	6.9	4.1	13.1	13.8	15.7	22.6	20.4	9.3	0.9
- 2 and 1 year	18.8	20.7	19.5	17.3	19.1	26.0	20.0	7.6	18.1	23.7	10.5
0 year	43.2	58.6	51.7	50.0	42.9	37.0	30.0	35.8	21.7	40.9	78.9
1 and 2 years	15.4	10.4	12.6	20.4	8.3	10.9	18.6	26.4	21.7	14.9	7.0
3 years and more	11.5	6.9	9.2	8.2	16.6	12.3	15.7	7.6	18.1	11.2	2.7
Number of Cases (= 100%)	495**	29	87	98	84†	73	70	53	166	215	114

* Difference = Original Interview minus Re-interview. ** 2 cases excluded. † 1 case of undefined age difference excluded.

TABLE 18

DIFFERENCE BETWEEN AGE AT MARRIAGE REPORTED IN ORIGINAL INTERVIEW AND RE-INTERVIEW BY CURRENT AGE OF RESPONDENT, AND LEVEL OF EDUCATION AS REPORTED IN ORIGINAL (ADJUSTED) INTERVIEW (IN PERCENTAGES)

Difference between age at marriage reported in original interview and Re-interview*	TOTAL	Age							Level of Education		
		10-19	20-24	25-29	30-34	35-39	40-44	45-49	No Schooling	Primary School	Secondary or higher
- 3 yrs and more	9.5	3.4	4.6	8.2	7.2	15.1	10.0	20.8	17.6	7.9	0.9
- 2 and - 1 year	23.3	24.1	25.3	17.3	30.1	24.7	27.1	13.2	24.8	27.4	13.2
- 0 year	37.5	34.5	47.1	37.8	37.3	30.1	35.7	35.8	19.4	34.4	69.3
- 1 and - 2 years	17.4	24.1	12.6	21.4	13.3	17.8	20.0	17.0	23.0	15.3	13.2
- 3 years and more	12.3	13.8	10.3	15.3	12.0	12.3	7.1	15.1	15.2	14.9	3.5
Number of Cases (= 100%)	494**	29	87	98	83†	73	70	53	165	215	114

* Difference = Original Interview minus Re-interview. ** 3 cases of no age at marriage recorded excluded. † 1 respondent with undefined difference for age at marriage

TABLE 19

DIFFERENCE BETWEEN AGE AT FIRST BIRTH REPORTED IN ORIGINAL INTERVIEW AND THE RE-INTERVIEW BY CURRENT AGE AND LEVEL OF EDUCATION AS REPORTED IN ORIGINAL (ADJUSTED) INTERVIEW (IN PERCENTAGES)

Difference between first birth interval reported in original interview and re-interview*	TOTAL	Age of Respondent							Level of Education		
		10-19	20-24	25-29	30-34	35-39	40-44	45-49	No Schooling	Primary School	Secondary or higher
- 3 yrs and more	10.4	9.1	6.6	4.3	13.0	15.7	10.4	17.0	16.2	11.1	0.9
- 2 and 1 year	20.2	18.2	24.0	20.4	20.0	24.3	17.9	12.8	19.5	24.3	14.3
0 year	36.7	27.2	42.7	39.8	37.6	31.4	31.3	29.8	15.6	32.3	71.4
1 and 2 years	20.2	36.4	14.7	30.1	14.1	17.1	20.9	21.3	27.9	20.1	9.5
3 years & more	12.4	9.1	12.0	5.4	15.3	11.4	19.4	19.1	20.8	12.2	3.8
Number of Cases (= 100%)	448**	11	75	93	85	70	67	47	154	189	105

* Difference = Original Interview minus Re-interview.
** 49 cases without first birth interval: 44 cases no live births, 4 cases due to errors.

TABLE 20

DISCREPANCIES BETWEEN THE ORIGINAL INTERVIEW AND THE RE-INTERVIEW: VALUES FOR UNWEIGHTED KAPPA FOR ATTITUDES AND OPINIONS

QUESTION NUMBERS	Questions	Percentage of Discrepancies	Number of Cases	Consistency Index $\hat{K}^*$
103/105	What kind of area would you say this (that) was when you were growing up, say to the age of 12? Was it a village, a town or a city?	30.9†	492	0.4476
503	As far as you know, is it physically possible for you and your husband to have a child supposing you wanted one?	18.1	365	0.6703
599**	If you could choose exactly the number of children to have in your whole life, how many children would that be?	45.97	453	0.4279

* Here the unweighted form of Kappa has been used.

** Excluding the "Other Answers"; for 458 cases weighted Kappa is 0.4536, the intraclass correlation is 0.8856, and the product-moment correlation is 0.8873.

† Because the sample of the IRS is biased towards the urban area, this figure may overestimate the occurrence of this type of inconsistent reporting.

3.5 ANALYSIS OF ATTITUDE AND OPINION QUESTIONS

A few questions on attitudes and opinions were included in the IRS in order to obtain an indication of their reliability. These covered the respondent's perception of the type of area (city, town or village) in which she resided when young (Q.103/105), the perceived fecundability (Q.503) and the desired number of children (Q.599). (See Appendix I, for Questionnaire). The results are shown in Table 20.

The percentage of discrepancies in Questions 103/105 is surprisingly high: 39.5 per cent of the respondents gave different descriptions of their childhood place of residence in the re-interview which was approximately four months after the original interview.

Question 503 was expected to show a high percentage of discrepancies, but there were in fact less than for the question about childhood residence (Qs. 103/105).

The percentage of discrepancies in Question 599 (the number of children desired) is high, as expected; nearly half of the respondents gave a different answer at the re-interview.

Two of the three questions about attitudes namely Questions 103/105 and 503 are not metric variables nor can they be considered as such. Therefore, for the questions about attitude, the unweighted Kappa has been used. It must be mentioned that for the same data, values for unweighted Kappa are generally slightly lower than weighted Kappa.

The consistency index for these questions is generally lower than that for the factual data. However, the relative consistency of the questions is somewhat surprising. Classification of childhood residence and number of children desired have approximately the same value of Kappa, around 0.44, but the value for perceived fecundability is higher, about 0.67.

In order to gain some insight into the low level of consistency in classification of childhood residence, the consistency of the answers was examined in relation to information about current residence. For the 495 respondents for whom complete information is available the results shown in Table 21 overleaf were obtained.

Apparently misclassification of childhood place of residence cannot be explained by inconsistent classification of current residence alone. Although those who consistently stated that they had always lived in the place of interview classified their childhood place of residence more consitently than those who stated that they had not always lived in the place.

Some results of the reconciliation interview are available: the main cause of the discrepancies is change of opinion. Some confusion seems to result from the retrospective character of the question, and the lack of precision about what a city or town is. Also, proximity to or access to an urban area seem to have confused some respondents; a village close to the main road or close to a town was often reported as a town.

However, of the 155 inconsistent answers, in 107 cases (69%) the respondents classified their childhood residence as a village in one interview and as a city or town in the other.

As expected the percentage of discrepancies in Question 599 (the desired number of children) is high. This question is sophisticated and its level of abstraction makes it difficult to understand for respondents who are not well-educated. For some respondents the reasons why they reported differently in the two interviews are available from the

TABLE 21

PERCENTAGE OF RESPONDENTS WHO CLASSIFIED THEIR CHILDHOOD PLACE OF RESIDENCE CONSISTENTLY ACCORDING TO REPORTED CONTINUITY OF RESIDENCE IN ORIGINAL INTERVIEW AND RE-INTERVIEW

	Always lived in current residence			
Original interview	YES	NO	YES then	or NO then
Re-interview	YES	NO	NO	YES
Percentage who classified childhood residence consistently	78.1	64.6	45.5	
Number of cases	233	215	47	

reconciliation interview. Although the reasons for changes in opinion are many and diverse, it seems that respondents may be influenced by economic factors, number of actual children and sex composition, and the impact of government information about family size. It also seems that some errors were caused by misrecording by the interviewer and at least one respondent reported that in the original interview the question was answered by her husband.

3.6 CONCLUSIONS

The conclusions of the Reliability Study will be presented in two sections. In the first section some substantive findings will be summarized and the reliability of the different groups of questions will be treated. In the second section a general overview of the type of discrepancies and errors will be given.

The reliability of each individual question can be assessed by using the percentage of discrepant results and also by using the value of the consistency index: the higher the value of Kappa, the more reliable the results. This is, of course, only a relative measurement, since there exist no generally accepted criteria for interpreting the levels of reliability. For groups of questions the reliability can be assessed only on the basis of the reliability of the questions that comprise the group. The reliability of a group of questions can be best characterized by the typical value of that group, the median value or the range of the middle values. Finally, the reliability of a questionnaire can be assessed only on the basis of the groups of questions that form the questionnaire. The questionnaire can, of course, yield results that are more reliable for certain topics, while for other topics the results are less reliable.

3.6.1 SUBSTANTIVE FINDINGS AND THEIR RELIABILITY

3.6.1.1 Background Data

The data can be divided into two groups, one first comprises the question about current residence[11] and questions about educational achievement, while the second consist of questions about marital status and situation. The values of the consistency index for the questions on residence and educational achievement range from 0.4051 to 0.9314, the median value being approximately 0.81. For the questions on marital status and situation, the range of the consistency index is from 0.5253 to 0.8481. The median value for these questions is 0.84. These results indicate that the questions that measure the background variables produce relatively reliable results. Exceptions are questions on literacy (Q.117) and whether the respondent's husband lives in the household (Q.206). For these two questions the consistency is relatively low. The background variables had a low priority for the reconciliation interview. Only for a limited number of interviews with discrepancies are results of the reconciliation interview available. These data suggest that the discrepancies are mainly caused by errors, except for the questions on marital status and situation the background variables are normally not subject to change. In a number of cases, the respondents claimed that interviewers recorded answers wrongly. But more often respondents apparently gave wrong answers, either due to misunderstanding of the question or deliberately, to avoid embarrassment.

3.6.1.2 Fertility Data

The questions on fertility can be divided into two groups, the introductory questions establishing whether the respondent should be asked further questions about number of children, live births or dead children, and the questions that actually obtained those numbers. The values of the consistency index range from 0.8328 to 0.9716 for the introductory questions. The questions on children at home show a higher value for the consistency index than the questions about children living away. The values of the consistency index for the questions that give the numbers of the different categories of children have a range from 0.8660 to 0.9940. Again, higher values are obtained for the consistency index for the questions giving the numbers of children at home, than for those who are away from home. The value of the consistency index for the total number of living children is higher than for the number of dead children.

The discrepancies found in this section are mainly due to errors. Errors mostly involved dead children: the respondents tended to omit to mention them. Some respondents also reported stepchildren and adopted children as their own children. It was interesting to find that some sex-misreporting had occurred. Although the percentage of cases is small, whether based on the number of children or on the number of respondents, the problem is serious enough to merit the attention of analysts.

Older respondents and respondents with little or no education seem to be more prone to commit errors than younger and better educated respondents.

3.6.1.3 Age and Dates

For the analysis of age and dates three variables have been examined:

Date of birth or age,
Date of marriage, or age at marriage,
Date of first live birth, or age at first live birth.

For the dates, both month and year of the occurrence of the event were considered.

The results of the analysis of these data corroborate the finding that dates are generally not known in Indonesia.

[11] Classification of the respondent's childhood residence is treated with the attitude and opinion questions.

Approximately half of the respondents did not even claim to know the year for each type of vital event. Knowledge of the month in which an event had taken place is apparently slightly more common than knowledge of the year. Also the more recent the event the more often the month in which it took place is reported.

