IUD use in Turkey:
An Analysis of 1978 and 1998

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Turkey has gone through drastic population changes in the past 80 years, especially in the area of fertility. The total fertility rate (TFR) for the country is just above replacement level; this is unlike other Islamic and Middle Eastern countries where the total fertility rates were around 5.1 in Iraq and 4.5 in Saudi Arabia (PRB, 2006) . The low TFR in Turkey can be attributed partly to the increased age at first marriage for women, the desire for smaller families, and greater contraceptive prevalence (Bulut, 1997; Behar, 1995; Unalan, 1997

Contraceptive use has increased greatly since the 1970s. Table 1 presents the proportions of exposed Turkish women by method use and type in 1978 and 1998. From 1978 to 1998, the percentage of women in the sample reporting current use of any family planning method rose from 50.29 percent to 81.71 percent. The largest increase was in women who are using modern methods, with a significant decrease in the proportion of exposed women not using any contraceptive methods. The proportion of women using modern methods, such as the IUD and birth control pills, increased by about 30 percentage points during the 20 year period. Increased use of the IUD accounted for much of this change; the percentage of women reporting IUD use increased from about 4 to 25 percent. Family Health International reported in 2000 that in Turkey, there were 2.1 million women, or 19 percent of women of reproductive age, using the IUD as their contraceptive method.

While the Copper T IUD has shown to be nearly as effective as male or female sterilization, the IUD remains underutilized in many countries. This is due largely to lack of information, misinformation and reluctance on the part of both clients and providers, unfounded fears about safety, or lack of supplies and trained staff. There are also other ways in which women are prevented from using the IUD, such as government policy concerning family planning.

However, this is not the case in Turkey. A significant policy change occurred in 1983 with the Population Planning Law. This law legalized induced abortions of up to ten weeks of pregnancy, allowed sterilization for men and women in Turkey with proper permission, and for health personnel to insert IUDs with the approved training.

This last aspect of the law is the main focus of this paper. Before 1983, only physicians were permitted to insert IUDs. Even though the IUD had proven to be adequate for women in Turkey, insertion and proper use were problematic. Male physicians were reluctant to accept and prescribe IUDs; moreover, many women lacked access to a physician because there were so few physicians in the rural areas. Recognizing these problems, Dervisoglu (1988) proposed that non-physicians learn to insert the IUD and to examine patients with the IUD. In a three-phase project, he trained assistant nurse-midwives in IUD insertions and check-ups. Because they were no less capable than physicians, intrauterine device services could now also reach the rural areas of the country beyond the range of traditional medical services. Another study in Nigeria, Turkey, and Mexico concluded that trained clinicians can insert IUDs safely in many settings if they receive the appropriate competency-based training (Farr, Rivera & Amatya, 1998).

For this paper, I will do an empirical study examining the use of the IUD in 1978 and 1998; years before and after the change in the population law concerning IUDs. The data sources that I will be using are the 1978 Turkish Fertility Survey (TFS) and the 1998 Turkish Demographic and Health Survey (TDHS). Using these two surveys, I want to compare the use of the IUD both before and after the implementation of the 1983 law. Specific questions I would like to examine are (1) what is the demographic profile of current IUD users and (2) what are the determinants of current IUD use.

The 1978 Turkish Fertility Survey and the 1998 Turkish Demographic and Health Survey were comprehensive national surveys of the Turkish population, stratified to yield self-weighting representative samples within five regions and urban versus rural places as well as for the total national population. The 1978 survey interviewed only married women at ages from 15 to 49, while the 1998 survey also included a sample of unmarried women. I limit attention here only to currently-married, non-pregnant women ages 14 to 49 because in both Turkish surveys only these women were asked about current contraceptive use. Studies that cite the proportion of all reproductive-age women using various types of methods will report lower levels of use because they include many other women in the denominators, including many women not at risk of conception and other women who were not asked (in these surveys) whether they were using contraceptives. Following standard usage, even though respondents who have undergone surgical sterilization or who have sterilized partners are not at risk of pregnancy, we include them as being modern contraceptive users since they report action to prevent future births. I studied responses from 3,217 women for the 1978 survey and 4,380 women from 1998.

