

## Contraception Use among Egyptian Women: Results from Egypt Demographic and Health Survey in 2005

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### Abstract

**Background:** The reports of a rise in contraceptive practices have not been matched by a similar decrease in population: therefore, there is a need to look into the causes of this discrepancy. The objectives of this study were to determine the prevalence of different methods of contraception used by Egyptian women, to compare different contraception methods used among various socio-demographic groups and, finally, to identify the main decision makers of contraception use within Egyptian families.

**Methods:** The 2005 Egypt Demographic and Health Survey (EDHS) is a nationally representative household survey of 18134 married women aged 15–49 years. The 2005 EDHS provides a wealth of information on fertility, family planning, maternal and child health and nutrition, and violence against women. The study sample was selected using a multistage sampling technique. A face-to-face structured interview was conducted with each of the selected women. The response rate was 99.5% for completing the questionnaires.

**Results:** The prevalence of contraception was 57.5%, nearly one third of the participants (33.1%) used IUD as a method of contraception. Both male and female were responsible for decision making regarding the use of contraception among different educational levels. Most women reporting use of contraceptive methods were 30–39 years old, were employed, were rich, educated and belonged to urban governorates.

**Conclusion:** More than half of the participants used contraception while IUDs and pills were the most commonly used methods. Whatever the level of education, the majority of women thought that family planning decisions should be made by both partners.

**Keywords:** Contraceptive, Egypt, Husband, Sociodemographic.

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### Introduction

Short birth intervals can have adverse maternal and infant consequences. Optimal birth spacing is often presumed to be achieved through the practice of family planning and use of contraceptives (1). Unintended pregnancy is a major public health problem that affects not only the individuals directly involved but also the society indirectly. Most couples who want to avoid pregnancy, practice contraception methods (2). In an ideal world, every woman would find a contraceptive method suited to her age, union status, and

her plan for her future fertility. Consequently, she would use the adopted method until she is no longer exposed to risks of an unintended pregnancy, or until changing life circumstances lead her to choose a different method (3). Use of modern contraceptive methods has been shown to reduce unwanted pregnancy, high fertility and maternal mortality rates (4).

The impact of contraception on declining total fertility rate (TFR) became an important factor in mid-1980s.

TFR in Egypt remains above three live births per woman. The finding indicates that reaching replacement level fertility in Egypt hinges primarily on further declines in marital fertility, resulting from reduction in wanted fertility and from an expansion in family planning program coverage and improved efficiency of service delivery and use (5). TFR in Egypt decreased from 3.9 in 1992 to 3.1 in 2005 (6). Son preference, other discriminatory gender attitudes, optimistic economic expectations, and fear of contraceptive side-effects are associated with a low preference for and ambivalence about having only two children (7).

In early 1960s, slowing the growth rate of population has long been the goal of the Egyptian government. In 1977, family planning activities became more structured, organized and better managed. In 1980, a new National Strategic Framework for Population, Human Resource Development and Family Planning Program was issued. In 1986, the third national population plan was formulated by the National Population Council (NPC). The plan described the nature of the population problem of Egypt and re-emphasized the interaction between population and development factors. In October 1995, a modified population strategy was developed, and in January 1996, the Ministry of Health and Population (MOHP) expanded family planning services, particularly to low-income populations and to rural Upper Egypt. As part of these efforts, MOHP renovated most of its clinics and added more than 500 mobile family planning clinics to improve access to the services (8).

Differences in availability, accessibility, and acceptability of the range of contraceptive technologies may mean that not all methods are favored at the same time. There is an increasing importance of monitoring trends and determinants of method choice, as family planning and reproductive health programs must adapt to meet users' changing needs and preferences (9). Access and service quality are important factors for contraceptive acceptance and continuation (10).

This paper aims to determine the prevalence of different methods of contraception used and intended to be used in the future by Egyptian women. It also intends to compare the uses of different contraception methods among various socio-demographic groups. Finally, this paper will identify who make(s) the decision for contraception use within Egyptian families.

There are differences between various socio-demographic groups in Egypt regarding use of different contraception methods. Identifying these differences will help determine where fund should be allocated to promote efficiency of the family planning services. These also, will help policy and decision makers to implement special training programs aiming at improving technical and communication skills of service providers.

### Methods

Demographic 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 for low and middle-income countries (10).

