

Fertility Awareness in Developing Countries: Analysis of Demographic and Health Survey Data from 63 Countries

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Introduction

The term *fertility awareness* pertains to information about a variety of subjects that can influence sexual and reproductive health, including body changes during puberty and on-set of fertility, postpartum return to fertility, pregnancy risk at various life stages, and fertility risk during the menstrual cycle. At its most minimal definition, however, fertility awareness means the basic knowledge of when during her cycle a woman can become pregnant if she has unprotected intercourse (IRH, 2013). Women who can recognize their fertile window, can use this information to time their next pregnancy, or avoid undesired pregnancies.

The Demographic and Health Surveys (DHS), are nationally-representative household surveys that provide data for a wide range of monitoring and impact evaluation indicators in the areas of population, health, and nutrition. They are collected periodically in most developing countries (DHS, 2013). Among the many questions asked of respondents, are two questions that can be used to estimate the percent of respondents who have fertility awareness. This report presents these estimates.

Methods

Data from all DHS surveys are available at the Measure DHS web site (DSH, 2013), and can be downloaded free of charge. We downloaded the most recent survey data for all countries for which the data were available, through December 2011. We analyzed each country data separately, choosing only married women of reproductive age. Only the 63 countries in which the fertility awareness questions were asked are included in the analysis.

In the survey, respondents were first asked: "From one menstrual period to the next, are there certain days when a woman is more likely to become pregnant if she has sexual relations". Women who answered 'yes', were then asked: "Is this time just before her period begins, during her period, right after her period has ended, or halfway between two periods?". We coded women who responded 'halfway between two periods' as having fertility awareness. We recognize that this definition of fertility awareness is weak, and does not adequately capture respondent's actual understanding of when in the cycle a woman can become pregnant, as there are a number of days around ovulation when a woman is fertile. Nevertheless, it can offer an approximation.

In addition to calculating the percentage of all married women of reproductive age with fertility awareness, we looked separately at those respondents who said (earlier in the interview), that they had ever used periodic abstinence. Users of periodic abstinence avoid unprotected intercourse on the days they believe they are fertile. Some users may actually understand their fertility, while others may make incorrect assumptions about when they can become pregnant, that they learned from friends or relatives. Nevertheless, we expect some correlation between previous or current use of periodic abstinence and fertility awareness.

Results

The following table shows the percent of married women of reproductive age who know that there is a fertile window and that it is half way between two periods for all women, and for those who had ever used periodic abstinence. The year of the survey and sample size for each country are also listed. Countries are

listed by continent. Within each continent they are listed in order of the percent women with fertility awareness.

Table 1. Percent of sample by country who know that there is a fertile window and that know it is half-way between two periods

Country (year of survey)	Sample size	% who know that there is a fertile window, and that it is half way between two periods	
		All women	Women who had ever used periodic abstinence
Africa			
Ethiopia (2005)	8644	12.4	55.8
South Africa (1998)	4948	13.0	24.3
Namibia (2006)	3575	13.6	16.7
Sierra Leone (2008)	5373	14.3	64.0
Malawi (2004)	8385	14.7	16.0
Senegal (2005)	10221	15.1	58.4
Niger (2006)	7461	15.4	40.6
Rwanda (2005)	5458	15.4	34.0
Mali (2006)	12324	16.4	48.6
Uganda (2006)	5362	16.7	20.7
Central African Republic (1994)	4057	17.4	34.2
Lesotho (2004)	3726	17.4	32.0
Nigeria (2008)	23954	18.3	37.4
Burkina Faso (2003)	9537	18.9	37.8
Guinea (2005)	6327	19.2	42.8
Kenya (2003)	4876	19.5	28.7
Liberia (2007)	4508	19.8	21.4
Egypt (2008)	15406	20.5	50.8
Togo (1998)	5976	20.5	48.9
Tunisia (1988)	4012	20.8	54.7
Comoros (1996)	1634	22.5	50.0
Zambia (2007)	4316	23.4	23.4
Burundi (1987)	2336	23.9	39.5
Tanzania, United Republic of (2004)	6786	25.4	36.4
Sudan (1989)	5400	29.2	72.9
Gabon (2000)	3469	32.6	44.5
Cameroon (2004)	7177	33.1	52.7
Benin (2006)	13486	34.8	56.4
Ghana (2008)	2950	36.0	60.3
Cote D'ivoire (1998)	1716	38.0	75.3
Morocco (2003)	8851	38.6	70.4
Congo DRC (2007)	6586	40.1	56.3

Chad (2004)	4415	51.4	52.9
Madagascar (2003)	4940	52.0	87.0
Congo Brazzaville (2005)	3993	62.3	66.1
Swaziland (2006)	2069	9.4	22.9
Zimbabwe (2005)	5118	9.5	11.7
Asia			
Cambodia (2005)	10309	14.8	57.2
Thailand (1987)	6226	14.9	43.6
Uzbekistan (1996)	3067	16.9	68.7
India (2005)	87925	18.3	38.1
Nepal (2006)	8244	19.9	56.5
Indonesia (2007)	30869	20.2	49.6
Kyrgyz Republic (1997)	2677	28.1	66.7
Philippines (2008)	8564	36.7	43.3
Sri Lanka (1987)	5449	43.2	64.2
Kazakhstan (1999)	2947	46.5	80.7
Jordan (2007)	10360	56.6	70.4
Europe			
Turkey (2003)	7686	26.3	65.6
Azerbaijan (2006)	5260	38.1	71.7
Armenia (2005)	4112	38.5	70.5
Moldova, Republic of (2005)	4892	52.3	77.0
Ukraine (2007)	4195	70.8	87.9
North America			
Dominican Republic (2007)	15872	11.7	19.8
Guatemala (1998)	4045	11.9	46.7
Nicaragua (2001)	7678	13.4	30.5
Haiti (2005)	6376	21.7	24.8
Honduras (2005)	11709	9.6	17.9
Trinidad & Tobago (1987)	2071	17.6	47.0
South America			
Ecuador (1987)	2957	24.1	50.6
Paraguay (1990)	3634	25.0	48.4
Brazil (1996)	7485	25.6	48.4
Columbia (2005)	20126	34.3	50.7
Peru (2004)	24591	35.2	50.1
Bolivia (2003)	10626	38.7	54.1
Honduras (2005)	11709	9.6	17.9

Discussion

Rates of fertility awareness vary widely among countries and region. Overall, the few countries listed had the higher rate of fertility awareness (ranging 26% - 71%). While 62% of women in Congo-Brazzaville had fertility awareness, the rate was significantly lower in all other African countries – in 25 of African countries less than 30% of women had fertility awareness.

Not surprisingly, women who had ever used periodic abstinence had higher fertility awareness. Yet their rates were still low (less than half of women in 32 countries), suggesting that the approach they use to determine their presumed fertile days is not an accurate one.

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