PROFILE OF INTRAUTERINE DEVISE USERS

As seen in Table 1, overall IUD use increased greatly between 1978 and 1998. Table 2 presents percentages of the 1978 sample who reported current use of any contraceptive method and use of an IUD and the percentages of current users who are using any modern method or the IUD. Table 3 presents the same information for the sample of women in 1998. The table also shows how these percentages varied by social and demographic characteristics. These are simple bivariate relations for each factor, unadjusted for effects of other factors.

Despite over 70 percent of exposed women having knowledge of the IUD, only 3.98 percent of exposed women were currently using this method in 1978. About 9 percent of the women had ever used the IUD in their lifetime. When looking at just those women who are contraceptive users, 35.29 percent are using modern methods, with only 7.91 percent of the contracepting women using the IUD. During this time, the Pill was the most widely used contraceptive method (Table 1). In 1998, when about 98 percent of the at-risk women had knowledge of the intrauterine device, 25.18 percent were using the IUD. Forty-five percent of women in the sample reported having ever-used the IUD.

One factor to look at between the IUD use in 1978 and 1998 are the differences between the categories of each predictor. Over the 20 year time span, the gaps are shrinking in terms of contraceptive use. However, since there was such little use of the IUD in 1978, the difference between the highest and lowest proportion in each variable consist of only a few percentage point. In 1998, when there are more women using the intrauterine device, there is more variation among the predictors in IUD use.

In both 1978 and 1998, the relationship between IUD use and age is an inverted-U shape: a higher percentage of women in the middle age group used the IUD relative to women in the youngest and oldest groups. Interestingly, the age profile of IUD users shifted upward between 1978 and 1998. Just over 11 percent of contracepting women in the 20 to 24 year old age group used the IUD in 1978, versus the 7.8 percent in the 30 to 34 age group. In 1998, roughly 33 percent of contracepting women were using the IUD in each of these age groups. The age group that saw the least increase was the 15 to 19 year olds. However, this is to be expected as they have not or may just be beginning to start a family.

Dramatic educational change occurred in Turkey over the period. The share of the female population completing primary school swelled from one-fourth to two-thirds of the population, and the share completing secondary school rose from one in 25 to one in five women. In addition to international comparative research documenting the strong link between education, fertility control and fertility, research in Turkey has shown that women's educational attainment affects the balance of power in Turkish marriages (Fox 1973a, 1973b) and that education influences domestic bargaining in Turkish families specifically related to productive and reproductive decisions (Fisek & Sumbuloglu 1978, Isvan 1991, Angin & Shorter 1998, Donahoe 1999). In this analysis, education is categorized into three groups: no education (including incomplete primary school), completed primary school (including incomplete secondary schooling), and completed secondary school. Tables 2 and 3 show the percentage of IUD users increased as education increased in both years.

An urban-rural difference in fertility was observed in Turkey as early as the 19th century (Karpat 1985, Duben & Bihar 1991) and persisted through the mid-twentieth century (Robinson 1958, Keleş 1972). Comparison of Tables 2 and 3 reveals that contraceptive patterns also differed by place in the last quarter of the 20th century, although this difference diminished substantially over time. At both time points, at-risk women living in rural areas were less likely to use the IUD than were living in urban areas. While the percentage of exposed women using the IUD in urban areas in 1978 is more then double the percentage in rural areas, there is only a 3 percent difference between the two in 1998.

Turkey always has exhibited a very clear pattern of regional differences in birth rates, death rates, and population growth. "The most striking predictor of fertility in Turkey, at both an aggregate and household level, is regional location. The eastern part of Turkey has demographic rates more characteristic of the developing countries of the Middle East and Asia, while the western region is more European in demographic structure" (Bacon & Mason, 1972:vii). In general, the West is more densely settled, industrialized, and socio-economically advanced. Industrial centers have been rapidly growing in the South in recent decades. The North region specializes in small-scale agriculture. Other than a few minor industries in Ankara, the industrial production in the Central region is relatively low. Mountain ranges separate the North and South regions from the Central region. The East is the least developed area of Turkey and is poor in terms of industrial production. Despite the West being the most developed region in Turkey, higher proportions of at-risk women and contracepting women are using the IUD in the Southern and Central regions. Also, while the West has higher proportions

compared to the East of IUD use among all exposed women, the East has higher proportions of IUD use among women using contraception. In other words, a contracepting woman living in the East is more likely to use the intrauterine device than a contracepting woman living in the West. Turkish women in the North have the lowest percentage of current IUD use, with only 16.34 percent using the IUD in 1998, versus 31.05 percent in the Central region.