The 2005 Egypt EDHS is a survey of 19474 married women aged 15–49 years. The study sample was selected using a multistage sampling technique. A face-to-face structured interview was conducted with the selected women. The response rate was 99.5% for completing the questionnaires. The 2005 EDHS provides a wealth of information on fertility, family planning, maternal and child health, nutrition, and violence against women (11). Married women were selected for the initial study sample (n=18,134), formerly married women were excluded (1340). The data from the 2005 survey was downloaded on 10 October 2010 free of charge from the website (11).

Wealth Index is a proxy for the long-term standard of living of a household and it is based on the data about the household's ownership of consumer items. To consider ethical issue, the participants were given a brief explanation about the study and were instructed to give their informed consent to participate in the study.

Statistical analysis was carried out using Statistical Package for Social Sciences (SPSS) version 13 (SPSS Inc., Chicago, USA). The data were described using percentages. Chi-square ( $\chi^2$ ) was used to find out the presence of significant differences between the studied groups. The  $p < 0.05$  were considered as statistically significant.

### Results

Most of the studied women were secondary school graduates, house wives, and from rural Upper Egypt, respectively 40.4%, 78.6% and 34% (Table 1).

**Table 1.** Sociodemographic characteristics of the studied sample (EDHS)

Sociodemographic determinant	Frequency (n=18134)	Percent (%)
<b>Age</b>		
< 20 year	843	4.6
20–29	6583	36.4
30–39	6021	33.2
40–49	4687	25.8
<b>Residence</b>		
Urban governorates	3304	18.2
Urban Lower Egypt	1454	8.0
Rural Lower Egypt	4088	22.5
Urban Upper Egypt	2268	12.5
Rural Upper Egypt	6169	34.0
Frontier governorates	851	4.8
<b>Level of education</b>		
Illiterate	6282	34.6
Primary	2809	15.5
Secondary	7334	40.4
Higher	1709	9.5
<b>Occupation</b>		
House wife	14237	78.6
Profession	1431	7.9
Clerical	513	2.9
Sales-woman	244	1.3
Farmer	1068	5.8
Others	641	3.5
<b>Wealth index</b>		
Poorest	3859	21.3
Poorer	3598	19.8
Middle	3425	18.9
Richer	3562	19.6
Richest	3690	20.4
<b>Current methods used</b>		
Not using	7711	42.5
IUD	5996	33.1
Pills	1961	10.8
Injections	1398	7.7
Others	1068	5.9

IUD, pill, and injection contraceptives were the most widely used methods: 33.1% of the married women were using IUD, 10.8% were relying on the pill, and 7.7% were employing injection method. Table 2 shows that overall, 57.5% of the married women in Egypt were using contraception, and IUD was the most preferred future method in 2005.

**Table 2.** Contraception methods currently used and intention to use in future

Use	Frequency	Percent (%)
<b>Situation regarding use</b>		
Currently using	10423	57.5
Used since last birth	2699	14.9
Used before last birth	1434	7.9
Never used	3584	19.7
Total	18134	100.0
<b>Contraceptive use and intention</b>		
Using modern methods	9950	54.9
Using traditional methods	473	2.6
Non-user but intends to use	4941	27.2
Does not intend to use	2770	15.3
Total	18134	100.0
<b>Intention to use</b>		
Use later	4941	64.5
Unsure about use	369	4.8
Does not intend	2347	30.7
Total	7657	100
<b>Preferred future method</b>		
Pill	772	15.5
IUD	1749	35.1
Injections	469	9.4
Female sterilization	38	0.7
Others	1963	39.3
Total	4991	100.0

Regarding residence, IUD and pills were more common in urban (respectively, 37.6% and 12.2%) than rural (respectively, 29.9% and 9.8%). IUD was most commonly used by women with higher education women (40.7%) while pills were most commonly used by women with secondary school education (12.2%). Other methods including: injections, sterilization, condoms and withdrawal were used by nearly one-fifth of farmers (18.6%) and poorest women (19.1%). There were statistically significant differences between sociodemographic characteristics and types of contraception used, (Table 3).

Table 4 illustrates the questions asked about participation in the decision to use family planning. There were a statistically significant difference between decision-making and level of education of the women. The results indicate that virtually all women felt they had a main role in the decision to use a family planning method. More than three-

