

Is the Diaphragm a Viable Option for Women in Turkey?

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Context: In Turkey, where contraceptive prevalence is about 65%, a large number of couples rely on withdrawal and the IUD. Although the country has had a national family planning program for 35 years, the diaphragm has not been introduced as a contraceptive option.

Methods: Diaphragms were offered to women as a contraceptive option during counseling sessions at four family planning clinic sites in western Turkey: two public-sector clinics (one in Çapa, Istanbul, the other in Izmir) and two private-sector clinics (one in Incirli, Istanbul, the other in Denizli). Women who chose the diaphragm were interviewed at enrollment and were invited for follow-up visits with a physician at two weeks and at any time thereafter. Demographic information was also collected from an additional 740 women who chose another contraceptive method, and focus-group discussions were conducted with diaphragm users and their partners, with users of other methods and with service providers.

Results: Overall, 166 women selected the diaphragm, and 161 enrolled in the study. Initial acceptance rates were higher at the two private clinics (14% and 6%) than at the public clinics (3% and 1%). At the public-sector clinics, diaphragm users were better educated and more likely to be professionally employed than were women who selected other contraceptive methods. In Çapa, 42% of women who chose the diaphragm were university graduates, compared with 7% of those who chose another method. Despite differences between the two private clinics in clients' educational levels, no such differences existed between diaphragm acceptors and users of alternative methods at each site. Among women who chose the diaphragm, 47% said they had sex four times or more per week, compared with 29% of those using another contraceptive. More than half of the women who selected the diaphragm (59%) cited safety and freedom from side effects as the reason for their choice of contraceptive. A similar percentage of clients who used other methods (58%) cited effectiveness. Fifty percent of diaphragm users had discontinued by six months, and 66% had done so by 12 months.

Conclusion: A small proportion of clients in both private- and public-sector clinics were interested in using the diaphragm and found it acceptable. In less-developed countries, the diaphragm may be a viable contraceptive option when providers are able to provide adequate information and support.

International Family Planning Perspectives, 2000, 26(1):36–42

The diaphragm was widely used during the 1950s in most developed countries, although its use decreased after the development of the pill and the IUD.¹ Despite the diaphragm's availability in many developed countries, it is almost unobtainable in developing countries. As a result, the number of trained providers in these countries is extremely small, and the quantity of diaphragms being supplied is tiny. In 1993, the United Nations Population Fund provided 5,000 diaphragms to the Gambia, Tanzania and Yemen, while the International Planned Parenthood Federation made a few available to a number of Caribbean islands, Chile, Kenya, Nigeria and several countries in eastern Europe.² The diaphragm has never been available in Turkey.

Due to the diaphragm's limited availability, data about its acceptability and use-effectiveness in the developing world are extremely sparse. Our review of 60

studies involving the diaphragm from 1965 to 1993 revealed only 11 concerning developing countries—Brazil,³ Egypt,⁴ India,⁵ Israel⁶ and Sri Lanka⁷—of which some date to the 1960s and whose results are probably irrelevant today, when many more contraceptive methods are available. Primarily, the studies examined acceptability, which was defined and measured differently across studies, and provided little information about users.

In Alexandria, Egypt, women choosing the diaphragm tended to do so because of the side effects or contraindications of other methods.⁸ The authors also noted an accidental failure rate of 16%, but gave no explanation about how the calculation was made. A more recent study in Brazil shed more light on use-effectiveness and documented an 18% one-year accidental pregnancy rate.⁹ The authors also found that diaphragm users tended to be older and more highly educated than pill users,

a pattern which is believed to exist among users in the developed world. Acceptability of the diaphragm was found to be surprisingly high among low-income women outside Madras, India (9% of the eligible population in the study area), with 70% still using the method 18 months after initiation. Furthermore, 35% of users were illiterate, contradicting the generally accepted view that the diaphragm is not suitable for such women.¹⁰