As an alternative to the 'date of a vital event', the 'age at that event' was taken. For those who did not know the year in which a vital event had happened they were asked how old they were at that particular event. The constructed AGE variables, that is CURRENT AGE, AGE AT MARRIAGE, and AGE AT FIRST LIVE BIRTH, are based on these two kinds of data taken together and in a sense are hybrids.

Comparing the different types of data for each of the vital events, it is found that the range of the consistency index for reported years is from 0.9798 to 0.9893. For the reported age data the range of the consistency index is 0.5679 to 0.9132, while it is from 0.6960 to 0.9398 for the constructed variables. That the value of the consistency index for the constructed variables lies between those of reported year and age is normal since the constructed variable is a combination of the two data. The values of the consistency index suggest that year reporting is much more reliable than age reporting. The results also indicate that CURRENT AGE is slightly more reliable than AGE AT MARRIAGE and AGE AT FIRST LIVE BIRTH. This result in a sense is surprising, because generally more recent events are better known than more distant events. Also events of which the respondent has direct personal knowledge are better known than events based on hearsay.

It is possible that current age shows more reliable results because age is more often asked than age at (first) marriage and age at first birth in everyday life. The respondent, therefore, has an idea – however vague – about her age, and reports this more 'consistently'. It is possible that the higher consistency of current age is thus spurious and all variables have the same level of consistency, and hence are equally reliable.

3.6.1.4 Attitudes and Opinions

Attitudes and opinions are more subject to change than factual data. Three attitudinal questions have been analysed, and the values of the consistency index [12] indicate that they have a relatively low level of reliability. The results are somewhat surprising. The question about the classification of the childhood residence has the same low reliability as the question about the desired number of children. This is probably due to the fact that although the question about childhood residence looks simple, it is in fact complicated. The respondent is expected to remember what her childhood place of residence was like, and to classify it into what are, for her, vague categories. The low reliability of the question about the desired number of children is no surprise because answers are subject to changeable personal and social motivations.

3.6.1.5 Comparison of the Reliability of Different Groups of Questions

In evaluating the reliability of individual questions the following aspects have been taken into account:

1. The table in which the data from the original interview and the re-interview are cross-tabulated.
2. The proportion of respondents who gave substantive answers in both interviews.
3. The proportion of inconsistent responses for those who gave substantive responses in both interviews.
4. The value of the consistency index.

To compare the different groups of variables the three last mentioned aspects can be taken as criteria, but none of them can be used as an absolute standard of comparison. For the different groups of questions the results are as follows. Firstly, factual data are more reliable than attitude and opinion data.

This conclusion is supported by all three criteria. Applying the same criteria within the factual data the fertility data are more reliable than the background variables. For age and date data the situation is more complex: the values of the consistency index are – for some variables in this group – relatively high[13] which might lead to the erroneous conclusion that these data are reliable. However, the proportion of respondents who gave substantive answers in both interviews is relatively low, and the proportion with discrepant answers is relatively high. The conclusion, therefore, is that the age and date data are the least reliable of the factual data. Moreover, there are important differences between the different types of age and date data. Year reporting tends to be more reliable than age reporting, and month reporting seems to be as reliable as year reporting. This implies, at least for the Indonesian data, that age or "years ago" in which an event happened, is an alternative to date but it is not as reliable an alternative.

In Table 22 the order of relative reliability of the different groups of variables as emerges from the analysis is presented.

There are unfortunately no other data of this kind available for Indonesia. Hence it is not possible to compare the results of the WFS exercise with other data.

TABLE 22

THE RELATIVE RELIABILITY OF THE DIFFERENT TYPES OF DATA RANKED FROM MOST TO LEAST RELIABLE

Type of Data	Sub-Groups	Rank-Order
Factual Data		
Fertility Data	Introductory Questions	1
	Questions Providing Numbers	2
Background Data	Marital Status and Situation	3
	Residence and Education	4
Age and Dates	Year	5
	Month	6
	Age	7
Attitudes and Opinions		8

3.6.1.6 Comparison with Data from Other Countries

Data from other countries for comparison with the In-

[12] For these questions unweighted Kappa is used, which generally tends to be lower than weighted Kappa.

[13] This can be explained by the relatively large number of categories of these variables compared with the relatively small number of the other variables.

donesian findings are scarce. Recently Knodel and Piampiti[14] have published some results of the Longitudinal Survey in Thailand. However, there is a three-year interval between the two interviews in the Thai study and few comparable variables are available. General results are worth mentioning: as in Indonesia, factual or "behavioural" data are more reliable than attitudes. The median values for unweighted Kappa are 0.64 and 0.18 respectively for married female respondents. Age reporting in Thailand seems to be more reliable than in Indonesia. In Thailand the values of unweighted Kappa for age and age at marriage (in five year groups) are 0.84 and 0.72 respectively.

TABLE 23

PERCENTAGE RESPONDENTS WHO REPORTED MONTH OF BIRTH, MONTH OF MARRIAGE AND MONTH OF FIRST LIVE BIRTH IN BOTH ORIGINAL INTERVIEW AND RE-INTERVIEW FOR FIJI AND INDONESIA

		Month of birth	Month of (first) marriage	Month of first live birth
Fiji	Percentage	56.3	75.5	80.1
	Number of cases	384	384	337
Indonesia	Percentage	34.7	57.3	66.3
	Number of cases	495	494	448

Some of the results of the preliminary analysis of the Post Enumeration Survey (PES) of the Fiji Fertility Survey[15] are available for comparison with the IRS data. In Fiji dates seem to be better known than in Indonesia. The majority of the respondents in Fiji reported year of vital events and only a small number reported age at that event. In Table 23 the percentages of respondents who reported a month of birth, month of first marriage and month of birth of the first live birth in both the original interview and the re-interview are presented for the Fijian PES and the Indonesian Reliability Study.

In Table 24 the results for age reporting[16] (age, age at first marriage and age at first live birth) for the Fijian data and the Indonesian data are presented. Because the data of the Fijian survey were reported exactly to a month and the data of the Indonesian study only in years, the Fijian data have been transformed to data exactly in years. The results clearly show that the Fijian data are more reliable than the Indonesian data. The average percentage of consistently reported data for the three age variables is 67 percent for Fiji, whereas it is 39 percent for Indonesia. It is also clear from the data that in Fiji the more recent the event, the more consistently the data reported, whereas in Indonesia this does not seem to be the case.

With regard to the fertility data, as can be seen From Table 25, the distribution of the discrepancies for the total number of live births is approximately the same for both countries.

[14] Knodel, J. and Piampiti, S., "Response Reliability in a Longitudinal Survey in Thailand". In: *Studies in Family Planning*, vol. 18, number 3, The Population Council, 1977, pp.55-66.

[15] *Fiji Fertility Survey 1974*, Bureau of Statistics, Suva, Fiji, 1976, pp. 26-32.

[16] For the IRS the combined "AGE" variables are used.

TABLE 24

CUMULATIVE PERCENTAGES OF DIFFERENCE BETWEEN REPORTED AGE, AGE AT (FIRST) MARRIAGE AND AGE AT FIRST LIVE BIRTH IN ORIGINAL INTERVIEW AND RE-INTERVIEW FOR FIJI AND INDONESIA

Difference between original interview and re-interview	Age		Age at (first) marriage		Age at first live birth	
	FFS*	IRS	FFS*	IRS	FFS*	IRS
No difference	64	43	67	38	74	37
Difference of 1 year or less	85	65	82	65	94	64
Difference of 2 years or less	90	77	88	78	98	77
Difference of 3 years or less	93	83	91	84	99	84
Difference of 4 years or less	96	88	93	89	99	88

* Adapted from *Fiji Fertility Survey, 1974*, Bureau of Statistics, Suva, Fiji, 1976, p. 30.

Thus, although consistency of date and age reporting in Fiji is better than in Indonesia, there is no difference in the reliability of the fertility data — at least for the total number of live births.

TABLE 25

PERCENTAGE DISCREPANCIES IN REPORTING NUMBER OF LIVE BIRTHS FOR FIJI AND INDONESIA

Difference in number of live births reported	FFS	IRS
Nil	89.8	90.7
1	7.0	6.8
2	2.9	1.2
3	0.3	0.6
4		0.6
Number of cases	384	497

3.6.2 DISCREPANCIES AND ERRORS IN THE RELIABILITY STUDY

The types of discrepancies and errors found in the Reliability Study will be briefly discussed in this section. In an interview/re-interview situation discrepancies can occur due to:

1. Change in situation.
2. Change of opinion or perception.
3. Error:
3.1 interviewer error.
3.2 respondent error.

It is difficult to establish when an error is an interviewer's error and when a respondent's error, especially when the questionnaires are not available for inspection. The supervisor's reconciliation interview sheet has provided some information to distinguish between these types of errors.

3.6.2.1 Change of Situation

1. Certain discrepancies were caused by changes in situation, and these should not be considered errors. If a respondent had given birth to a child in the period between the two interviews, this new birth was not considered in the analysis. The data were adjusted to reflect the situation at the first interview.

2. Some changes in the situation could cause discrepancies and could also reveal errors. In the set of questions on fertility a child who was living somewhere else at the first interview but had returned at the time of the second interview would cause a discrepancy. These discrepancies were not counted as errors, provided the number of children at home and the number of children away reflected the changed situation. If, however, a respondent had omitted to mention a child that was away at the time of either interview, the discrepancy (omission of children) was counted as an error.

3. Certain changes in situation caused changes in attitudes or opinion. Discrepancies found in factual data which could be adjusted could cause discrepancies in the attitudinal data, which could not be adjusted. For instance, in the reconciliation interview it was found in some cases that the respondent had changed her opinion about the number of desired children. The reason for this change was a pregnancy that had become apparent after the original interview. These discrepancies, although caused by a change in situation, were still considered as discrepancies for the analysis.

3.6.2.2 Respondent's Error

1. *Omissions or Recall Errors.* Discrepancies had to be classified as omissions or recall errors by the respondent when in one interview information was given that was not reported in the other. Generally, information was not given in the original interview but was available for the re-interview. These omissions occured when reporting the number of live births, the number of marriages or the number of dead children. In some cases embarrassment or shyness was reported as the reason for not giving the correct information. It is difficult to establish whether these errors are (involuntary) recall lapses or deliberate omissions.

2. *Incorrect Perception.* Discrepancies and errors sometimes were caused by the interpretation the respondent gave to the question. One of the questions that best illustrate this is Q.103, the classification of the childhood residence. Although this question was considered to be straightforward, a considerable number of respondents gave inconsistent answers. Some answers clearly demonstrate the incorrect perception or lack of clear understanding of the concepts by the respondents.

   "It is a town as it is too close to the main road for a village".
   "Jakarta was not so busy when I was a child, it was a village".
   "It is a village because my husband comes from there". *(sic)*
   "It is a village, but because it is near a town it is a town".

3. *Misunderstanding of Question.* In the reconciliation interview it was often reported that the respondent misunderstood the question. This is doubtful, as it could as well be an interviewer error, caused by careless questioning, and lack of adequate probing. Misunderstanding as a cause of discrepancy was claimed in a number of background variables, for instance education and literacy. It is possible that the respondent deliberately gave wrong information in some cases. From the reconciliation interview it was learned that some respondents assumed that the capability to sign their name meant that they were able to write, in spite of the clear content of the question.

4. *Other Misreporting by Respondent.* In the comment sheets of the reconciliation interview in a number of cases "misreporting by respondent", is entered but no further details are given. Some of these misreportings were clearly errors. In the fertility questions a number of respondents included their stepchildren and adopted children in live birth categories. This misreporting led to an increase in the number of reported live births of the respondent. It is possible that some of the errors were caused by carelessness of the interviewer.