The number of living children also appears to be associated with IUD use; this was constructed into three categories based on family size. A small family has either no children or only one child; an average sized family has between two and four children; and a large family is classified as having 5 or more children. Just over 4 percent of women in 1978 were using the IUD if they had at least 2 children, versus only 2.77 percent of women with no more than one child. In 1998, women with 2 to 4 children had a higher proportion of IUD use.

Overall, there has been a tremendous increase in the proportion of women who are using the IUD as a contraceptive method from 1978 to 1998. Increases are apparent in all categories of predictors. The remainder of the paper will use multinomial logistic regression to examine the odds of using a Turkish woman using the IUD over traditional methods, other modern methods, or no contraceptive use at all.

Tables

Table 1 – Contraceptive Use of Turkish women by Method; 1978 TFS and 1998 TDHS

Contraceptive Method	**1978**	**1998**
Modern Methods	**17.75**	**48.67**
IUD	3.98	25.18
Pill	8.11	5.73
Injections	0.44	0.62
Condom	4.07	10.87
Sterilization	0.78	5.52
Diaphragm/ Foam/ Jelly	0.37	0.75
Traditional Methods	**32.54**	**33.04**
Withdrawal	22.16	31.05
Periodic Abstinence	0.06	1.21
Other*	10.32	0.78
Not Using	**49.70**	**18.29**
N	3,217	4,380

*Includes douche, rhythm, and traditional IU method

Table 2 – Proportions of Exposed Turkish Women Using Contraceptives and the IUD by Predictors; 1978 TFS

	All Exposed Women		All Exposed Method Users	
	% Using Contraceptives	% Using IUD	% Modern Method Users	% Using IUD
Age				
15 – 19	21.61	2.12	43.14	9.80
20 – 24	42.17	4.78	39.84	11.33
25 – 29	51.17	5.28	36.39	10.32
30 – 34	61.50	4.81	40.00	7.83
35 – 39	54.60	2.81	30.58	5.15
40 – 44	55.97	3.23	29.33	5.78
45 - 49	51.53	1.53	26.73	2.97
Education				
No Education	40.80	2.92	31.99	7.15
Primary	62.13	5.21	37.70	8.38
Secondary	77.30	7.80	42.20	10.09
Place of Residence				
Urban	62.35	5.79	39.81	9.28
Rural	37.18	2.01	27.05	5.41
Region				
West	66.70	3.42	31.63	5.12
South	47.66	5.23	38.73	10.98
Central	50.18	6.53	42.79	13.02
North	49.01	1.97	28.74	4.02
East	25.57	1.78	34.18	6.96
Living Children				
0 – 1	32.59	2.77	37.45	8.51
2 – 4	60.62	4.45	35.41	7.34
5+	42.58	4.02	33.22	9.45
Total	50.30	3.98	35.29	7.91
N	3,217	(128)	1,618	(128)

Table 3 – Proportions of Exposed Turkish Women Using Contraceptives and the IUD by Predictors; 1998 TDHS

	All Exposed Women		All Exposed Contracepting Users	
	% Using Contraceptives	% Using IUD	% Modern Method Users	% Using IUD
Age				
15 – 19	42.86	9.71	50.67	22.67
20 – 24	68.48	22.67	60.54	33.11
25 – 29	81.11	28.01	65.86	34.54
30 – 34	87.35	29.00	63.21	33.21
35 – 39	90.52	31.28	60.47	34.55
40 – 44	89.13	20.59	52.13	23.11
45 - 49	78.04	11.49	42.42	14.72
Education				
No Education	74.12	21.32	56.66	28.77
Primary	83.65	26.02	57.87	31.11
Secondary	86.38	28.17	70.65	32.61
Place of Residence				
Urban	83.04	26.02	61.57	31.33
Rural	78.81	23.37	54.97	29.65
Region				
West	87.80	25.04	57.50	28.52
South	79.73	28.45	60.18	35.68
Central	85.01	31.05	63.48	36.52
North	87.48	16.34	53.23	18.67
East	64.31	22.21	64.62	34.53
Living Children				
0 – 1	62.60	16.84	57.06	26.89
2 – 4	89.64	29.36	60.62	32.75
5+	78.18	19.60	57.11	25.06
Total	81.71	25.18	59.57	30.82
N	4380	(1,103)	3579	(1,103)

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