In general, policymakers and providers have considered the diaphragm an inappropriate and ineffective method for women in developing countries, despite a lack of data to confirm this view. For more than a decade, women in a variety of developing countries have questioned this situation and have requested that more attention be given to introducing barrier methods into family planning programs because they are under the user's control, have few side effects and protect against some sexually transmitted diseases.¹¹

Turkey has had a national family planning program for the past 35 years, but that program has never included the diaphragm. In its first decades, contraceptive options were mainly limited to the IUD, the pill and condoms. Voluntary sterilization for both women and men was legalized in 1983, but is still not readily accessible. For the country as a whole, withdrawal remains the most widely used method of contraception (used by nearly 25% of married women of reproductive age), followed by the IUD (20%). Only 8%

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of contraceptive users rely on the condom, and fewer than 5% use the pill.¹² Thirty-five percent of married women of reproductive age use no method at all. The figures are similar for western Turkey.

The diaphragm, which is an inexpensive contraceptive method, could have a place in Turkey's family planning program, especially at a time when one of the major donor agencies has decided to stop contraceptive donations. We undertook our study to determine how many women would choose the diaphragm and use it successfully, if it were offered as another contraceptive option in different family planning delivery settings in Turkey. Additionally, we examined what characteristics of a contraceptive were most important to women when they selected a method and what types of services would be most appropriate for supplying the diaphragm.

The study reported here was part of an interagency collaborative study on the diaphragm in three developing countries—Colombia (conducted by the Population Council), the Philippines (by Family Health International) and Turkey (by the World Health Organization). The results of a pooled data analysis from these three studies are described elsewhere.¹³

Methods

We selected four service delivery settings in western Turkey to represent the major service provision outlets that provide reproductive health care and family planning services in the country. We considered these sites to be representative, since contraceptive prevalence rates are similar throughout Turkey¹⁴ and because the two public clinics, especially the one in Izmir, serve large numbers of recent immigrants from eastern and southeastern Turkey. The sites were a university-affiliated well-woman clinic in Çapa, Istanbul, serving an urban clientele of lower class and middle-class women; a Ministry of Health family planning clinic in Izmir (located in a large maternity hospital) that serves low-income groups; a private hospital in Incirli, Istanbul, with an upper-middle-class clientele; and a private clinic in Denizli that offers gynecologic and obstetric services to middle-income urban and rural clients.

The number of clients seen at these facilities each month varied from 50 in Incirli to 600 in Izmir and Denizli. At the beginning of the study, all clinics provided pills, IUDs and condoms; the two public-sector clinics also offered vasectomy, tubal ligation and injectables. We chose the clinics based on their caseload, the number of staff, the availability of counseling, the method mix, the

adequacy of physical infrastructure for elements such as privacy and infection control, and the interest of staff in integrating a new method into the clinic's operation.

All staff involved in family planning service provision from these clinics (a total of 19) participated in a five-day training program based on a manual developed for the three-country study by the Center for Research and Control of Maternal and Child Diseases, Brazil.¹⁵ The manual includes modules on client-provider communication, sexuality and gender awareness; it also includes a contraceptive technology update and an introduction to the diaphragm. At each clinic, skilled trainers taught providers diaphragm measurement, insertion and removal. In the two public clinics, physicians trained clients to use the diaphragm; in the private clinics, a nurse-midwife and a physiotherapist provided this service.

Clients received information about all methods, including the diaphragm, in counseling sessions. In some cases, these were individual sessions, and in others, group sessions. Posters and information leaflets developed for the study were placed in the clinics; otherwise, no special effort was made to disseminate information about the diaphragm more widely. Therefore, the majority of clients heard about the diaphragm for the first time in the clinic.