5. *Sickness or the Respondent's State of Mind.* In some of the cases covered by the reconciliation interview reference was made to the state of mind of the

respondent. It is difficult to state with confidence that the inconsistency of the responses given is due to the respondent's state of mind. In one case, the interviewer stated that the answers of the original interview were inconsistent because the respondent had been unwell.

3.6.2.3 Interviewer's Error

It is extremely difficult to identify interviewer error. In the field only the coded information of the original interview was available for comparison with the results of the re-interview.

1. *Misrecording.* This comment appears occasionally in the reconciliation interview and also the respondents sometimes claimed that the interviewer had recorded something other than what they had said. There are, therefore, sufficient indications that the interviewers sometimes committed this type of error.

2. *Improper Following of Instructions.* There are sufficient indications to conclude that the interviewers sometimes did not follow the instructions correctly. This is especially clear in cases where a date had to be obtained. It seems that the interviewers in the original study entered a date while the respondent had given an age in response to probing.

3. *Lack of Probing.* The evidence of the reliability study suggests that the interviewers of the re-interview and the reconciliation interview obtained on some items better results than the interviewers of the original interview. The reasons given for the better results are "more and better probing", "use of event chart or other documentary evidence", or "help from other persons".

In this section only an imprecise and qualitative description of the type of discrepancies and errors has been given. The main reason is that a reconciliation interview was not held for all the discrepancies. However, the available data give some clear indication of the main types of errors committed.

3.6.3 SUMMARY OF CONCLUSIONS

The results of the reliability study indicate that the IFS/WFS data are, in general, reasonably reliable and of good quality, at least in so far as quality is measured by consistency. In particular, the fertility data and background information are of good quality. The attitudinal questions are less reliable; this is hardly surprising, because this is generally found to be true. Of lesser quality are the age and date data; but this is in line with the experience of others in Indonesia.

The available evidence suggests that the discrepancies are mainly due to errors, and to a lesser degree due to change of opinion. The errors seem to be committed mostly by the respondents, but there is also evidence of interviewer error. The results of the reconciliation interview show that there is still room for improvement of the performance of the interviewers. In the Indonesia Fertility Survey the interviewers were allowed to translate the questionnaire from the Bahasa Indonesia version into the language or dialect spoken by the respondent. This could have placed an additional strain on the interviewer during the interview. The generally used procedure in WFS surveys is to use questionnaires printed in the language of the interview, thus eliminating the possibility of errors due to on the spot translations.

The Indonesia Reliability Study has produced some useful results. However, the data obtained from the reconciliation interview about the reasons for the discrepancies did not live up to expectations. Apparently, the instructions given to the supervisors were inadequate, but it is also possible that unfamiliarity with this type of exercise caused underperformance. For a successful reconciliation interview more intensive training, both theoretical and practical, is required.

Better training of the field force, conscientious supervision, and questionnaires printed in the language of the interview will undoubtedly improve the quality of the data. With improved education of the female population and a wider coverage by vital registration or the issue of identification cards, the quality of the date and age data will also improve.

Finally, it should be mentioned that in the present study the data analysed are the crude data, i.e., the data in the form as obtained in the field. These data have not been edited in the office nor by computer, and these two procedures recommended by WFS lead normally to the detection and correction of a certain number of inconsistencies.

APPENDIX I

Field documents of the Indonesia Reliability Study

CONFIDENTIAL

WORLD FERTILITY SURVEY
INDONESIA FERTILITY SURVEY 1976

Urban = U
Rural = R

INDIVIDUAL QUESTIONNAIRE

I. IDENTIFICATION		
1.	Province	
2.	Kabupaten/Kotamadya	Domain
3.	Kecamatan	
4.	Village	
5.	Cluster No.	
6.	Census Block No.	
7.	Building No.	
8.	Household No.	
9.	Address	

II. ENUMERATION INFORMATION						
1.	Interviewer's Name					
2.	Interviewer Identity No.					
3.	Interviewer's calls	1	2	3	4	
4.	Date					
5.	Language Used					
6.	Result Codes					

Result Codes:

1. Completed
3. Respondent not at home
4. Deferred
5. Refused
8. Partly completed
9. Other

7.	Duration	
8.	Supervisor's Name	
9.	Date	

SECTION 1: RESPONDENT'S BACKGROUND

101. *INTERVIEWER: COMPLETE THE FOLLOWING FROM PAGE ONE*

LOCATION OF INTERVIEW: _____
(VILLAGE/TOWN/CITY)

102. Have you always lived in _____?
(PLACE NAME FROM 101)

YES [1] → 103. What kind of area would you say this was when you were growing up, say to the age of 12? Was it a village, a town or a city?

VILLAGE [1] TOWN [2] CITY [3]

NO [2] → 104. Where did you mostly live when you were growing up, say to the age of 12?

VILLAGE: _____

KECAMATAN: _____

KAB/KODYA: _____

105. What kind of area would you say that was then? Was it a village, a town or a city?

VILLAGE [1] TOWN [2] CITY [3]

106. In what year were you born?

19____ (YEAR)

D.K. [99] → 107. How old are you now?

____(AGE)

(PROBE AND RECORD BEST ESTIMATE. NEVER WRITE D.K.)

108. In what month of the year were you born? _____
(MONTH)

INTERVIEWER: SPECIFY CALENDAR IF MONTH UNKNOWN:

MUSLIM [1] WESTERN [2] OTHER _____
(SPECIFY)

109. COMMENTS ON AGE REPORTING *INTERVIEWER: CHECK APPROPRIATE BOX*

NO COMMENT ON AGE REPORTING	[1]
YEAR OBTAINED FROM DOCUMENT	[2]
AGE OBTAINED AFTER PROBING, BUT BELIEVED TO BE ACCURATE	[3]
AGE ONLY ESTIMATED AFTER DETAILED PROBING	[4]
EVENTS CHART USED	[5]
OTHER (SPECIFY): _____	

110. Have you ever attended school?

YES [1] NO [2] (SKIP TO 116)

111. What was the highest level of school you attended, primary, junior high, senior high, academy or university?

PRIMARY [1]
JUNIOR HIGH [2]
SENIOR HIGH [3]
ACADEMY [4]
UNIVERSITY [5]
OTHER (SPECIFY): _____

112. Was that a vocational or a general high school?

VOCATIONAL [1]
GENERAL [2]

113. Did you graduate from (HIGHEST LEVEL ATTENDED)?

YES [1] (SKIP TO 118) NO [2]

114. Which class did you complete in (HIGHEST LEVEL ATTENDED)?

_____(CLASS)

115. *INTERVIEWER: CODE APPROPRIATE BOX*

DID NOT GRADUATE PRIMARY SCHOOL [1]

GRADUATED PRIMARY SCHOOL OR HIGHER [2] (SKIP TO 118)

116. Can you read in any language - say, a simple letter?

YES [1] NO [2] (SKIP TO 118)

117. Can you write in any language - say, a simple letter?

YES [1] NO [2]

118. What language or languages do you normally speak at home?
(CIRCLE ALL THAT APPLY)

BAHASA INDONESIA [1]
JAVANESE [2]
SUDANESE [3]
MADURANESE [4]
BALINESE [5]
OTHER: _____
(SPECIFY)

SECTION 2 : MARRIAGE HISTORY

201. Now I have some questions about your married life. Are you now married, widowed, divorced or separated?

MARRIED [1] WIDOWED [2] DIVORCED [3] SEPARATED [4]

202. Were you married only once, or more than once?

ONLY ONCE [1] (SKIP TO TABLE IN 217 AND 220 TICK APPROPRIATE BOXES, THEN ASK 213, ETC.)

MORE THAN ONCE [2] (SKIP TO 212)

203. In what year were you and your husband married?

19 _____ (YEAR)

D.K. [99]

204. How old were you then?

_____ (AGE)

(LEAVE AND RECORD BEST ESTIMATE)

205. What month of the year was it when you and your husband got married?

INTERVIEWER : SPECIFY MUSLIM AF MONTH KNOWN

_____ (MONTH)

MUSLIM [1] WESTERN [2] OTHER _____ (SPECIFY)

206. Does your husband live in this household?

YES [1] (SKIP TO 211)

NO [2]

207. Is he away for the time being, or have you stopped living together for good?

AWAY FOR TIME BEING [1]

STOPPED FOR GOOD [2]

208. How many years and months did you and your husband live together?

_____ YEARS (PLUS) _____ MONTHS

209. In what year did you stop living together?

19 _____ (YEAR)

D.K. [99]

210. In what month was that?

_____ (MONTH)

INTERVIEWER: SPECIFY CALENDAR IF MONTH KNOWN.

MUSLIM [1] WESTERN [2] OTHER _____ (SPECIFY)

211. Have you been married more than once?

YES [1]

NO [2] (SKIP TO SECTION 3)

212. How many times have you been married altogether?

_____ (NUMBER OF TIMES)

INTERVIEWER : FOR EACH MARRIAGE ASK 213-220, THEN SKIP TO 300 (IF CURRENTLY MARRIED IN 201, THE NUMBER OF ENTRIES WILL BE ONE LESS THAN NUMBER IN 212)

FORMER MARRIAGES TABLE

MARRIAGE	213 In what year did your (first, second ....) marriage begin ?	IF YEAR DK IN 213 → 214 How old were you at the time when your (first, second ...) marriage began?	215 What month of the year was it when this marriage began? *INTERVIEWER: SPECIFY CALENDAR IF MONTH KNOWN (TICK MUSLIM OR WESTERN), SPECIFY IF OTHER*	216 How many years and months did the marriage last?	217 How did the marriage end?	218 In what year did (this husband die)?	219 In what month was that? *INTERVIEWER : SPECIFY CALENDAR IF MONTH KNOWN (TICK MUSLIM OR WESTERN, SPECIFY IF OTHER*	220 How many years and months did you remain without a husband after this marriage ended?
1	19 (YEAR) D.K. 99 →	(AGE) →	(MONTH) MUSLIM 1 / WESTERN 2 / OTHER → (SPECIFY)	(YEARS) PLUS (MONTHS)	DEATH 1 / DIVORCE 2 / SEPARATION 3	19 (YEAR) D.K. 99 →	(MONTH) MUSLIM 1 / WESTERN 2 / OTHER → (SPECIFY)	(YEARS) PLUS (MONTHS) / UNTIL NOW 1
2	19 (YEAR) D.K 99 →	(AGE) →	(MONTH) MUSLIM 1 / WESTERN 2 / OTHER → (SPECIFY)	(YEARS) PLUS (MONTHS)	DEATH 1 / DIVORCE 2 / SEPARATION 3	19 (YEAR) D.K. 99 →	(MONTH) MUSLIM 1 / WESTERN 2 / OTHER → (SPECIFY)	(YEARS) PLUS (MONTHS) / UNTIL NOW 1
3	19 (YEAR) D.K 99 →	(AGE) →	(MONTH) MUSLIM 1 / WESTERN 2 / OTHER → (SPECIFY)	(YEARS) PLUS (MONTHS)	DEATH 1 / DIVORCE 2 / SEPARATION 3	19 (YEAR) D.K. 99 →	(MONTH) MUSLIM 1 / WESTERN 2 / OTHER → (SPECIFY)	(YEARS) PLUS (MONTHS) / UNTIL NOW 1
4	19 (YEAR) D.K 99 →	(AGE) →	(MONTH) MUSLIM 1 / WESTERN 2 / OTHER → (SPECIFY)	(YEARS) PLUS (MONTHS)	DEATH 1 / DIVORCE 2 / SEPARATION 3	19 (YEAR) D.K. 99 →	(MONTH) MUSLIM 1 / WESTERN 2 / OTHER → (SPECIFY)	(YEARS) PLUS (MONTHS) / UNTIL NOW 1

SECTION 3 : MATERNITY HISTORY

300. *INTERVIEWER : TICK APPROPRIATE BOX PRESENCE OF OTHERS AT THIS POINT (TICK ALL APPLY).*

NO OTHERS	0
CHILDREN UNDER 10	1
HUSBAND	2
OTHER MALES	4
OTHER FEMALES	8

301. We would like to get a complete record of all the babies each woman has actually given birth to in all of her life. Do you have any sons you have given birth to now living with you?

