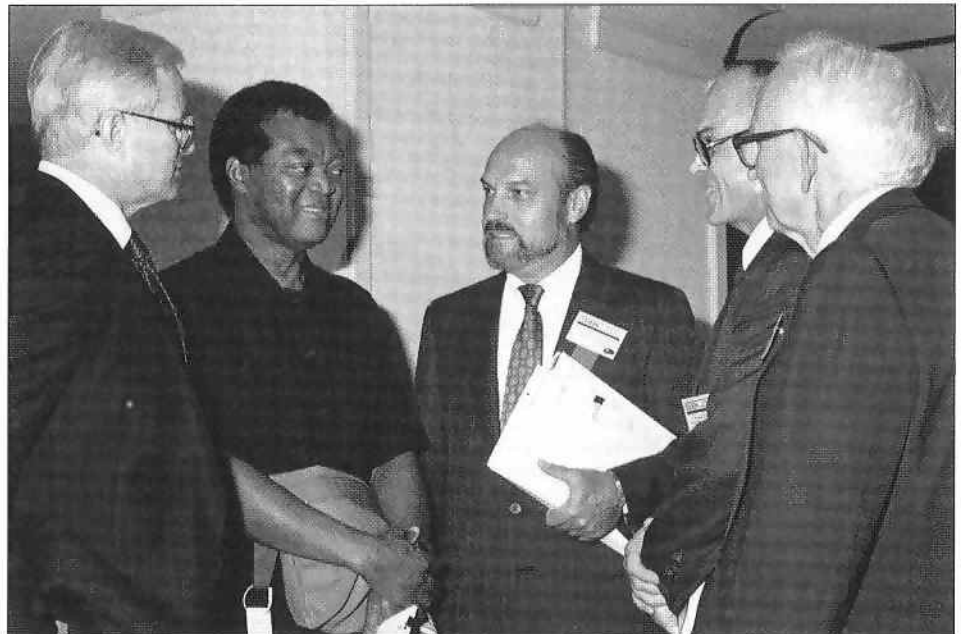


DHS Findings Presented at World Conference in Washington

The first international conference to review and disseminate the findings of the Demographic and Health Surveys (DHS) was held in Washington, D.C. August 5-7, 1991. The DHS World Conference was attended by more than 650 participants from 63 countries, including representatives from implementing organizations and government ministries, policymakers, program managers, and members of the international scientific community.

Major funding for the conference was provided by the U.S. Agency for International Development (USAID). Additional support came from the United Nations Fund for Population Activities, the Ministry of Foreign Affairs of the Netherlands, the Swedish International Development Authority, and the Overseas Development Administration of the United Kingdom.

More than 100 papers were presented at the conference; topics included: fertil-
Continued on page 2



The results from the first phase of the Demographic and Health Surveys program were discussed during the DHS World Conference in Washington, D.C. August 5-7, 1991. Participants at the plenary session on Demographic Trends in the 1980s were (from left to right) Duff Gillespie (Director, Office of Population, USAID), Olikoye Ransome-Kuti (Minister of Health, Nigeria), Martin Vaessen (DHS Project Director), Jeremiah Sullivan (Deputy Director for Survey Operations, DHS), and Ronald Freedman (Professor, University of Michigan).

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Recipients of DHS Small Grants

The DHS Small Grants Program, funded by the Andrew W. Mellon Foundation, has awarded 28 grants for further analysis of DHS data. Awards were received by researchers from Belgium, Brazil, Chile, China, Dominican Republic, Ghana, Indonesia, Kenya, Mexico, Nigeria, Pakistan, Peru, Spain, Thailand, Togo, United States, and Zimbabwe.

The following is a listing of the awards and the research topics:

Ahmad, Omar B.

Levels, Trends and Differentials in Infant and Child Mortality in West Africa: The Case of Ghana

Chayovan, Napaporn

Further Analysis of the 1987 Thailand Demographic and Health Survey on Two Topics: I. Age Reporting; II. Coital Activity

Continued on page 9

DHS World Conference

Continued from page 1

ity, family planning, maternal and child health, infant and child mortality, survey design and implementation, data collection, and data processing and analysis. A special workshop was held on the use of statistical packages for microcomputers to analyze DHS health data. In the exhibit area, DHS publications were available along with information about the DHS Data Archive.

Two publications on the DHS World Conference are in production: a summary, prepared by conference coordinator, Ann Blanc, which will be published before the end of the year, and a two-volume conference proceedings, to be available after the first of the year. Both publications will be distributed free of charge to conference participants.

The DHS World Conference was organized around three themes:

- Demographic Trends in the 1980s,
- Components of Demographic and Health Patterns, and
- Policy Issues for the 1990s.

One of the themes was addressed in a plenary session each day of the conference. The following is a brief summary of these plenary sessions.

Demographic Trends in the 1980s

At the first plenary session, opening statements were made by Martin Vaessen, DHS Project Director, Duff Gillespie, Director of the Office of Population (USAID), and Roxann Van Dusen, Director of the Office of Health (USAID). The keynote address was delivered by Professor Olikoye Ransome-Kuti, Minister of Health of the Federal Republic of Nigeria (see box on page 3). Following Ransome-Kuti's address, Ronald Freedman presented a discussion of fertility trends and the fertility transition, and Jeremiah Sullivan summarized the DHS findings on infant and child mortality.

Fertility Trends. Prior to about 1965, there was little evidence that fertility had declined in any developing region. Between 1965-70 and 1980-85, however, total fertility rates in less developed countries declined by about 30 percent (from 6.1 to 4.2 births per woman). Thus, in just fifteen years, developing countries moved almost halfway toward replacement level fertility (2.1 births per woman). The DHS data provide evidence of significant fertility decline in some sub-Saharan countries, specifically in Botswana, Kenya, and Zimbabwe.