**Table 3.** Association between different contraception methods and sociodemographic characteristics of users

Sociodemographic determinant	Not using (n=7711) (42.5%)	IUD (n=5996) (33.1%)	Pill (n=1961) (10.8%)	Others (n=2466) (13.6%)	Total (n=18134) (100.0%)
<b>Age</b>					
<20 year	628 (74.5%)	126 (14.9%)	51 (6.1%)	38 (4.5%)	843 (100.0%)
20–29	3245 (49.2%)	1920 (29.2%)	688 (10.5%)	730 (11.1%)	6583 (100.0%)
30–39	1867 (31.0%)	2417 (40.1%)	757 (12.6%)	980 (16.3%)	6021 (100.0%)
40–49	1971(42.1%)	1533 (32.7%)	465 (9.9%)	718 (15.3%)	4687 (100.0%)
$\chi^2=829.82$	p<0.001				
<b>Residence</b>					
Urban	2898 (38.5%)	2832 (37.5%)	919 (12.2%)	888 (11.8%)	7537 (100.0%)
Rural	4813 (45.4%)	3164 (29.9%)	1042 (9.8%)	1578 (14.9%)	10597 (100.0%)
$\chi^2=183.620$	p<0.001				
<b>Education</b>					
Illiterate	2942 (46.8%)	1679 (26.7%)	583 (9.3%)	(17.2%) 1078	6282 (100.0%)
Primary	1120 (39.9%)	957 (34.1%)	300 (10.7%)	432 (15.3%)	2809 (100.0%)
Secondary	2973 (40.5%)	2665 (36.4%)	896 (12.2%)	800 (10.9%)	7334 (100.0%)
Higher	676 (39.6%)	695 (40.7%)	182 (10.6%)	156 (9.1%)	1709 (100.0%)
$\chi^2=329.61$	p<0.001				
<b>Occupation</b>					
House wife	6286 (44.2%)	4511 (31.6%)	1565(11.0%)	(13.2%) 1875	14237 (100.0%)
Profession	509 (35.6%)	590 (41.2%)	159 (11.1%)	173 (12.1%)	1431 (100.0%)
Clerical	157 (30.6%)	224 (43.6%)	64 (12.5%)	68 (13.3%)	513 (100.0%)
Sales-woman	82 (33.6%)	89 (36.5%)	33 (13.5%)	40 (16.4%)	244 (100.0%)
Farmer	436 (40.8%)	342 (32.1%)	91 (8.5%)	199 (18.6%)	1068 (100.0%)
Others	241 (37.6%)	240 (37.5%)	49 (7.6%)	111 (17.3%)	641 (100.0%)
$\chi^2=157.49$	p<0.001				
<b>Wealth index</b>					
Poorest	1871(48.5%)	906 (23.5%)	344 (8.9%)	738 (19.1%)	3859 (100.0%)
Poorer	1608 (44.7%)	1072 (29.8%)	375 (10.4%)	543 (15.1%)	3598 (100.0%)
Middle	1452 (42.4%)	1145 (33.4%)	393 (11.5%)	435 (12.7%)	3425 (100.0%)
Richer	1404 (39.4%)	1363 (38.2%)	426 (12.0%)	369 (10.4%)	3562 (100.0%)
Richest	1376 (37.3%)	1510 (40.9%)	423 (11.5%)	381 (10.3%)	3690 (100.0%)
$\chi^2=456.82$	p<0.001				

quarters of the users made the decision jointly with their husbands; 4.8% of the illiterate indicated that the husbands were mainly responsible for the decision to use contraception.

**Discussion**

The type of contraceptive method used is associated with the source where the method is acquired. Clinical methods such as IUDs and sterilization are generally administered at healthcare facilities where there are necessary equipment, supplies, hygienic conditions, and staff with technical capacity. In contrast, methods such as oral contraceptives and condoms are typically obtained from private pharmacies and mobile units (12).

The results of this study showed that 57.5% of the participants used contraception. This figure is slightly higher than that reported among low-income urban population in India (52%), (13). Another study in Dohuk district of Kurdistan region, northern Iraq, in 2003 estimated the prevalence of contraceptive use (any method) among 668 non-pregnant women as much as 60.6% (14).

Until the 1960s, IUDs and condoms were the only artificial methods for birth control. The mix of available methods has greatly expanded and insertion of an IUD is now the second most prevalent method of family planning worldwide (13.6%), after female sterilization (20.5%), among women of reproductive age who are married or

**Table 4.** Decision-making for using contraception among different educational levels

Decision-maker	Women's level of education			
	Illiterate	Primary	Secondary	Higher
Mainly respondent	575 (17.4%)	272 (16.2%)	618 (14.3%)	127 (12.4%)
Mainly husband	160 (4.8%)	75 (4.5%)	146 (3.3%)	27 (2.6%)
Joint decision	2567 (77.5%)	1324 (78.9%)	3560 (82.2%)	868 (84.7%)
Others	10 (0.3%)	6 (0.4%)	9 (0.2%)	3 (0.3%)
<b>Total</b>	<b>3312 (100%)</b>	<b>1677 (100%)</b>	<b>4333 (100%)</b>	<b>1025 (100%)</b>

$\chi^2=43.707, p<0.001$

cohabiting (15).