YES 1 ↓ NO 2 (SKIP TO 303)

302. How many live with you?

_____

303. Do you have any sons you have given birth to who do not live with you?

YES 1 ↓ NO 2 (SKIP TO 305)

304. How many do not live with you?

_____

305. Do you have any daughters you have given birth to now living with you?

YES 1 ↓ NO 2 (SKIP TO 307)

306. How many live with you?

_____

307. Do you have any daughters you have given birth to who do not live with you?

YES 1 ↓ NO 2 (SKIP TO 309)

308. How many do not live with you?

_____

309. *INTERVIEWER : ENTER HERE NUMBER OF LIVING CHILDREN (SUM OF 302, 304, 306 AND 308)*

_____ (LIVING CHILDREN)

310. Have you ever given birth to any boy or girl who later died, even if the child lived for only a short time, may be a few hours, a few days or a few months ?

YES [1] NO [2] (SKIP TO 312)

311. How many of your children have died in all?

_____

312. *INTERVIEWER : SUM ANSWERS TO 302, 304, 306, 308 AND 311*

_____ (LIVE BIRTHS)

NOW ASK :

313. Just to make sure I have that right, you had _____ (SUM IN 312) births altogether and _____ (No. IN 309) are still living. Is that correct?

YES [1] NO [2] (PROBE AND CORRECT RESPONSES AS NEEDED)

314. Are you pregnant now?

YES [1] NO [2] (SKIP TO 317) D.K. [3] (SKIP TO 317)

315. In what month of pregnancy are you now?

_____ (MONTH)

316. Would you prefer to have a boy or a girl ?

BOY [1] GIRL [2] EITHER [3]

OTHER ANSWER : _____ (SPECIFY)

317. *INTERVIEWER : TICK APPROPRIATE BOX (SEE 312).*

NO LIVE BIRTH [1] (SKIP TO 321) ONE LIVE BIRTH [2] (SKIP TO 326) TWO OR MORE LIVE BIRTHS [3]

318. Have you ever had twins or triplets ?

YES [1] NO [2] (SKIP TO 320)

319. *INTERVIEWER : RECORD NUMBER OF FERTILE PREGNANCIES. (COUNT MULTIPLE BIRTHS AS ONE LIVE BIRTH).*

_____ (NUMBER)

IN SUBSEQUENT QUESTIONS USE THIS NUMBER AS NUMBER OF LIVE BIRTHS.

320. Now I want to ask you some questions about each of your children, starting with the first one you had.

INTERVIEWER : IN TABLE, CIRCLE NUMBER IN COLUMN 326, THE NUMBER OF LIVE BIRTHS MENTIONED IN 312, AND CROSS THE NEXT NUMBER. FIRST, COMPLETE 327-334 FOR ALL LIVE BIRTHS (UP TO CIRCLED NUMBER IN 326), THEN FOR EACH INTERVAL (UP TO CROSSED IN 326) COMPLETE 335-339 FOR EACH.

321. *TICK APPROPRIATE BOX (SEE 314)*

CURRENTLY PREGNANT [1] ↓

322. Aside from your current pregnancy, have there been any other times you were pregnant ? (IF NO, PROBE : I mean have you ever had a pregnancy that lasted for just a few weeks or a few months) ?

YES [1] (SKIP TO 325) NO [2] ↓

NOT CURRENTLY PREGNANT OR D.K. [2] ↓

323. Have you ever been pregnant (IF NO PROBE : I mean have you ever had a pregnancy even one that lasted just for a few weeks or a few months)?

YES [1] (SKIP TO 325) NO [2] ↓

324. Did you ever do something or have something done by a midwife or a doctor or someone else to end any pregnancy that you did not want?

YES [1] ↓

NO [2] (SKIP TO 345)

325. How many such pregnancies?

_____
(NUMBER)

FOR EACH PREGNANCY COMPLETE 336-339, RECORD THE ANSWERS IN TWO LINES PROVIDED FOR FIRST LIVE BIRTH.

FOR ALL LIVE BIRTHS (UP TO CIRCLED NUMBER IN 326)

326	327	328	329	IF D.K. IN 329 / 330	331	332	333	IF DEAD IN 333 / 334
Live birth number (CIRCLE LAST LIVE BIRTH AND CROSS NEXT NUMBER	What was his/her name ?	Was that a boy or a girl?	In what year was (NAME OF CHILD) born ?	How many years and months ago was (NAME OF CHILD) born ? (RECORD BEST ESTIMATE)	In what month was that child born? *INTERVIEWER : SPECIFY CALENDAR IF MONTH KNOWN. (TICK MUSLIM OR WESTERN, SPECIFY IF OTHER).*	How many years and months after your (first marriage, previous birth) did you have this child ?	Is he/she still living ?	How many years and months old was the child when he/she died ?
1	(NAME)	B 1 G 2	19 (YEAR) DK 99	YRS PLUS MOS	M 1 W 2 (MONTH) OTHER	YRS PLUS MOS	YES 1 NO 2	YRS PLUS MOS
2	(NAME)	B 1 G 2	19 (YEAR) DK 99	YRS PLUS MOS	M 1 W 2 (MONTH) OTHER	YRS PLUS MOS	YES 1 NO 2	YRS PLUS MOS
3	(NAME)	B 1 G 2	19 (YEAR) DK 99	YRS PLUS MOS	M 1 W 2 (MONTH) OTHER	YRS PLUS MOS	YES 1 NO 2	YRS PLUS MOS
4	(NAME)	B 1 G 2	19 (YEAR) DK 99	YRS PLUS MOS	M 1 W 2 (MONTH) OTHER	YRS PLUS MOS	YES 1 NO 2	YRS PLUS MOS
5	(NAME)	B 1 G 2	19 (YEAR) DK 99	YRS PLUS MOS	M 1 W 2 (MONTH) OTHER	YRS PLUS MOS	YES 1 NO 2	YRS PLUS MOS

FOR ALL INTERVALS (UP TO X IN 326)

INTERVAL	335	For all pregnancy in intervals			
		336	IF 7 MONTHS OR MORE		IF LESS THAN 7 MONTHS
			337	338	339
FOR THE LAST INTERVAL (IN ROW WITH X IN 326) USE "AFTER YOUR LAST BIRTH (OTHER THAN YOUR CURRENT PREGNANCY)".	Were there any times (STATE INTERVAL) that you were pregnant, even if only for a few weeks or months ? IF "YES": How many such pregnancies were there in that interval ?	How many months did the (first, second...) such pregnancy last ?	Did that baby show any sign of life after it was born ?	If "YES" : was it a boy or a girl ?	Did you or a Doctor or someone else do anything to end that pregnancy early ?
BEFORE FIRST BIRTH (USE NAME IN 327)	YES [1] →	MONTHS IF 7 MONTHS OR MORE IF LESS THAN 7 MONTHS →	YES [1] →	B [1]	YES [1]
			NO [2]	G [2]	NO [2]
	NO [2] GO TO NEXT INTERVAL, [ ] IF ANY	MONTHS IF 7 MONTHS OR MORE IF LESS THAN 7 MONTHS →	YES [1] →	B [1]	YES [1]
			NO [2]	G [2]	NO [2]
BETWEEN FIRST AND SECOND BIRTHS (USE NAME IN 327)	YES [1] →	MONTHS IF 7 MONTHS OR MORE IF LESS THAN 7 MONTHS →	YES [1] →	B [1]	YES [1]
			NO [2]	G [2]	NO [2]
	NO [2] GO TO NEXT INTERVAL, [ ] IF ANY	MONTHS IF 7 MONTHS OR MORE IF LESS THAN 7 MONTHS →	YES [1] →	B [1]	YES [1]
			NO [2]	G [2]	NO [2]
BETWEEN SECOND AND THIRD BIRTHS (USE NAME IN 327)	YES [1] →	MONTHS IF 7 MONTHS OR MORE IF LESS THAN 7 MONTHS →	YES [1] →	B [1]	YES [1]
			NO [2]	G [2]	NO [2]
	NO [2] GO TO NEXT INTERVAL, [ ] IF ANY	MONTHS IF 7 MONTHS OR MORE IF LESS THAN 7 MONTHS →	YES [1] →	B [1]	YES [1]
			NO [2]	G [2]	NO [2]
BETWEEN THIRD AND FOURTH BIRTHS (USE NAME IN 327)	YES [1] →	MONTHS IF 7 MONTHS OT MORE IF LESS THAN 7 MONTHS →	YES [1] →	B [1]	YES [1]
			NO [2]	G [2]	NO [2]
	NO [2] GO TO NEXT INTERVAL, [ ] IF ANY	MONTHS IF 7 MONTHS OR MORE IF LESS THAN 7 MONTHS →	YES [1] →	B [1]	YES [1]
			NO [2]	G [2]	NO [2]
BETWEEN FOURTH AND FIFTH BIRTHS (USE NAME IN 327)	YES [1] →	MONTHS IF 7 MONTHS OR MORE IF LESS THAN 7 MONTHS →	YES [1] →	B [1]	YES [1]
			NO [2]	G [2]	NO [2]
	NO [2] GO TO NEXT INTERVAL, [ ] IF ANY	MONTHS IF 7 MONTHS OR MORE IF LESS THAN 7 MONTHS →	YES [1] →	B [1]	YES [1]
			NO [2]	G [2]	NO [2]

FOR ALL LIVE BIRTHS (UP TO CIRCLED NUMBER IN 326)

326	327	328	329	IF D.K. IN 329 → 330	331	332	333	IF DEAD IN 333 → 334
Live birth number	What was his/her name ?	Was that a boy or a girl?	In what year was (NAME OF CHILD) born?	How many years and months ago was (NAME OF CHILD) born ? *(RECORD BEST ESTIMATE)*	In what month was that child born ? *INTERVIEWER : SPECIFY CALENDAR IF MONTH KNOWN. (TICK MUSLIM OR WESTERN, SPECIFY IF OTHER)*	How many years and months after your (first marriage, previous birth) did you have this child ?	Is he/she still living ?	How many years and months old was the child when he/she died?
6	(NAME)	B 1 G 2	19 (YEAR) DK 99	YRS PLUS MOS	M 1 W 2 (MONTH) OTHER	YRS PLUS MOS	YES 1 NO 2	YRS PLUS MOS
		9	11	15	17	20	21	23
7	(NAME)	B 1 G 2	19 (YEAR) DK 99	YRS PLUS MOS	M 1 W 2 (MONTH) OTHER	YRS PLUS MOS	YES 1 NO 2	YRS PLUS MOS
		33	35	39	41	44	45	45
8	(NAME)	B 1 G 2	19 (YEAR) DK 99	YRS PLUS MOS	M 1 W 2 (MONTH) OTHER	YRS PLUS MOS	YES 1 NO 2	YRS PLUS MOS
		57	59	63	65	68	69	71
9	(NAME)	B 1 G 2	19 (YEAR) 99	YRS PLUS MOS	M 1 W 2 (MONTH) OTHER	YRS PLUS MOS	YES 1 NO 2	YRS PLUS MOS
		9	11	15	17	20	21	23
10	(NAME)	B 1 G 2	19 (YEAR) 99	YRS PLUS MOS	M 1 W 2 (MONTH) OTHER	YRS PLUS MOS	YES 1 NO 2	YRS PLUS MOS
		33	35	39	41	44	45	45