Mortality Trends. Overall, infant and child mortality rates have declined substantially in the developing world in recent decades. A review of the data on under-five mortality for 28 countries from the mid-1970s to the late 1980s, indicates that mortality has declined by 40 percent in six countries, and 20 percent in 22 countries. In general, the large inequalities in child mortality between different socioeconomic groups observed during the 1970s have persisted during the 1980s.

Components of Demographic and Health Patterns

In the second plenary session, Mary Beth Weinberger (Population Affairs Officer, UN Population Division) discussed recent trends in contraceptive behavior; Charles F. Westoff (Director, Office of Population Research, Princeton University) analyzed the demand for family planning in developing countries; and Robert Black (Professor, Johns Hopkins University) spoke about the current status of child health interventions.

Contraceptive Use. Fertility declines in developing countries are primarily due to the increasing use of contraception, particularly modern contraceptive methods. Between 1960-65 and 1985-90, the contraceptive prevalence rate in developing countries increased from an average of less than 10 percent to 48 percent. Growth in the use of contraception is due to increasing reliance on sterilization, oral contraceptives, and the IUD.

Although the level of use remains low in sub-Saharan Africa as a whole, the DHS surveys have established that contraceptive use is increasing in several sub-Saharan African countries, notably Botswana, Kenya, and Zimbabwe.

Demand for Family Planning. As reproductive preferences change and the use of family planning rises in developing countries, information on the demand for services becomes increasingly important for program planning purposes. The total demand for family planning — defined as the sum of contraceptive prevalence and unmet need — among married women varies widely across countries participating in the DHS program, ranging from 28-35 percent in Mali, Uganda, Burundi, and Sudan to over 80 percent in Brazil and Colombia.

Child Health Interventions. A majority of the 14 million deaths of children under age five each year in developing countries are due to preventable causes. In DHS surveys, information is collected for children under five on immunization coverage, prevalence and treatment of diarrheal diseases, breastfeeding and nutritional status.

The immunization of children is one of the most effective strategies for improving child survival. DHS data indicate that the percentage of children who have received all of the recommended childhood vaccines varies substantially across countries, from 10 percent or less in Mali and Senegal to more than 75 percent in Botswana and Tunisia. DHS surveys also provide information on social and demographic differentials in immunization coverage which can be used to identify high risk and underserved populations.

The use of oral rehydration therapy (ORT) for the treatment of diarrheal diseases has been promoted in developing countries all over the world. Findings from the DHS surveys indicate that the mothers of about two-thirds of the children in the surveys had heard of the ORS packets used in oral rehydration therapy.

The promotion of breastfeeding is an important element in most child survival.

Continued on page 3

DHS World Conference

Continued from page 2

val programs. The median duration of breastfeeding in DHS countries varies from more than one and one-half years in most sub-Saharan African countries, and in Indonesia and Sri Lanka, to less than 9 months in some Latin American countries—Brazil, Dominican Republic, Mexico, and Trinidad and Tobago.

Malnutrition is a contributing factor in an estimated 60 percent of all child deaths in developing countries. Findings from the DHS surveys show large variations between countries in the percentage of children age 3-35 months who are stunted (short for their age), an indicator of chronic malnutrition. The percentage stunted reaches 44 percent in Nigeria and Uganda, 47 percent in Burundi, and 58 percent in Guatemala. Three countries have levels of stunting below 20 percent—Paraguay, Trinidad and Tobago, and Tunisia.

Policy Issues for the 1990s

Planning for the future was the theme of the third plenary session. Duff Gillespie from the Office of Population (USAID) discussed funding priorities in family planning; Mark Belsey from the World Health Organization reviewed the priority issues in maternal and child health; and Martin Vaessen examined data needs for the future.

Duff Gillespie reported that after two decades of support of family planning programs in 106 developing countries, USAID now plans to focus on countries with the largest populations. These "top ten" countries include 70 percent of the combined population of all the countries in which USAID operates. Currently, USAID spends \$.07 per capita in these countries, versus \$0.17 in the other 96. In the future, USAID will shift funds so as to spend \$0.14 per capita in the top ten countries. Extensive evaluation efforts will be continued, including DHS surveys every four or five years in many countries.

Mark Belsey identified the priorities needed for maternal and child health in

Prof. Olikoye Ransome-Kuti Gives Keynote Address at DHS World Conference

In his keynote address, Prof. Ransome-Kuti recalled concerns in the international population and health community in the 1960s about population growth and infant and child mortality in developing countries. Referring to a recent Nigerian study exploring the impact of varying rates of population growth on national development, he emphasized that rapid population growth in developing countries tends to frustrate attempts to achieve social and economic goals. For this reason, Nigeria adopted a population policy in 1988 which sets targets in the areas of health, fertility, and population growth. Ransome-Kuti noted that data collection efforts, such as the DHS surveys, which measure the combined impact of governmental and international donor programs, are vital for evaluating progress toward achieving national goals. According to Ransome-Kuti, a whole new approach is needed, one in which population goals are kept always in sight and new survey information is used to guide the planning process. Further, "New skills must be developed to make management decisions and generate new policies based on



The keynote speaker at the DHS World Conference was Professor Olikoye Ransome-Kuti, the Honorable Minister of Health, Federal Republic of Nigeria. Prof. Ransome-Kuti spoke about the need for strong population and health programs in developing countries to protect the health of women and children and to promote economic development.