Since 1988, IUD has remained the most popular contraceptive method in Egypt. Earlier, oral contraceptive was the leading method used by Egyptian women. The prevalence of IUD use among married women increased from 4% in 1980 to 37% in 2003 (16). The total number of current IUD users is estimated to be over 150 million women worldwide. Prevalence of IUD use is the greatest in certain countries in the Middle East and Latin America (Egypt, 63%; Cuba, 59%). In contrast, prevalence of IUD use is below 2% among women of reproductive age in sub-Saharan Africa and in North America (15).

In current study, IUD, pill, and injection were the most widely used methods: 33.1% of currently married women were using IUD, 10.8% were relying on pill, and 7.7% were getting injection. In Niger, intrauterine contraceptive device was the most (74.6%), and condom was the least common method chosen by clients (0.2%); injection and pills were used by 19.5% and 5.7% of women, respectively (17).

Alvergne et al. (18) found that individual socio-demographic characteristics were the most likely explanatory factors for temporal and spatial patterns of contraceptive uptake. In previous studies, economic status has been identified as one of the key factors affecting contraceptive use. In Egypt, household wealth status is associated with IUD use from private sources, perhaps because services from public or not-for-profit sources can be obtained with minimal cost, whereas access to private services usually involves higher cost (19). The results of this study indicated that one-fifth of poor women used methods other than IUD and pills.

Women's education level was associated with the type of contraception method used; however, differences in the use of any family planning method by education level have narrowed considerably in the past decade, although differentials remain in

the use of certain methods (20). The present study showed that IUD was most commonly used by higher educated women (40.7%) while pills were most commonly used by graduates of secondary schools (12.2%). In India, the low-income urban population is aware of the importance of limiting the family size and has family planning facilities yet has less contraceptive usage because of low level of education (13).

Brown et al. (21) reported a positive correlation between perceived benefit regarding ease of contraception use and educational level. In the Eastern province of Saudi Arabia socio-economic factors were related to their use. The most important variables that were found to be significantly correlated with the birth intervals were maternal age, level of education, family size and breastfeeding (22).

Men have rarely been involved in either receiving or providing information on sexuality, reproductive health or birth spacing. They have also been ignored or excluded in one way or the other from participating in many family planning programs as family planning is viewed as a woman's affair (23). In recent times, concerned groups have argued strongly in favour of bringing men into the center of debate and research on family planning, population control and reproductive health of women.

The entire reproductive process from pregnancy to childbirth is a complex phenomenon that is socially and culturally determined (24).

However, Kabbash et al. (25) reported that men play a powerful role in reproductive decisions. Their actions can have unhealthy and even dangerous results. Men's participation is a promising strategy for addressing some of the world's pressing reproductive health problems. The Arab region, though diverse, is characterized by patriarchal social systems and family structures that give prominence to the role of men in both public and private spheres (26).

This study showed that the majority (80.4%) of contraceptive users made the decision jointly with their husband, 38.8% of secondary school educated participants saw the decision as one they made mainly on their own, and 39.2% of illiterate individuals indicated that their husbands were mainly responsible for the decision to use contraception.

Although women's status in Egypt is clearly multidimensional, the reproductive aspect of women's position has a strong connection with non-reproductive dimensions. Analyses based on data from Egyptian Demographic and Health Survey have revealed a positive, although unspecified, association between gender inequalities and fertility. To identify the dynamics underlying this relationship, a study examined the links between women's status, family planning decision making, and contraceptive use. The majority (60.4%) thought family planning decisions should be made by both partners (27).

In Ghana, about 20% indicated their male partner as a barrier for contraception use (28). In Port Harcourt, about 15.8% would depend on their spouses for choice of contraceptive methods and 52.7% would discontinue family planning if their spouses objected. Only 22.1% of the females recognized that male involvement could impact on the acceptance rate of family planning services (29). In a rural village in India, a study highlighted how multilevel factors were linked to a woman's ability to contracept and make fertility decisions in a context where being a wife implies obedience, limited mobility, sexual availability, and high fertility (30).

### Conclusion

More than half of the participants used contraception while IUDs and pills were the most commonly used methods. Whatever the level of education, the majority of women thought that family planning decisions should be made by both partners.

### Conflict of Interest

The author discloses any relevant associations that might pose a conflict of interest.

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