INTERVAL

FOR ALL INTERVALS (UP TO X IN 326)

FOR THE LAST INTERVAL (IN ROW WITH X IN 326) USE "AFTER YOUR LAST BIRTH (OTHER THAN YOUR CURRENT PREGNANCY)".	335	For all pregnancy in intervals			
		336	IF 7 MONTHS OR MORE		IF LESS THAN 7 MONTHS
			337	338	339
	Were there any times (STATE INTERVAL) that you were pregnant even if only for a few weeks or months ? IF "YES": How many such pregnancies were there in that interval ?	How many months did the (first, second...) such pregnancy last ?	Did that baby show any sign of life after it was born ?	If "YES" : was it a boy or a girl ?	Did you or a Doctor or someone else do anything to end that pregnancy early ?
BETWEEN FIFTH AND SIXTH BIRTHS (USE NAME IN 327)	YES [1] ——→	MONTHS IF 7 MONTHS OR MORE IF LESS THAN 7 MONTHS	YES [1] →	B [1]	YES [1]
			NO [2]	G [2]	NO [2]
	NO [2] GO TO NEXT INTERVAL, [ ] IF ANY	MONTHS IF 7 MONTHS OR MORE IF LESS THAN 7 MONTHS	YES [1] →	B [1]	YES [1]
			NO [2]	G [2]	NO [2]
BETWEEN SIXTH AND SEVENTH BIRTHS (USE NAME IN 327)	YES [1] ——→	MONTHS IF 7 MONTHS OR MORE IF LESS THAN 7 MONTHS	YES [1] →	B [1]	YES [1]
			NO [2]	G [2]	NO [2]
	NO [2] GO TO NEXT INTERVAL, [ ] IF ANY	MONTHS IF 7 MONTHS OR MORE IF LESS THAN 7 MONTHS	YES [1] →	B [1]	YES [1]
			NO [2]	G [2]	NO [2]
BETWEEN SEVENTH AND EIGHTH BIRTHS (USE NAME IN 327)	YES [1] ——→	MONTHS IF 7 MONTHS OR MORE IF LESS THAN 7 MONTHS	YES [1] →	B [1]	YES [1]
			NO [2]	G [2]	NO [2]
	NO [2] GO TO NEXT INTERVAL, [ ] IF ANY	MONTHS IF 7 MONTHS OR MORE IF LESS THAN 7 MONTHS	YES [1] →	B [1]	YES [1]
			NO [2]	G [2]	NO [2]
BETWEEN EIGHTH AND NINTH BIRTHS (USE NAME IN 327)	YES [1] ——→	MONTHS IF 7 MONTHS OT MORE IF LESS THAN 7 MONTHS	YES [1] →	B [1]	YES [1]
			NO [2]	G [2]	NO [2]
	NO [2] GO TO NEXT INTERVAL, [ ] IF ANY	MONTHS IF 7 MONTHS OR MORE IF LESS THAN 7 MONTHS	YES [1] →	B [1]	YES [1]
			NO [2]	G [2]	NO [2]
BETWEEN NINTH AND TENTH BIRTHS (USE NAME IN 327)	YES [1] ——→	MONTHS IF 7 MONTHS OR MORE IF LESS THAN 7 MONTHS	YES [1] →	B [1]	YES [1]
			NO [2]	G [2]	NO [2]
	NO [2] GO TO NEXT INTERVAL, [ ] IF ANY	MONTHS IF 7 MONTHS OR MORE IF LESS THAN 7 MONTHS	YES [1] →	B [1]	YES [1]
			NO [2]	G [2]	NO [2]

FOR ALL LIVE BIRTHS (UP TO CIRCLED NUMBER IN 326)

326	327	328	329	IF D.K. IN 329 / 330	331	332	333	IF DEAD IN 333 / 334
Live birth number (CIRCLE LAST LIVE BIRTH AND CROSS NEXT NUMBER)	What was his/her name ?	Was that a boy or a girl?	In what year was (NAME OF CHILD) born ?	How many years and months ago was (NAME OF CHILD) born ? (*RECORD BEST ESTIMATE*)	In what month was that child born ? *INTERVIEWER : SPECIFY CALENDAR IF MONTH KNOWN. (TICK MUSLIM OR WESTERN, SPECIFY IF OTHER).*	How many years and months after your (first marriage, previous birth) did you have this child ?	Is he/she still living ?	How many years and months old was the child when he/she died ?
11	(NAME)	B [1] G [2] 9	19 (YEAR) DK [99] 11	YRS PLUS MOS 15	M [1] W [2] (MONTH) OTHER 17	YRS PLUS MOS 20	YES [1] NO [2] 21	YRS PLUS MOS 23
12	(NAME)	B [1] G [2] 33	19 (YEAR) DK [99] 35	YRS PLUS MOS 39	M [1] W [2] (MONTH) OTHER 41	YRS PLUS MOS 44	YES [1] NO [2] 45	YRS PLUS MOS 47
13	(NAME)	B [1] G [2] 57	19 (YEAR) DK [99] 59	YRS PLUS MOS 63	M [1] W [2] (MONTH) OTHER 65	YRS PLUS MOS 68	YES [1] NO [2] 69	YRS PLUS MOS 71
14	(NAME)	B [1] G [2] 9	19 (YEAR) [99] 11	YRS PLUS MOS 15	M [1] W [2] (MONTH) OTHER 17	YRS PLUS MOS 20	YES [1] NO [2] 21	YRS PLUS MOS 23
15	(NAME)	B [1] G [2] 33	19 (YEAR) [99] 35	YRS PLUS MOS 39	M [1] W [2] (MONTH) OTHER 41	YRS PLUS MOS 44	YES [1] NO [2] 45	YRS PLUS MOS 47

FOR ALL INTERVALS (UP TO X IN 326)

INTERVAL	335	For all pregnancy in intervals			
		336	IF 7 MONTHS OR MORE		IF LESS THAN 7 MONTHS
			337	338	339
FOR THE LAST INTERVAL (IN ROW WITH X IN 326) USE "AFTER YOUR LAST BIRTH (OTHER THAN YOUR CURRENT PREGNANCY)".	Were there any times (STATE INTERVAL) that you were pregnant even if only for a few weeks or months ? IF "YES": How many such pregnancies were there in that interval ?	How many months did the (first, second,..) such pregnancy last ?	Did that baby show any sign of life after it was born ?	If "YES" : was it a boy or a girl ?	Did you or a Doctor or someone else do anything to end that pregnancy early ?
BETWEEN TENTH AND ELEVENTH BIRTHS (USE NAME IN 327)	YES [1] →	MONTHS IF 7 MONTHS OR MORE IF LESS THAN 7 MONTHS →	YES [1] →	B [1]	YES [1]
			NO [2] →	G [2]	NO [2] →
	NO [2] GO TO NEXT INTERVAL, [ ] IF ANY	MONTHS IF 7 MONTHS OR MORE IF LESS THAN 7 MONTHS →	YES [1] →	B [1]	YES [1]
			NO [2] →	G [2]	NO [2] →
BETWEEN ELEVENTH AND TWELFTH BIRTHS (USE NAME IN 327)	YES [1] →	MONTHS IF 7 MONTHS OR MORE IF LESS THAN 7 MONTHS →	YES [1] →	B [1]	YES [1]
			NO [2] →	G [2]	NO [2] →
	NO [2] GO TO NEXT INTERVAL, [ ] IF ANY	MONTHS IF 7 MONTHS OR MORE IF LESS THAN 7 MONTHS →	YES [1] →	B [1]	YES [1]
			NO [2] →	G [2]	NO [2] →
BETWEEN TWELFTH AND THIRTEENTH BIRTHS (USE NAME IN 327)	YES [1] →	MONTHS IF 7 MONTHS OR MORE IF LESS THAN 7 MONTHS →	YES [1] →	B [1]	YES [1]
			NO [2] →	G [2]	NO [2] →
	NO [2] GO TO NEXT INTERVAL, [ ] IF ANY	MONTHS IF 7 MONTHS OR MORE IF LESS THAN 7 MONTHS →	YES [1] →	B [1]	YES [1]
			NO [2] →	G [2]	NO [2] →
BETWEEN THIRTEENTH & FOURTEENTH BIRTHS (USE NAME IN 327)	YES [1] →	MONTHS IF 7 MONTHS OT MORE IF LESS THAN 7 MONTHS →	YES [1] →	B [1]	YES [1]
			NO [2] →	G [2]	NO [2] →
	NO [2] GO TO NEXT INTERVAL, [ ] IF ANY	MONTHS IF 7 MONTHS OR MORE IF LESS THAN 7 MONTHS →	YES [1] →	B [1]	YES [1]
			NO [2] →	G [2]	NO [2] →
BETWEEN FOURTEENTH & FIFTEENTH BIRTHS (USE NAME IN 327)	YES [1] →	MONTHS IF 7 MONTHS OR MORE IF LESS THAN 7 MONTHS →	YES [1] →	B [1]	YES [1]
			NO [2] →	G [2]	NO [2] →
	NO [2] GO TO NEXT INTERVAL, [ ] IF ANY	MONTHS IF 7 MONTHS OR MORE IF LESS THAN 7 MONTHS →	YES [1] →	B [1]	YES [1]
			NO [2] →	G [2]	NO [2] →

340. Did you feed _____(NAME OF "MOST RECENT CHILD") at the breast?

YES [1] NO [2] (SKIP TO 342)

341. For how many months did you feed (him/her) at the breast?

_____(MONTHS) STILL BREAST FEEDING [88]

342. *INTERVIEWER: TICK APPROPRIATE BOX (SEE 326).*

ONE LIVE BIRTH [1] (SKIP TO 345)

TWO OR MORE LIVE BIRTHS [2]

343. And did you feed _____(NAME OF SECOND TO LAST CHILD) at the breast?

YES [1] NO [2] (SKIP TO 345)

344. For how many months did you feed (him/her) at the breast?

_____(MONTHS)

INTERVIEWER: TICK APPROPRIATE BOXES IN 345 AND 346 BEFORE STARTING SECTION 4.