the information provided by the data, bearing in mind the available resources, political sensitivities, and the ecology." ■

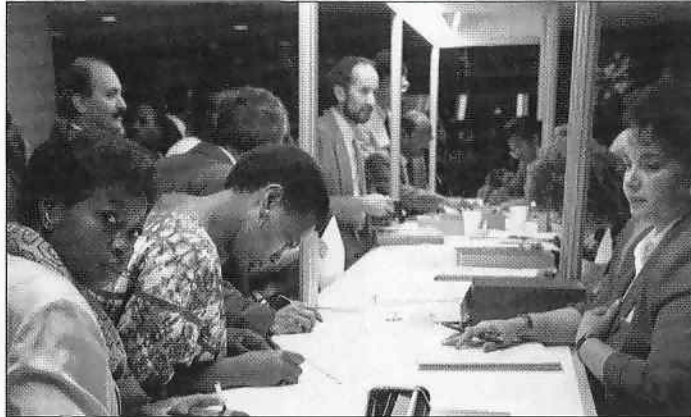
the 1990s. First, he said it is important to maintain the gains that have been made in the areas of family planning, child survival, and safe motherhood. He noted the importance of surveys such as the DHS surveys in monitoring these gains. Second, he identified a number of areas where policies and program strategies are needed; these include: maternal health and morbidity, perinatal infections, newborn care, breastfeeding, and HIV/AIDS.

Martin Vaessen addressed the subject of future data needs in developing countries. One of the primary objectives of the DHS program is to provide data and analysis useful for informed policy choices in the survey countries. In the absence of reliable statistical systems in many countries, it is clear that there will be a continuing need for DHS-type surveys. The challenge will be to maintain high data quality in spite of ever-growing questionnaire content. ■

DHS World Conference



August 5-7, 1991
Washington, DC



The first stop at the DHS World Conference was the registration desk, where participants picked up a bright blue souvenir bag containing conference materials.



Persons attending the Conference could listen on headsets to simultaneous interpreters speaking in French, Spanish, and English.

Concern over population growth in developing countries was a focus of many presentations at the World Conference. Here, Duff Gillespie (Director, Office of Population, USAID), warns of continued population growth in the immediate future because of the large number of women just entering their reproductive years. Shown here (from left to right) are Duff Gillespie, Jeremiah Sullivan (Deputy Director for Survey Operations, DHS), Martin Vaessen (DHS Project Director), Olikoye Ransome-Kuti (Minister of Health, Nigeria), Sarah Clark (Deputy Director, Office of Population, USAID), and Roxann Van Dusen (Director, Office of Health, USAID).



The DHS findings on contraceptive use were of particular interest during the World Conference. Here, at the session on Contraceptive Use Dynamics, Javier Suarez (Ministry of Health, Mexico) discusses the findings from the Mexico DHS Survey. The other presenters shown are Napaporn Chayovan (Chulalongkorn University, Thailand) and Leo Morris, (Centers for Disease Control, Atlanta).



The DHS World Conference provided an opportunity for population and health specialists from all over the world to meet and exchange ideas and information.



At the DHS exhibit, there was considerable interest in the new DHS publications, the computer presentations of DHS data, and information about the DHS Data Archive and ISSA (Integrated System for Survey Analysis).