345. RESPONDENT'S ABILITY TO GIVE DATES OF EVENTS

GOOD [1] FAIR [2] POOR [3]

346. PRESENCE OF OTHERS AT THIS POINT (TICK ALL THAT APPLY)

NO OTHERS [0]

CHILDREN UNDER 10 [1]

HUSBAND [2]

OTHER MALES [4]

OTHER FEMALES [8]

SECTION 5: FERTILITY REGULATION

501. *INTERVIEWER: TICK APPROPRIATE BOX (SEE 301)*

MARRIED AND LIVING WITH HUSBAND ☐ → 502

SEPARATED, WIDOWED OR DIVORCED ☐ (SKIP TO 599)

502. *INTERVIEWER: TICK APPROPRIATE BOX (SEE 314)*

NOT CURRENTLY PREGNANT OR D.K. ☐ → 503

CURRENTLY PREGNANT ☐ → 507

503. As far as you know, is it physically possible for you and your husband to have a child supposing you wanted one?

YES [1] → 504 NO [2] (SKIP TO 599) D.K. [3] → 504

504. *INTERVIEWER: TICK APPROPRIATE BOX (SEE 313)*

NO LIVE BIRTH ☐ → 505

ONE OR MORE LIVE BIRTHS ☐ → 507

505. Do you want to have any children?

YES [1] → 506 NO [2] (SKIP TO 599)

UNDECIDED [3] (SKIP TO 599)

506. Would you prefer your next child to be a boy or a girl?

BOY [1] GIRL [2]

EITHER [3] OTHER [4]

507. Do you want to have another child sometime (in addition to the one you are expecting)?

YES [1] → 508 NO [2] (SKIP TO 599) UNDECIDED [3] (SKIP TO 599)

508. Would you prefer your next child to be a boy or a girl?

BOY [1] GIRL [2]

EITHER [3] OTHER [4]

509. How many more children do you want to have (after the one you are expecting?

_____

(NUMBER)

599. If you could choose exactly the number of children to have in your whole life, how many children would that be?

_____

(NUMBER)

INTERVIEWER: TICK APPROPRIATE BOX (SEE 201)

803. MARRIED LIVING WITH HUSBAND ☐ → 804

SEPARATED, WIDOWED OR DIVORCED ☐ (END INTERVIEW)

804. What is your husband's age?

_____(YEARS)

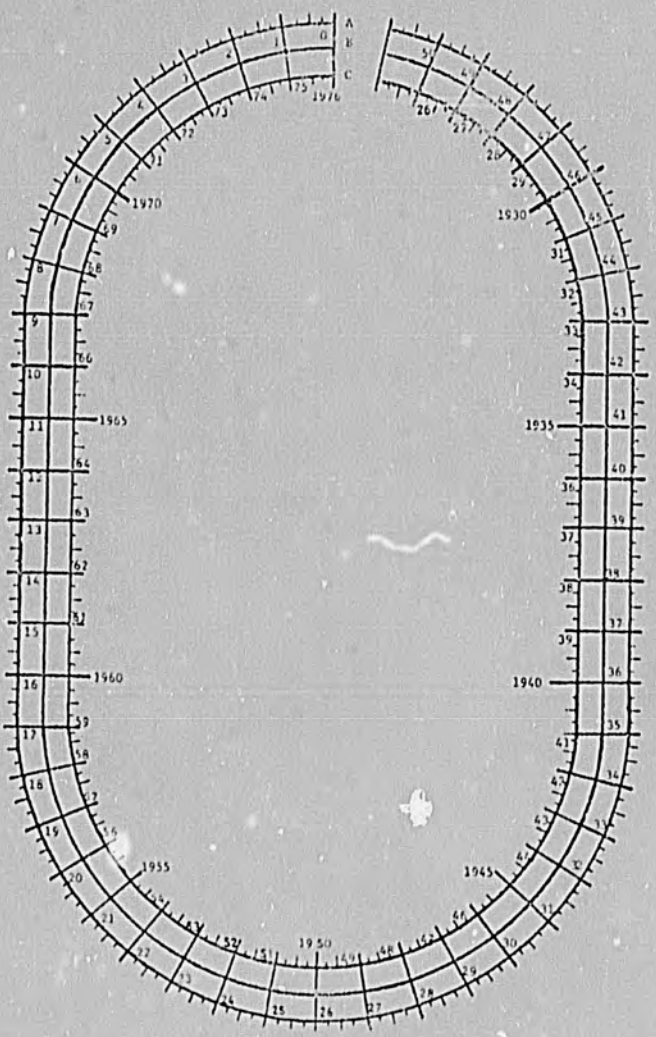
(RECORD BEST ESTIMATE)

(END INTERVIEW)

INDONESIA FERTILITY SURVEY

EVENTS CHART

A = Umur Responden (Age of Respondent)
B = Sekian tahun yang lalu (Years Ago)
C = Tahun (Year)



3 SUPERVISOR'S CONTROL SHEET

INDONESIA RELIABILITY SURVEY — SUPERVISOR'S CONTROL SHEET

PLACE NAME _____ SUPERVISOR _____

CASES	ROUNDS	ADDRESS+LOCATION	NAME OF RESPONDENT	I.F.S. IDENTIFICATION No.	INTERVIEWER'S I.D. No: I.F.S.	I.R.S.	DATE ASSIGNED	RESULT CODE: INT	SUP	REMARKS
1.	R1									
	R2									
	R3									
	R3'									
2.	R1									
	R2									
	R3									
	R3'									
3.	R1									
	R2									
	R3									
	R3'									
4.	R1									
	R2									
	R3									
	R3'									
5.	R1									
	R2									
	R3									
	R3'									
6.	R1									
	R2									
	R3									
	R3'									
7.	R1									
	R2									
	R3									
	R3'									
8.	R1									
	R2									
	R3									
	R3'									
9.	R1									
	R2									
	R3									
	R3'									
10.	R1									
	R2									
	R3									
	R3'									

LAY-OUT OF THE CODING SHEETS

CODING SHEET	COLUMN	
Card 1	1	Round*
	2	Card Type
	3-5	Interviewer's Identity Number
	6-29	Section 1, Respondent's Background
	30-71	Section 2, Marriage History
Card 2	1	Round*
	2	Card Type
	3-36	Section 3, Maternity History
Card 3-5	1	Round*
	2	Card Type
	3-26	Birth interval 1
	27-50	Birth interval 2
	51-74	Birth interval 3
	Repeated on cards 4 and 5 giving up to 9 birth intervals.	
Card 6	1	Round*
	2	Card Type
	3-12	Section 3, Maternity History
	13-19	Section 5, Fertility Regulation
	20-72	Section 6, Family Planning*
	73-74	Section 8, Current (Last) Husbands Background.
	75-80	IFS Identity Number.

It was originally planned to include Section 6 on Family Planning in the Reliability Study, but this was subsequently excluded after discussions with the Indonesian executive agencies. The space provided for this section on the pre-printed coding sheets was left blank.

The coding provided for had the following limitations:

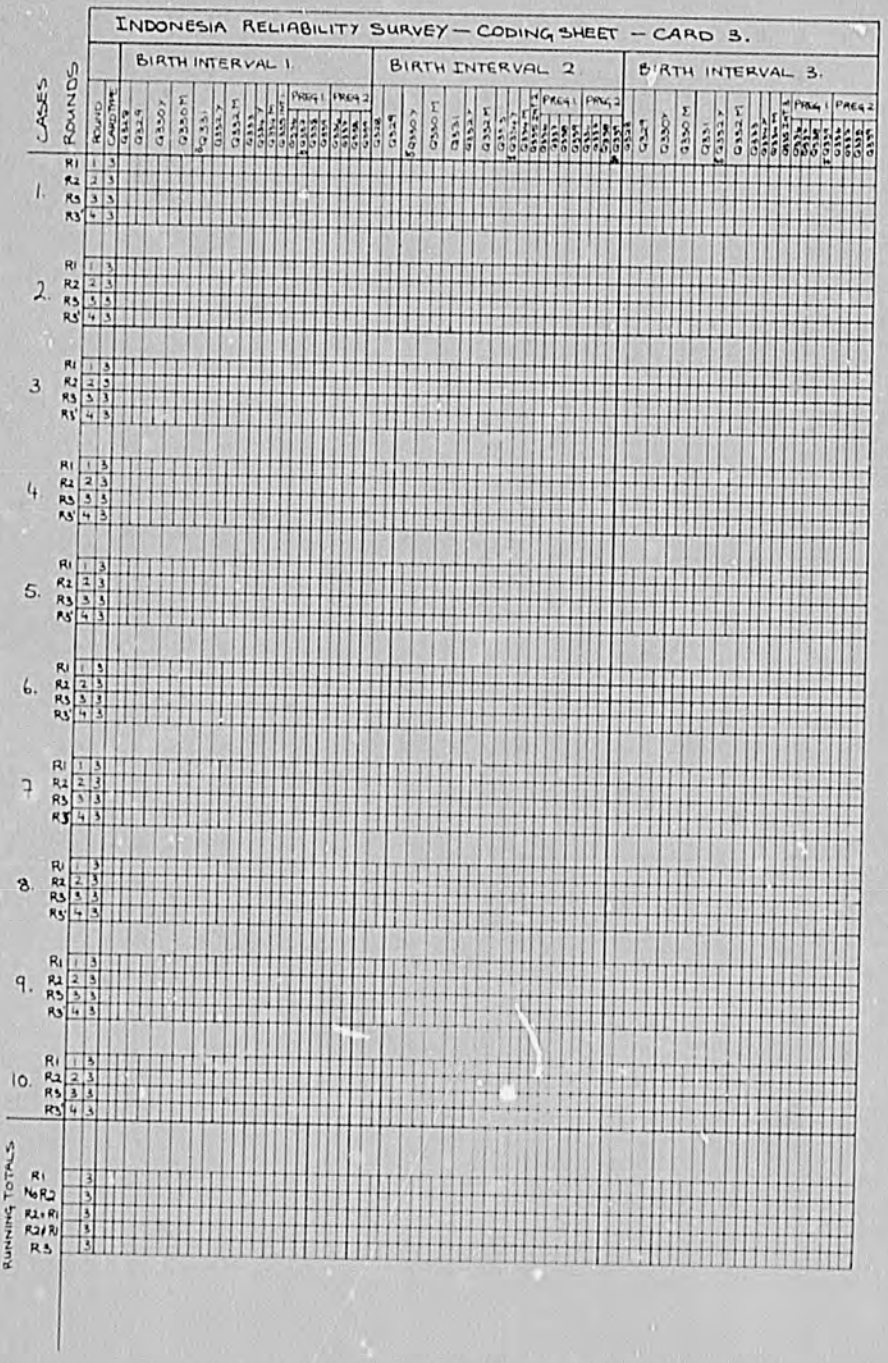
1) In Section 2, Marriage History, space was only provided for the coding of two marriages, first and current marriage.