Status of Demographic and Health Surveys as of October 1991

COUNTRY	DATE OF FIELDWORK	IMPLEMENTING ORGANIZATION	RESPONDENTS
AFRICA			
Botswana	Aug-Dec 1988	Ministry of Health	All women 15-49
Burundi	Apr-Jul 1987	Dép. de la Population, Min. de l'Intérieur	All women 15-49
Burundi (Husband Survey)	Apr-Jul 1987	Dép. de la Population, Min. de l'Intérieur	Husbands
Ghana*	Feb-May 1988	Ghana Statistical Service	All women 15-49
Kenya*	Dec-May 1988/89	Nat. Council for Population and Development	All women 15-49
Liberia	Feb-Jul 1986	Ministry of Planning & Economic Affairs	All women 15-49
Mali	Mar-Aug 1987	Institut du Sahel: USED/CERPOD	All women 15-49
Mali (Male Survey)	Mar-Aug 1987	Institut du Sahel: USED/CERPOD	Men 20-55
Ondo State, Nigeria	Sep-Jan 1986/87	Ministry of Health, Ondo State	All women 15-49
Senegal	Apr-Jul 1986	Dir. de la Stat., Min. de l'Econ. et de Fin.	All women 15-49
Sudan	Nov-May 1989/90	Dep. of Stat., Min. of Fin. and Econ. Plan.	EMW 15-49
Togo	Jun-Nov 1988	Unité de Recherche Dém., Univ. du Benin	All women 15-49
Uganda	Sep-Feb 1988/89	Ministry of Health	All women 15-49
Zimbabwe	Sep-Jan 1988/89	Central Statistical Office	All women 15-49
ASIA/NEAR EAST/NORTH AFRICA			
Egypt	Oct-Jan 1988/89	National Population Council	EMW 15-49
Indonesia	Sep-Dec 1987	Gen. Bur. of Stat./Nat. Fam. Plan. Coord. Board	EMW 15-49
Morocco	May-Jul 1987	Ministère de la Santé Publique (MSP)	EMW 15-49
Nepal (In-depth, KAP-GAP)	Feb-Apr 1987	New Era	CMW 15-49
Sri Lanka	Jan-Mar 1987	Dept. of Cen. and Stat., Min. of Plan Implementation	EMW 15-49
Thailand	Mar-Jun 1987	Institute of Population Studies, Chulalongkorn Univ.	EMW 15-49
Tunisia	Jun-Oct 1988	Office National de la Famille et de la Population	EMW 15-49
LATIN AMERICA & CARIBBEAN			
Bolivia	Mar-Jun 1989	Instituto Nacional de Estadística (INE)	All women 15-49
Bolivia (In-depth, Health)	Mar-Jun 1989	Instituto Nacional de Estadística (INE)	All women 15-49
Brazil	May-Aug 1986	Sociedade Civil Bem-Estar Familiar no Brasil (BEMFAM)	All women 15-44
Colombia	Oct-Dec 1986	Corp. Cen. Regional de Población(CCRP) /Min. de Salud	All women 15-49
Dominican Rep.	Sep-Dec 1986	Consejo Nacional de Población y Familia (CONAPOFA)	All women 15-49
Dominican Rep. (Exp.)	Sep-Dec 1986	Consejo Nacional de Población y Familia (CONAPOFA)	All women 15-49
Ecuador	Jan-Mar 1987	Gen. de Estud. de Pob. y Pater. Responsable (CEPAR)	All women 15-49
El Salvador	May-Jun 1985	Asociación Demográfica Salvadoreña (ADS)	All women 15-49
Guatemala	Oct-Dec 1987	Inst. de Nut. de Cent. y Pan.(INCAP)	All women 15-44
Mexico	Feb-May 1987	Dir. Gen. de Plan. Familiar, Secretaría de Salud	All women 15-49
Peru	Sep-Dec 1986	Instituto Nacional de Estadística	All women 15-49
Peru (Experimental)	Sep-Dec 1986	Instituto Nacional de Estadística	All women 15-49
Trinidad/Tobago	May-Aug 1987	Family Planning Assoc. of Trinidad/Tobago (FPATT)	All women 15-49
DHS-II SURVEYS			
Brazil (Northeast)	Sep-Dec 1991	Sociedade Civil Bem-Estar Familiar no Brasil (BEMFAM)	All women 15-49
Cameroon*	Apr-Sep 1991	Ministère du Plan et de l'Aménagement du Territoire	All women 15-49
Dominican Republic	Jul-Oct 1991	Asoc. Dom. Pro-Bienestar de la Fam. (PROFAMILIA)	All women 15-49
Indonesia	Jun-Aug 1991	CBS/NFPCB/MOH	EMW 15-49
Jordan	Sep-Jan 1990/91	Dept. of Statistics, Ministry of Planning	EMW 15-49
Madagascar	Jul-Oct 1992	Centre Nat. de Recherches sur l'Environnement (CNRE)	All women 15-49
Morocco	Dec-Mar 1991/92	Ministère de la Santé Publique (MSP)	All women 15-49
Niger	Feb-Apr 1992	Dir. de la Statistiques et de la Dém., Min. du Plan	All women 15-49
Nigeria	Apr-Aug 1990	Federal Office of Statistics	All women 15-49
Pakistan*	Dec-May 1990/91	National Institute of Population Studies	EMW 15-49
Paraguay	May-Aug 1990	Centro Paraguayo de Estudios de Población (CEPEP)	All women 15-49
Peru	Oct-Dec 1991	Asociación Benéfica PRISMA	All women 15-49
Rwanda	Aug 1990	Office National de la Population	All women 15-49
Tanzania*	Sep-Jan 1991/92	Bureau of Statistics of the Planning Commission	All women 15-49
Yemen	Nov-Dec 1991	Central Statistical Organization	EMW 15-54
Zambia	Feb-Apr 1992	University of Zambia	All women 15-49

A = Recode and raw data files available

B = Raw data files available, recode files in progress

C = Raw data files only available

EMW = Ever-married women

SUPPLEMENTAL MODULES/ADDITIONAL QUESTIONS

SAMPLE SIZE	SUPPLEMENTAL MODULES/ADDITIONAL QUESTIONS										CURRENT STATUS	DATA FILES AVAILABLE	COUNTRY
	Hgt. and Wgt. of Children	Service Availability Info	Health	Natural Family Planning	Social Marketing	Maternal Mortality	AIDS	Women's Employment	Causes of Death	Sterilization			
4,368						X				X	Final report completed	A	Botswana
3,970	X	X									Final report completed	A	Burundi
542											Final report completed	C	Burundi (HS)
4,488	X			X		X					Final report completed	A	Ghana*
7,150			X								Final report completed	A	Kenya*
5,239			X								Final report completed	A	Liberia
3,200	X										Final report completed	A	Mali
970											Final report completed	C	Mali(MS)
4,213	X	X									Final report completed	A	Ondo State, Nigeria
4,415	X						X				Final report completed	A	Senegal
5,860			X		X						Final report completed	A	Sudan
3,360	X	X	X								Final report completed	B	Togo
4,730	X	X	X								Final report completed	B	Uganda
4,201	X	X	X			X	X			X	Final report completed	A	Zimbabwe
8,911	X	X	X		X		X	X		X	Final report completed	A	Egypt
11,884				X						X	Final report completed	A	Indonesia
5,982	X		X					X	X		Final report completed	A	Morocco
1,623											Final report completed	C	Nepal(I)
5,865	X		X	X							Final report completed	A	Sri Lanka
6,775	X	X						X			Final report completed	A	Thailand
4,184	X	X	X					X			Final report completed	A	Tunisia
7,923	X		X		X		X	X			Final report completed	A	Bolivia
7,923	X		X		X		X	X			Final report completed	A	Bolivia(I)
5,892	X		X		X				X		Final report completed	A	Brazil
5,329	X	X			X				X	X	Final report completed	A	Colombia
7,649	X	X							X		Final report completed	A	Dominican Rep.
3,885			X						X		Final report completed	C	Dom. Rep.(Exp.)
4,713		X									Final report completed	A	Ecuador
5,207	X		X						X		Final report completed	B	El Salvador
5,160	X	X							X		Final report completed	A	Guatemala
9,310			X	X					X		Final report completed	B	Mexico
4,999			X	X							Final report completed	A	Peru
2,534											Final report completed	C	Peru (Exp.)
3,806	X			X							Final report completed	A	Trinidad & Tobago
5,000					X					X	Fieldwork in progress		Brazil (NE)
4,500	X	X					X				Preliminary report in progress		Cameroon*
8,000	X	X						X			Fieldwork in progress		Dominican Rep.
22,909				X						X	Preliminary report in progress		Indonesia
6,462	X	X									Final report in progress		Jordan
6,000	X	X			X						Pretest completed		Madagascar
7,000	X	X			X						Questionnaire design		Morocco
6,000	X	X			X						Pretest completed		Niger
8,781	X	X									Final report in progress		Nigeria
6,611	X	X									Final report in progress		Pakistan*
5,827	X	X									Final report completed	C	Paraguay
12,000	X	X			X						Fieldwork in progress		Peru
6,000	X	X									Fieldwork suspended		Rwanda
7,650	X	X				X					Fieldwork in progress		Tanzania*
6,000	X	X			X		X				Pretest completed		Yemen
6,000	X	X			X						Pretest completed		Zambia

CMW = Currently married women

* Data are available for a sub-sample of husbands of respondents (husband's questionnaire) in Ghana (943 husbands) and Kenya (1,133 husbands). In DHS-II, the Pakistan survey interviewed 1,354 husbands; the Cameroon survey interviewed approximately 1,000 husbands; and, the Tanzania survey will interview approximately 2,000 males.

Program Changes Result from Zimbabwe Service Availability Survey

The importance of demographic data in program planning was emphasized recently in Zimbabwe. The findings from the 1989-90 Zimbabwe Service Availability Survey (ZSAS) showed that community-based distribution (CBD) was reaching a much greater proportion of women than previously thought; and, in fact, CBD was cost-effective for the population it was serving.

Based on this information, the CBD component of the family planning program in Zimbabwe is being restructured to reflect the importance of outreach services for the overall population. The World Bank is partially funding this restructuring effort.

The Zimbabwe Service Availability Survey (ZSAS) is a follow-on to the Zimbabwe Demographic and Health Survey (ZDHS), which was conducted by the Central Statistical Office in 1988-89. The ZDHS interviewed a nationally

representative sample of 4,201 women age 15-49. Approximately a year after the main survey, the ZSAS returned to the 166 communities in which these women lived and gathered information about the types of health and family planning services available to community inhabitants. The ZSAS questionnaire was designed with the assistance of the Ministry of Health and the Zimbabwe National Family Planning Council (ZNFPC). Funding for the Zimbabwe Service Availability Survey was provided by the World Bank.

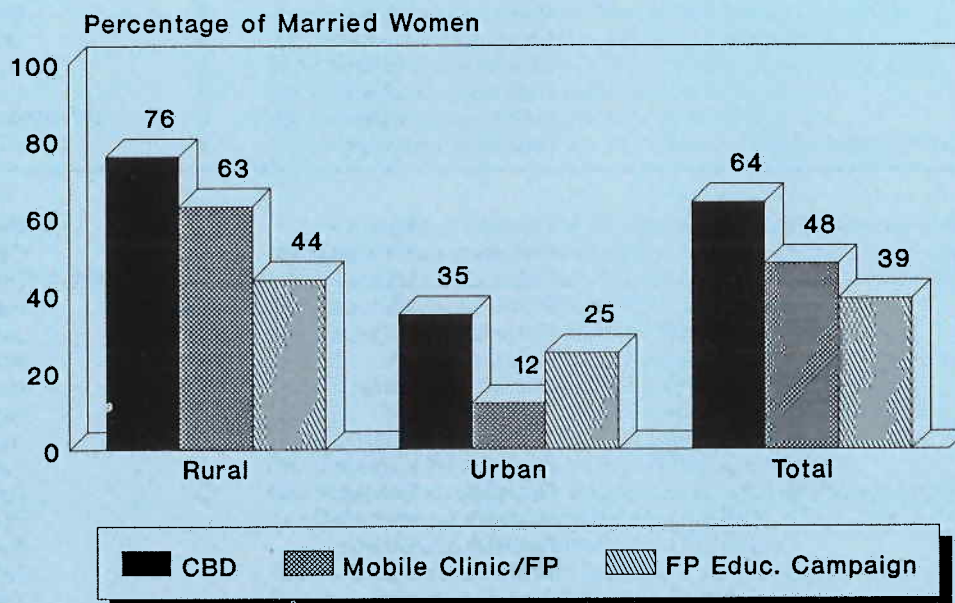
Before the results of the ZSAS became available, it was generally accepted that the community-based distribution program covered 30 percent of the women in rural areas. The ZSAS findings, however, showed that coverage for rural women was 76 percent, or more than double the previous estimate.

The Zimbabwe CBD program had

long been regarded as a successful outreach program, but, because it was thought to cover only 30 percent of the population, the cost was considered too high and plans were made to greatly modify the program. In light of the ZSAS findings, it became apparent that the Zimbabwe CBD program was, in fact, cost-effective; and, rather than curtail the program, it should be supported. Efforts will now be made to recruit more CBD workers and study how well they perform their duties.