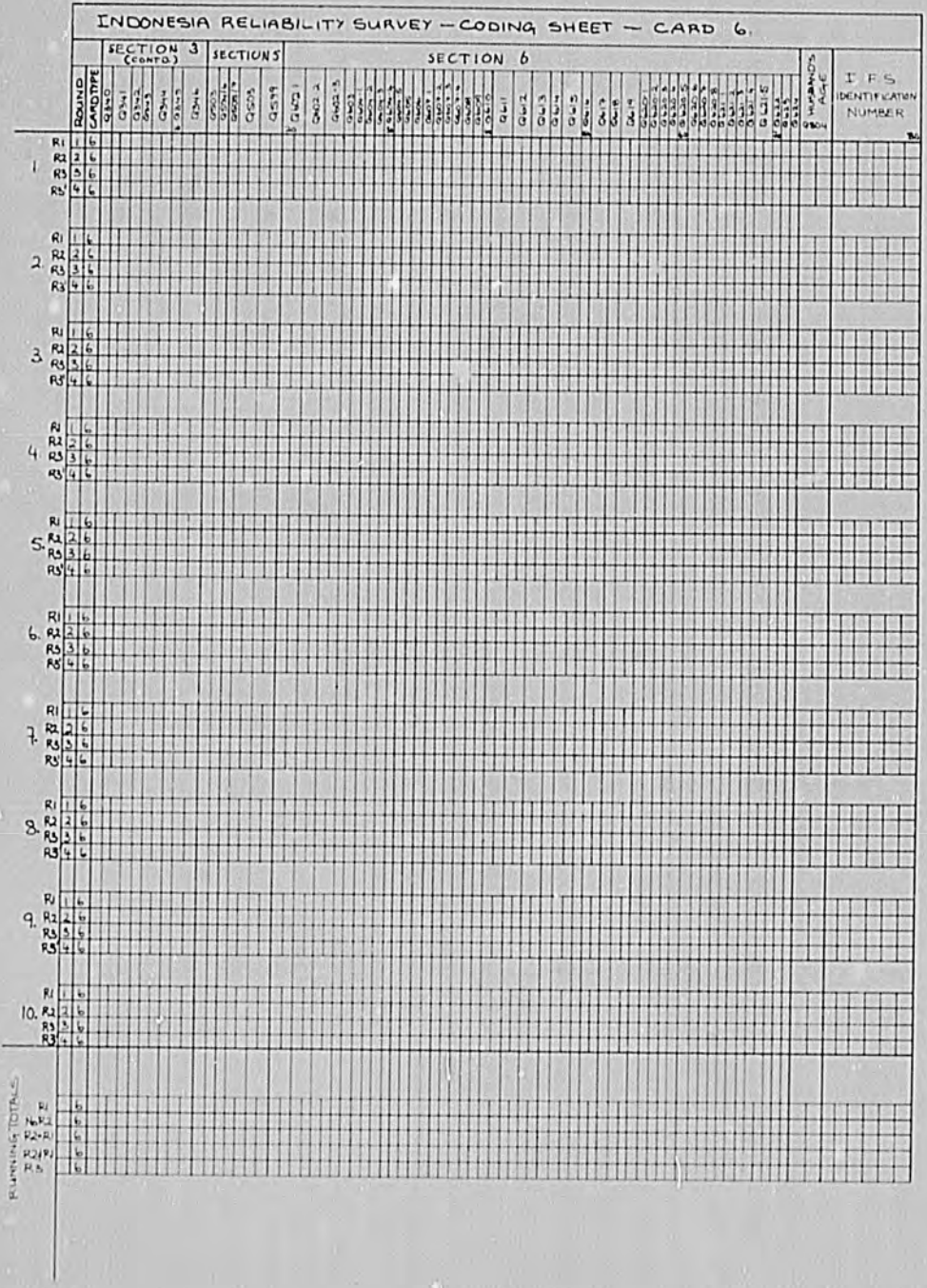
2) In Section 3, Birth History, space was provided for up to nine birth intervals (1st - 9th) and within each interval for two pregnancies. This was done merely to conserve space and was found adequate for the vast majority, approximately 95 per cent, of the interviews.

The IFS identity number was only coded once to eliminate errors in entering the 6-digit numbers. The sheets were so designed that sheets 1-5 were narrower than sheet 6 (i.e., only extended to column 74) and thus sheet 6 extending to the full 80 columns, showed the relevant identity number for the full set of sheets when stapled together. The results of the IFS questionnaire were transcribed onto these coding sheets for the selected respondents and given to the supervisors before going into the field for the reliability study interviews.

---

* Round refers to the type of interview: original interview, re-interview or reconciliation interview. R3 was planned to be used for coding error-type, due to shortage of time, codes could not be developed and were left blank.




INDONESIA RELIABILITY SURVEY — CODING SHEET — CARD 6.
SECTION 3 (CONTD.)
SECTION 5
SECTION 6
ROUND
CARDTYPE
IFS IDENTIFICATION NUMBER
RUNNING TOTALS

APPENDIX II

Staff of the Indonesia Reliability Study

Indonesia Fertility Study HQ staff who gave full-time assistance during the IRS were:

Bambang Sungkono
Sri Poedjastoeti
Toto F. Sastrasuanda
Ayub Rusyadi

WFS staff in attendance were:

Alphonse MacDonald
Agnes Whitfield

The Provincial Statistical Officers involved in the Study were:

Soejipto Wirosarajono	Jakarta
Sutopo Martowarddoyo	West Java
Sukarno Slamet	Central Java
Soewondo HP	Yogyakarta
Soekayat Darmosuwito	East Java
Ida Kade Surya	Bali

SELECTED BACKGROUND INFORMATION OF THE FIELD STAFF OF THE INDONESIA RELIABILITY STUDY, BY PROVINCE

Province	Name	Status S/C/I*	Age	Sex M/F	Education	Marital status	Previous employment
East Java	Soebandi	S	33	M	Economics (Business Admin.)	Married	University Teaching
	Nural Hayati	C	27	F	B.Sc. Econ.	Single	–
	Sri Nirbito	I	28	M	B.Sc. Econ.	Single	–
	Ratna Siandayami	I	25	F	B.Sc. Econ.	Single	–
	Resmiasih	I	27	F	B.Sc. Econ.	Single	–
	Nuryati	I		F	B.Sc. Econ.	Single	–
Central Java	Jera Uripi Hernowo	S	24	F	Student, Faculty of Medicine Diponegoro University	Single	–
	Soelistyawati Soejadi	C	28	F	Student, Fac. of Engineering Diponegoro University	Single	–
	Astum Kusti Wahyuni	I	20	F	,, ,,	Single	–
	Naniek Sawitri	I	20	F	,, ,,	Single	–
	Suntari	I	28	F	,, ,,	Single	–
	Nafiah	I	20	F	,, ,,	Single	–
Yogyakarta	Nursinah Amal Urai	S	24	F	Academy of Statistics	Married	Staff Census & Statistics Office, Province: Bali
	Ida Aya Komang Surasmini	C	25	F	Academy of Bank, Grade III	Married	Staff Census & Statistics Office, Province: Bali
	Murdiati	I	24	F	B.Sc. Agriculture	Single	Coder
	Sri Semadi Suroso	I	31	F	Midwife	Married	Coder
	Isdaryam	I	24	F	B.Sc. Agriculture	Single	Coder
	Sim Muryam	I	22	F	B.Sc. Economics	Single	Coder
	Umi Jipiniah	I	29	F	M.A. Sociology	Married	Coder
	Ida Aya Ka de Tardjini	I	27	F	Foreign Language Academy Grade III	Married	–
	Nyoman Ruth	I	23	F	,, ,, ,,	Single	–
	Ni Nyoman Ritaheni	I	23	F	,, ,, ,,	Single	–
Bali	Ni Ketut Wiriati	I	23	F	Udayana University (Econ. Faculty Grade)	Single	Staff Census and Statistics Office, Kabupaten Badung
	Ni Made Murningsih	I	23	F	Senior High School	Single	–
	Soebandi	S	33	M	B.Sc. Econ.	Married	University Teaching
	Nural Hayati	C	27	F	B.Sc. Econ.	Single	–
	Sri Nirbito	I	28	F	B.Sc. Econ.	Single	–
	Ratna Scandryani	I	25	F	B.Sc. Econ.	Single	–
	Rasoniashih	I	27	F	B.Sc. Econ.	Single	–
	Nuryati	I	27	F	B.Sc. Econ.	Single	–
West Java	Suprapto	S	26	M	Faculty of Agriculture, Padjadjaran University	Single	–
	Saut Munthe	C	23	M	Faculty of Law, Pagjadjaran University	Single	–
	Herawati Kartasa	I	26	F	Faculty of Medicine, Padjadjaran University	Single	–
	Nani Siti Amaliani	I	24	F	Faculty of Letters, Padjadjaran University	Single	–
	Sri Ernawati	I	20	F	Faculty of Agriculture, Padjadjaran University	Single	–
	Inna Arlimansyah	I	22	F	Faculty of Letters, Padjadjaran University	Single	–
	Vera Uripi Hernowo	I	24	F	Student, Faculty of Medicine, Diponegoro University	Single	Supervisor
	Soelistyawati Soejadi	I	28	F	Student, Faculty of Engineering, Diponegoro University	Single	Coder
	Astum Kusti Wahyuni	I	20	F	,,	Single	Interviewer
	Naniek Sawitri	I	20	F	,,	Single	–
	Suntari	I	28	F	,,	Single	–
	Nafiah	I	20	F	,,	Single	–

* S = Supervisor; C = Coder/Editor; I = Interviewer

Province	Name	Status S/C/I*	Age	Sex M/F	Education	Marital status	Previous employment
D.K.I. Jakarta	Ris Mah Judin	S	28	M	University of Indonesia, Economics Faculty Grade 4	Single	Staff Census & Statistics Office D.K.I. Jakarta
	Titik N.	C	22	F	University of Indonesia, Economics Faculty Grade 2	Single	
	Rhina W.	C	23	F	University of Indonesia, Economics Faculty Grade 2	Single	
	Dewi Murni	I	21	F	University of Indonesia, Economics Faculty Grade 2	Single	
	Rina H.	I	24	F	University of Indonesia, Economics Faculty Grade 2	Single	
	Sabartini	I	25	F	University of Indonesia, Economics Faculty Grade 2	Single	
	Herlina	I	22	F	Student, Academy Managers' Secretary	Single	
	Padmasari	I	23	F	University of Indonesia, Economics Faculty Grade 2	Single	
	Waspada	I	39	M	B.A.	Married	K.S.S. Staff Supervisor
	Sri Hartati	I	31	F	M.A. Geography	Married	Coder

APPENDIX III

Data Processing Details

1. EDITING

1.1 IDENTIFICATION EDIT

At WFS London a listing of the data on the tape was made and it became apparent that some card images had no identification number. To find out how to amend these errors, the original listing was scrutinized carefully. The WFS *Guidelines for Data Processing* recommend that a format check should be carried out **before** sorting to detect and correct identification errors. In this case it had, erroneously, been thought unnecessary. Correction of the file could be done in two ways:

1) By putting the file on-line and manually updating the incorrect card images by on-line edit software;
2) By writing a program to correct the incorrect data by the position of the card image in the file.

Since procedure 2) is subject to error itself, procedure 1) was chosen. The corrections were made, the file sorted again and written onto the tape.
In scrutinizing the listings it was noted that (a) for some questionnaires there were repeated card types; and (b) there were several obvious column shifts. It was therefore decided that some editing was necessary.

1.2 STRUCTURE EDIT

A structure edit was done. It was difficult to specify the structure uniquely as the data were coded inconsistently. For instance, in some cases the last open birth interval was always coded while in others it was only coded if an additional pregnancy occurred. Two edit runs were done. Most of the repeated card types were apparently due to mispunchings and they were corrected using the original unsorted listings. Some errors were probably caused by some misunderstanding about the pregnancy history in the reliability study. Only nine live births were considered in the reliability study, but some interviewers apparently tried to fit more live births into the table. These were also coded. These excess live births were deleted. A general structure edit program was used. This was written by M. Pearce, WFS central staff.

1.3 RANGE EDIT

A range edit using CONCOR[1] was performed on all fields. Not only were errors in ranges detected, but some column shifts were also found. When possible (i.e., where it was clear that a punch error had been committed) corrections were made. Two respondents had reported their age as 50 years or more. These data were not deleted since they could be excluded from the relevant tabulations. No attempt was made to do a consistency check.

1.4 BIRTH HISTORY EDIT

A program was prepared to produce a fixed length file (file 1) which consisted of the data from the original interview and the re-interview. It consisted of the six card types for each respondent in each interview. Missing card types were replaced by dummy cards. A summary of the number of differences found in each field was prepared from this file. In this summary an extraordinarily large number of differences in the sex of the live births was found and a program was therefore written to verify whether differences in sex occurred for each live birth (including cases in which one of the interviews reported sex as "blank"). In cases where differences were found the whole birth history was printed out. By scrutinizing the records of each case obvious mispunchings could be detected and corrected. In addition, if a birth had occurred between the two interviews it did not appear on the newly created file (file 2).