The cost of this program change will be less than the cost of the program which was planned before the ZSAS results were available. Finally, the findings regarding the importance of outreach services in Zimbabwe have boosted morale among CBD workers and ZNFPC staff generally. ■

Access to Family Planning Outreach Services, Zimbabwe 1989/90



The effectiveness of family planning outreach services in Zimbabwe can be seen from the results of the Zimbabwe Service Availability Survey carried out in 1989-90. Three-quarters of the married women living in rural areas have access to family planning services through a CBD worker.

Recipients of Grants

Continued from page 1

di Barros, Ricardo P. (with Sawyer)

Short and Long Run Policies to Increase the Level and Reduce the Inequality in Infant Mortality Among Brazilian Children

Dodoo, Francis

The Status of Women and Gender Differences in Fertility Intentions in Ghana

Dwiyanto, Agus

Women with Unmet Demand in Indonesia: Who Are They? How They Should be Approached

Fadayomi, T.O.

Husband/Wife Variations in Family Limitation Behaviour: A Comparative Analysis of Male/Female KAP in Selected African Countries

Fort, Alfredo L.

Characterizing Users of Traditional Methods of Contraception: Are they Comparable to Modern-Method Users? Phase I: Latin America (Peru and Bolivia)

Fosu, Gabriel B.

Dynamics of Family Health Care Utilization Behavior in Africa

Frankenberg, Elizabeth (with Kristianto)

A Multilevel Model of Effects of Demographic, Socioeconomic, and Infrastructural Variables on Infant and Child Mortality in Indonesia

Gichuhi, Wanjiru

The Role of Maternal Health Care in Infant Mortality in Kenya

Guo, Guang and Lawrence M. Grummer-Strawn

Child Mortality Among Twins Contrasted with that of Singleton Births in DHS-I Countries

Hammerslough, Charles R.

Women's Groups and Fertility Decline in Kenya

Jensen, Eric R.

Contracepting Duration, Method Choice and Use-Efficacy: Use of DHS Data to Assess Program and Method Effectiveness

New Fellows Join DHS Staff

As part of the second phase of the Demographic and Health Surveys program two new fellows have joined the DHS staff in Columbia, Maryland. DHS Fellowships were awarded to Pav Govindasamy of Malaysia and Pradip Muhuri of Bangladesh. Dr. Govindasamy recently completed a doctorate in sociology at Michigan State University; Dr. Muhuri just completed his doctorate in

demography at the University of Pennsylvania.

DHS Fellowships are designed to train young scholars in the skills necessary to conduct and analyze nationally representative population and health surveys in developing countries. DHS fellows are expected to make significant contributions to the analysis of DHS data and to assist in the implementation of surveys.

Knodel, John (with Chayovan)

Further Analysis of the 1987 Thailand Demographic and Health Survey on Two Topics: I. Age Reporting; II. Coital Activity

Kristianto, Yohanes Bambang

A Multilevel Model of Effects of Demographic, Socioeconomic, and Infrastructural Variables on Infant and Child Mortality in Indonesia

Lecky, Muhammed

Trends and Determinants of Breastfeeding: Ondo State Women (Nigeria)

McKinney, Barbara J.

The Impact of Rural-Urban Migration on Fertility in Senegal

Meekers, Dominique

Sexual Initiation and Premarital Childbearing in Sub-Saharan Africa

Moreno, Lorenzo, Noreen Goldman, Lakshiminarayan Sastry, Diane O. Sawyer

The Relationship Between Place of Residence and Child Health in Brazil

Muniz, Edmundo and Peter Fajans

Maternal Education and Child Survival in the Dominican Republic

Njogu, Wamucii and Teresa Castro Martin

Fertility Decline in Kenya: The Role of Timing and Spacing of Births

Olaleye, David O.

Ideal Family Size: A Comparative Study of Numerical and Non-numerical Fertility Desires of Women in Two Sub-Saharan Countries

Palloni, Alberto

Breastfeeding, Pace of Childbearing and Early Child Mortality in Africa

Rodriguez, German and Ricardo Aravena

Socioeconomic Factors and the Transition to Low Fertility in Less Developed Countries: Evidence from the WFS and DHS

Sawyer, Diana O.

Short and Long Run Policies to Increase the Level and Reduce the Inequality in Infant Mortality Among Brazilian Children

Tam, Luis

Health Services and Child Survival in Peru

Thomas, Duncan and Ityai Muvandi

The Dynamics of Demographic Change in Zimbabwe

Zaki, Khalida P.

A Comparative Study of Factors Affecting Contraceptive Use in Pakistan and Indonesia ■

ISSA Notes

Regional Workshops for ISSA Training

Regional workshops have been scheduled in sub-Saharan Africa and Latin America to provide training in the use of ISSA (Integrated System for Survey Analysis), the software used to process data for all DHS surveys. The first workshop took place in Harare, Zimbabwe September-October 1991; the second will be in Santiago, Chile in January 1992.

The Harare workshop was carried out in cooperation with the Central Statistical Office of Zimbabwe. Participants from Zimbabwe were joined by representatives from five other sub-Saharan countries: Botswana, Cameroon, Namibia, Tanzania, and Zambia. The three-week workshop was held at the University of Zimbabwe; computer equipment was provided by the Central Statistical Office.

ISSA workshops are a combination of lectures and hands-on practice. The ratio of participants to microcomputers is kept low to maximize the time spent using ISSA to develop processing applications. Participants will learn to use ISSA to develop data entry and editing programs, and to produce tabulations. By the end of the workshop, all participants will have developed programs and dictionaries similar to those used to process DHS data.