2 RECODING

Since age data (i.e. age, age at marriage and age at first birth) had been obtained in two different ways, for each of the age variables a composite variable was constructed. Some other related variables were constructed, such as difference between AGES[2], difference between intervals, etc.

3 TABULATIONS

Using file 2 which was of fixed length, MINITAB was used to produce all tables.

---

[1] An editing package originally developed by CELADE, the United Nations Demographic Centre for Latin America, distributed by the WFS Data Processing Department.

[2] AGE, AGE AT (FIRST) MARRIAGE and AGE AT FIRST LIVE BIRTH.

APPENDIX IV

Details of Tables 5, 6, 14 and 20

Attached is a series of tables from the Indonesia Reliability Survey giving the results of the original interview and the re-interview. A few observations should be stated to avoid problems:

The total sample size does not always amount to 497. Invalid codes were excluded from the tabulations.

There are some discrepancies between the sizes of different categories of some variables. This occurred because the data were not office edited; they are a result of transcribing or coding errors.

The tables presented cover basically background variables and attitudes and opinion questions. The age data are not repeated here because they are treated extensively in the text.

DETAILS OF TABLE 5: BACKGROUND VARIABLES

Q.112 Have you always lived in _____ ?

		Re-interview		
		YES	NO	TOTAL
Original Interview	YES	233	33	266
	NO	14	215	229
	TOTAL	247	248	495

Q.110 Have you ever attended school?

		Re-interview		
		YES	NO	TOTAL
Original Interview	YES	318	10	328
	NO	6	161	167
	TOTAL	324	171	495

Q.111 What was the highest level of school you attended - primary, junior high, senior high, academy or university ?

Original Interview	Re-interview						
	Primary	Junior High	Senior High	Academy	University	NA	TOTAL
Primary	198	12	0	0	0	9	219
Jun High	6	36	5	0	0	0	47
Sen High	0	3	41	1	2	0	47
Academy	0	0	1	2	0	0	3
University	0	0	2	0	9	0	11
NA *	7	0	0	0	0	163	170
TOTAL	211	51	49	3	11	172	497

* *NA = Not Applicable*

Q.113 Did you graduate from _____ ?
(HIGHEST LEVEL ATTENDED)

		Re-interview			
		YES	NO	NA	TOTAL
Original Interview	YES	93	27	1	121
	NO	14	183	10	207
	NA	0	6	163	169
	TOTAL	107	216	174	497

Q.116 Can you read in any language, say a simple letter ?

Original Interview \ Re-interview	YES	NO	NA	TOTAL
YES	128	15	9	152
NO	14	157	2	173
NA	6	2	164	172
TOTAL	148	174	175	497

Q.117 Can you write in any language, say a simple letter ?

Original Interview \ Re-interview	YES	NO	NA	TOTAL
YES	111	8	18	137
NO	4	5	6	15
NA	12	5	328	345
TOTAL	127	18	352	497

Q.201 Are you married, widowed, divorced or separated ?

Original Interview \ Re-interview	Married	Widowed	Divorced	Separated	TOTAL
Married	442	0	1	2	445
Widowed	0	21	1	0	22
Divorced	1	3	14	1	19
Separated	3	2	0	4	9
TOTAL	446	26	16	7	495

Q.206 Does your husband live in this household ?

Original Interview \ Re-interview	YES	NO	NA	TOTAL
YES	425	3	8	436
NO	4	4	1	9
NA	3	1	48	52
TOTAL	432	8	57	497

Q.211 Have you been married more than once ?

Original Interview \ Re-interview	NO	YES	NA	TOTAL
NO	342	13	3	358
YES	9	78	1	88
NA	1	3	45	49
TOTAL	352	94	49	495

DETAILS OF TABLE 6 : FERTILITY DATA

Q.301 Do you have any sons you have given birth to, now living with you?

Original Interview \ Re-interview	YES	NO	TOTAL
YES	343	8	351
NO	3	143	146
TOTAL	346	151	497

Q.302 Number of sons living at home.

Original Interview \ Re-interview	0	1	2	3	4	5	6	7	TOTAL
0	143	3							146
1	4	133	1						138
2	4	3	94	3					104
3			1	58	2				61
4			1	4	23	1			29
5				1	1	12			14
6							3		3
7								2	2
TOTAL	151	139	97	66	26	13	3	2	497

Q.303 Do you have any sons you have given birth to, who do not live with you?

Original Interview \ Re-interview	YES	NO	TOTAL
YES	49	10	59
NO	7	431	438
TOTAL	56	441	497

Q.304 Number of sons living away.

Original Interview \ Re-interview	0	1	2	TOTAL
0	430	7	1	438
1	10	34	3	47
2			12	12
TOTAL	440	41	16	497

Q.305 Do you have any daughters you have given birth to, now living with you?

Original Interview \ Re-interview	YES	NO	TOTAL
YES	342	5	347
NO	1	149	150
TOTAL	343	154	497

Q.306 Number of daughters living at home.

Original Interview \ Re-interview	0	1	2	3	4	5	6	7	TOTAL
0	145	4							149
1	5	129	3						137
2		5	103	2					110
3			3	54					57
4			1	3	27				31
5					2	9			11
6						1		1	2
7									0
TOTAL	150	138	110	59	29	10	0	1	497

Q.307 Do you have any daughters you have given birth to, who do not live with you?

Original Interview \ Re-interview	YES	NO	TOTAL
YES	71	1	72
NO	12	413	
TOTAL	83	414	497

Q.308 Number of daughters away.

Original Interview \ Re-interview	0	1	2	3	4	5	TOTAL
0	416	12					428
1	1	38	1	1			41
2		4	18				22
3				2	1		3
4				1	1	1	3
5							0
TOTAL	417	54	19	4	2	1	497

Q.309 Number of living children

Original Interview \ Re-interview	0	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
0	51														51
1	3	77	1												81
2			87												87
3	2	1		68											71
4				2	57	1									60
5						54	1								55
6						1	35	1							37
7							1	26							27
8									13	1					14
9										7					7
10											3	1			4
11												2			2
12													0		0
13														1	1
TOTAL	56	78	88	70	57	56	37	27	13	8	3	3	0	1	497

Q.310 Have you ever given birth to any boy or girl who later died, even if the child lived for only a few days or months?

Original Interview \ Re-interview	YES	NO	TOTAL
YES	148	13	161
NO	13	323	336
TOTAL	161	336	497

Q.311 Number of children died.

Original Interview \ Re-interview	0	1	2	3	4	5	6	TOTAL
0	323	9	1	2	1			336
1	11	87	1	1				100
2		1	26	2				29
3	1	1	1	14	2			19
4	1		1		5		1	8
5					1	1	1	3
6							2	2
TOTAL	336	98	30	19	9	1	4	497

Q.312 Number of live births

Original \ Re-interview	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	TOTAL
0	44	1															45
1	2	65	2														69
2		1	75	4													80
3		1	2	59	1												63
4	1			3	44												48
5		1			3	55	3	2	1								65
6				1		1	33			1							36
7							1	34	2	1		1					39
8							2	1	16	2							21
9										7							7
10										1	8	2					11
11												8					8
12												1	2				3
13														0			0
14														1	0		1
15+																1	1
TOTAL	47	69	79	67	48	56	39	37	19	12	8	12	2	1	0	1	497

DETAILS OF TABLE 14: DATE AND AGE REPORTING

Q.106/107 Constructed Age

Original Interview \ Re-interview	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	TOTAL
10-14	1	1							2
15-19	1	22	4	1					28
20-24		3	68	12					83
25-29		2	8	80	11	5			106
30-34			2	8	59	7	2		78
35-39			1	2	5	55	11	3	77
40-44				1	5	4	46	14	70
45-49						1	15	35	51
TOTAL	2	28	83	104	80	72	74	52	495

Q.108 In what month were you born?

Original interview	Re-interview: DK	January	February	March	April	May	June	July	August	September	October	November	December	TOTAL
DK	266	2	4	2	1		1	5	3	2	1		4	291
January	4	12												16
February	5		6						1					13
March	4		1	22					1					28
April	2				9		1							11
May	1		1			13			1	1	2			19
June	1						12	2						16
July	4		1				1	13	1	1				18
August	8				3			1	17	1				27
September	1								1	13				15
October	2							1			10			13
November	1											8	3	12
December	2								1	1	1		13	18
TOTAL	300	14	13	24	12	13	15	19	26	19	14	8	20	497

Q.205 What month of the year was it when you and your husband got married?

Original Interview	Re-interview: DK	January	February	March	April	May	June	July	August	September	October	November	December	TOTAL
DK	144	1	2	2	3	1	6	4	6	2	3		2	176
January	6	12	1									1		20
February	3	1	9						2		1	2	1	19
March	2		1	15	4		3	1	2	2			1	31
April	4				11	1	1	4	2		1	1	2	27
May	3		1	1		10							2	17
June	1			2			17	1				1		22
July	1	2			1		1	21	3	1		1	1	32
August	8			1	3			2	27	2		1	1	45
September	3						1		1	16	1		1	23
October	1			1	1	1			2		20		1	27
November	1			1				1				5	1	9
December	5	3		2		1	2	2				1	33	49
TOTAL	182	19	14	25	23	14	31	36	45	23	26	13	46	497

Q.331 In what month was that child (first live birth) born?

Original interview / Re-interview

	DK	January	February	March	April	May	June	July	August	September	October	November	December	TOTAL
DK	83		4	6	3	4	6	2	4	3	2	1	3	119
January	1	9		1	1				1	1			1	12
February	3		8					1			1	1	3	17
March	1			17	5		1			1				24
April	4	1	1		26	1	1				3	2	1	37
May		1		1	1	16	1			1				21
June	3				2		19	1		4		1	1	30
July	3			1	2	2	3	23	1			4	2	39
August	3	1		1					27	1		3	1	37
September	4		1	1					1	23	1			31
October	2							2	1	1	15			21
November	6	1					1	1			2	14		27
December		2	2			1	2		2				29	38
TOTAL	115	12	16	29	33	24	33	30	37	33	24	26	41	453

DETAILS OF TABLE 20 : ATTITUDES AND OPINIONS

Q.103/105 What kind of area would you say this (that)was when you were growing up, say to the age of 12? Was it a village, a town or a city?

Original Interview \ Re-interview	Village	Town	City	Other	TOTAL
Village	235	43	7	0	285
Town	44	76	19	3	142
City	13	23	29	0	65
Other	1	2	0	2	5
TOTAL	293	144	55	5	497

Q.503/505 As far as you know, is it physically possible for you and your husband to have a child supposing you wanted one?

Original Interview \ Re-interview	YES	NO	DK	NA	TOTAL
YES	197	11	18	15	241
NO	4	75	5	2	86
DK	17	11	27	0	55
NA	33	2	6	69	110
TOTAL	251	99	56	86	492

Q.599 If you could choose exactly the number of children to have in your whole life, how many would that be?

Original Interview \ Re-interview	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	OA*	TOTAL
0	1		1															2
1		4	5	1	1													11
2		2	30	8	3	2	2											47
3			15	64	26	6	1		1									113
4			7	25	75	10	6	2			1						2	128
5		1	3	9	11	35	10	2		1	1						2	75
6	1	1		2	4	7	14	2	3	1							1	36
7					3	1	3	8	3								1	19
8				1					5	2	1							9
9						1	1	1	2	1			1				1	8
10							1	1	1		3	1						7
11							1					1						2
12																	1	1
13			1			1												2
14																		0
15+							1											1
OA*				1	1	1	3	2									28	36
TOTAL	2	8	62	111	124	64	43	18	15	5	6	2	1	0	0	0	36	497

*OA = Other answers, range or "up to God" etc.