Country Workshops for ISSA Training

In addition to the regional workshops, a number of country workshops (three weeks in length) are planned during DHS-II. These will include the same material as the regional workshops but focus more on the specific data requirements of the country. ISSA training workshops will be conducted in Egypt, Indonesia, and Jordan, by mid-1992.

For further information about ISSA software or ISSA workshops, write to Jeanne Cushing, IRD/Macro International, 8850 Stanford Boulevard, Suite 4000, Columbia, MD 21045.

DHS Data Archive

The DHS Data Archive has datasets available for 34 DHS surveys (see page 7). Datasets for the surveys currently in progress will be available after publication of the first country report for each survey. Widespread interest in the DHS program has generated considerable demand for survey datasets. Currently, 700 volumes of DHS data have been sent to researchers at institutions around the world.

In addition to the DHS Data Archive, five regional depository libraries have been established to provide researchers with greater access to DHS data. DHS datasets are available at these depository libraries as a resource for students, staff, and visiting researchers:

Cairo Demographic Centre, Cairo, Egypt

Centro Latinoamericano de Demografía, Santiago, Chile

East-West Population Institute, Honolulu, Hawaii

Institut du Sahel, Bamako, Mali

Regional Institute for Population Studies, Accra, Ghana

DHS datasets are not available for distribution through the regional depository libraries; they can be obtained only through the DHS Data Archive in Columbia, Maryland (or from the implementing organizations in each country).

Datasets may be requested in any of three formats, depending on the researcher's needs: flat, rectangular, and hierarchical files. The files can be sent on Bernoulli cartridges, magnetic tape, or diskettes, according to the user's hardware and/or software capabilities. All data files are distributed with questionnaires, machine-readable data file descriptions, and associated documentation.

The cost for each dataset is **\$200**; however, for institutions in developing countries or for researchers from these countries the cost is **\$50**. To obtain DHS datasets researchers should complete a **data request form** and send it with a **description of the proposed analysis** to the DHS Data Archive.

To obtain a data request form, write to: **DHS Data Archive**, IRD/Macro International, 8850 Stanford Boulevard, Suite 4000, Columbia, MD 21045, USA (Telephone: 301-290-2977; Fax: 301-290-2999). ■



Training in data processing techniques is an important part of the DHS program. Shown above are the participants at the ISSA workshop in Lagos, Nigeria (March 22-April 13, 1991); Jeanne Cushing, DHS Coordinator for Computer Training (center), directed the workshop. At left, workshop participants receive graduation certificates from Mr. O.O. Ajayi (center), Project Director for the Nigeria Demographic and Health Survey, and Dr. S.O. Adamu (right), Sole Administrator, Federal Office of Statistics.

New Publications

A number of reports have been published since the last newsletter. The following is a list of the most recent DHS publications:

FINAL REPORTS

Sudan *Sudan Demographic and Health Survey 1989/90*

Bolivia *Maternal and Child Health in Bolivia: Report on the In-depth DHS Survey in Bolivia, 1989*

SUMMARY REPORTS

Paraguay *Encuesta Nacional de Demografía y Salud, 1990: Resumen*

DHS-II BASIC DOCUMENTATION

No. 1 – *Model "A" Questionnaire with Commentary for High Contraceptive Prevalence Countries*

No. 2 – *Model "B" Questionnaire with Commentary for Low Contraceptive Prevalence Countries*

No. 3 – *Interviewer's Manual for Use with Model "A" Questionnaire for High Contraceptive Prevalence Countries*

No. 4 – *Interviewer's Manual for Use with Model "B" Questionnaire for Low Contraceptive Prevalence Countries*

No. 5 – *Supervisor's and Editor's Manual for Use with Model "A" and "B" Questionnaires*

(Note: Nos. 2, 4, and 5 are available in French and Spanish)

DHS COMPARATIVE STUDIES

No. 4 – *Childhood Morbidity and Treatment Patterns* (J. Ties Boerma et al.)

No. 5 – *Unmet Need and the Demand for Family Planning Services* (Charles F. Westoff and Luis Hernando Ochoa)

No. 6 – *Knowledge and Use of Contraception* (Naomi Rutenberg et al.)

DHS METHODOLOGICAL REPORTS

No. 1 – *An Assessment of DHS-I Data Quality*

DHS Publications

DHS publications are available through regional depositories and selected libraries. A list of those nearest you will be sent on request. A limited number of final reports, and other DHS publications, are available for distribution. To receive a list of DHS publications, or to receive the DHS Newsletter, write to: Sidney Moore, Editor, IRD/Macro International, 8850 Stanford Boulevard, Suite 4000, Columbia, MD 21045, USA.

■ **DHS Newsletter** — Published twice a year, the newsletter provides information on the current status of DHS surveys.

■ **Final Reports** — DHS survey results are published in a final report approximately a year after completion of fieldwork. Currently, 33 final reports, covering 35 DHS surveys, have been published (see page 7).

■ **Summary Reports** — Summary reports are available for most DHS surveys. Published in the language of the country, these reports are designed for use by policymakers and planners in the survey countries. Summary reports have been published for: Bolivia, Botswana, Brazil, Ecuador, Egypt, Ghana, Guatemala, Indonesia, Kenya, Liberia, Mali, Mexico, Morocco, Paraguay, Peru, Senegal, Sri Lanka, Togo, Trinidad & Tobago, Tunisia, Uganda, and Zimbabwe.

■ **DHS Basic Documentation** — DHS survey methodology is described in the *DHS Basic Documentation* series. A list of the Basic Documentation for DHS-I and DHS-II is available on request.

■ **Tables and graphs in *Studies in Family Planning*** — Key findings from each DHS survey are summarized in 28 tables and graphs published in *Studies in Family Planning*.

■ **DHS Further Analysis Series** — The results of further analysis studies carried out during the first phase of the DHS program have been published in ten reports by the Population Council (which provided technical assistance for the projects). Another 25 further analysis activities are planned for DHS-II, although DHS will not necessarily publish all the results.

■ **DHS Comparative Studies** — Seventeen reports will be published in this series. Each report presents the results of a comparative analysis of DHS datasets for a particular topic.

■ **DHS Methodological Reports** — Eight reports are to be published in this series which deals with methodological and technical issues pertaining to survey research in the fields of population and health.

■ **DHS Working Papers** — Occasional publications (limited distribution).

Selected Statistics from DHS Surveys

	VITAL RATES		KNOWLEDGE AND USE OF CONTRACEPTION (Currently Married Women 15-49)			MATERNAL CARE (Births Last 5 Yrs.)		CHILD HEALTH INDICATORS		
	Total Fertility Rate ^a	IMR/Under 5 Mortality ^b	% Knowing Any Modern Method ^c	% Currently Using Any Method ^d	% Currently Using Any Modern Method ^e	% Women Receiving Prenatal Care ^g	% Women Immunized With Tetanus Toxoid ^f	% Children 3-35 Mos. Stunted ^h	% Children <5 With Diarrhea ⁱ Treated With: ORS Packets	RHF ^j
AFRICA										
Botswana 1988	4.7	37/53	94	33	32	92	85	†	46	25
Burundi 1987	6.5	75/152	64	7	1	79	59	47	30	8
Ghana 1988	6.1	77/155	77	13	5	82	70	29	34	6
Kenya 1989	6.5	60/89	91	27	18	77	89	†	21	49
Liberia 1986	6.4	144/220	68	6	6	83	71	†	7	3
Mali 1987	6.9	108/250	29	3	1	31	18	24	2	1
Ondo State, Nigeria 1986-87	5.7	56/108	50	6	4	80	71	32 ^l	1	23
Nigeria 1990	5.7	87/192	41	6	4	57	52	44	12	24
Senegal 1986	6.2	86/191	68	5	2	64	31	23 ^l	2	5
Sudan 1989-90	4.6	70/123	71	9	6	70	45	†	29	8
Togo 1988	6.1	81/158	81	12	3	82	70	31	20	3
Uganda 1988-89	7.2	101/180	78	5	3	87	56	44	14	1
Zimbabwe 1988-89	5.3	53/75	98	43	36	91	79	30	—70—	
ASIA/NORTH AFRICA										
Egypt 1988-89	4.5	73/102	98	38	36	53	11	31	29 ^k	†
Indonesia 1987	3.0	70/101	94	48	48	44	†	†	†	†
Jordan 1990-91	5.5	34/39	99	35	27	††	43	††	42	64
Morocco 1987	4.5	73/102	98	36	29	25	†	24	15	1
Pakistan 1990-91	5.3	††	77	12	9	††	30	††	39	19
Sri Lanka 1987	2.7	25/35	99	62	41	97	83	27	29	10
Thailand 1987	2.2	35/45	100	66	64	77	65	22	37	6
Tunisia 1988	4.1	50/65	99	50	40	58	33	18	—20—	
LATIN AMERICA/CARIBBEAN										
Bolivia 1989	4.9	86/130	68	30	12	45	20	38	23	9
Brazil 1986 ^l	3.4	76/86	100	66	57	74	40	29 ^m	9	8 ⁿ
Colombia 1990	2.8	27/35 ^o	100	66	55	82	55	†	31	37
Dominican Republic 1986	3.6	68/88	99 ^p	50	47	95	87	21 ^l	—38—	
Ecuador 1987	4.1	58/82	90	44	36	70	39	†	†	†
El Salvador 1985	4.0	71/98	93	47	45	†	48	†	—26—	
Guatemala 1987 ^l	5.5	73/110	72	23	19	34	14	58	13	3
Mexico 1987	4.0	47/61	93	53	45	71	†	†	—4—	
Paraguay 1990	4.5	34/43	96	48	35	84	84	18	24	43
Peru 1986	4.0	76/111	86	46	23	55	16	†	4	0
Trinidad & Tobago 1987	3.1	26/30	99	53	44	98	31	5	53	13

† = Not available from survey data

†† = Not available until publication of final report

a Based on 3 years preceding the survey (women 15-44)

b Based on 5 years preceding the survey

c Excludes periodic abstinence, withdrawal, and "other" methods

d Excludes prolonged abstinence

e Care provided by medically trained personnel

f One or more injections

g Percentage of children for whom the height-for-age index is 2 or more standard deviations below the median for the International Reference Population

h Based on 2 weeks preceding survey

i Recommended home fluids: includes "home solution" (sugar, salt, water), rice water, etc.

j Children 6-36 months

k Based on 7 days preceding survey

l Women 15-44 years

m Northeast region only

n Includes commercial solution "Soro"

o Based on 10 years preceding the survey

p Percentage knowing any method

The Demographic and Health Surveys (DHS) program is a nine-year project to assist developing countries in implementing 59 population and health surveys. The DHS newsletter is published twice a year by IRD/Macro International, Inc. to provide information about the DHS program and the current status of DHS surveys. IRD/Macro International, 8850 Stanford Boulevard, Suite 4000, Columbia, MD 21045, USA (Telephone 301-290-2800; Telex 87775; Telefax 301-290-2999). Project Director, Martin Vaessen; Deputy Director for Survey Operations, Jerry Sullivan; Deputy Director for Analysis, Shea Rutstein.