Women who chose the diaphragm and who agreed to participate in the study were interviewed at enrollment and were invited for follow-up visits with a physician at two weeks and at whatever time they felt the need thereafter. Interviewers, who were trained, were selected because of their good communication skills and because they were not involved in family planning service delivery. Providers instructed women to use the diaphragm with spermicide at every act of intercourse and to leave it in place for six hours. Additionally, they were told to wash the diaphragm with unperfumed soap, to rinse it with water and to dry it with a clean towel, and were advised to check for holes or tears before storing it in its box. Providers gave each woman a diaphragm and a tube of spermicide, along with applicators to insert additional spermicide, in case she had intercourse again before six hours had passed.

In Turkey, many women take a vaginal douche as part of the Islamic practice of "gusul" (cleansing one's body) after intercourse. In three of the clinics, the providers deliberately avoided mention of douching during the counseling sessions, but emphasized the importance of not removing the diaphragm for six hours.

In the public hospital in Izmir, clients were told not to douche for six hours. All diaphragm acceptors were told that emergency contraception was available to them if they forgot to use their diaphragm or suspected it had been dislodged. Recruitment for the study was carried out from May 1995 to September 1997.

Over a one-year period, interviewers collected data from 200 women who chose a contraceptive method other than the diaphragm at each of three of the sites and from 140 (due to a lower caseload) at the clinic in Incirli. During the second year of the study, we conducted focus-group discussions and in-depth interviews across the four sites with diaphragm users, with discontinuers, with users of other methods, with partners of diaphragm users, with providers who participated in the study, and with health personnel in Istanbul and Izmir who worked in other service areas and who did not provide the diaphragm.

So that a woman's choice was not affected by cost, the diaphragm was priced in accordance with other methods. The price charged for counseling and diaphragm-fitting services tended to be similar to that charged for an IUD insertion. Thus, the clinic in Izmir, where all services are free, provided the diaphragm at no cost, while the clinic in Incirli charged US\$50.

We used chi-square analysis, Fisher's exact test and variance analysis, where appropriate. We analyzed the quantitative data using SPSS and EpiInfo. The ethics committee of the Turkish Coordinating Institution and the World Health Organization's Committee for Research in Human Subjects approved the study.

Results

Initially, we pooled data from all four sites. Of the 166 women who chose the diaphragm, 161 (97%) enrolled in the study. The loss to follow-up rate at 12 months was 10%; 55 women (34%) were still using the method at the 12-month follow-up. A larger percentage of diaphragm acceptors (60%) made their contraceptive choice during counseling than did those who selected another method (36%). Additionally, women who chose the diaphragm relied less heavily on friends for information about contraception (11%) than did women selecting an alternative (41%).

The life-table analysis indicated an accidental pregnancy rate for the diaphragm of 6% (95% confidence interval, 2.9–14.0) at six months and 18% (95% confidence interval, 8.8–33.5) at 12 months. Nine of the 10 pregnancies, which were evenly distributed across the months of use, oc-

Table 1. Selected characteristics of women obtaining contraceptives, by method obtained and clinic site, May 1995–September 1997, Turkey

Characteristic	All clinics		Public clinics				Private clinics			
			Çapa, Istanbul		Izmir		Denizli		İncirli, Istanbul	
	Diaphragm (N=154–166)	Other methods (N=668–736)	Diaphragm (N=52–58)	Other methods (N=193–197)	Diaphragm (N=46–66)	Other methods (N=139–199)	Diaphragm (N=14–19)	Other methods (N=174–200)	Diaphragm (N=23)	Other methods (N=139–140)
Mean age	30.33±7.08	28.72±6.35*	32.45±6.93	29.75±5.77	28.18±6.12	29.44±6.19	31.89±9.34	27.44±6.63	29.87±6.45	28.09±6.62
Mean years of schooling	9.90±5.17	7.39±4.31*	11.33±5.25	7.53±4.06**	8.61±4.64	4.92±3.21**	5.84±4.50	6.52±3.57	13.39±3.41	11.94±3.34
% who are univ. graduates	28.5	14.2*	41.5	7.1**	15.6	1.0**	7.1	8.1	47.8	46.0
% who are professionals	12.9	8.6*	37.9	6.1**	15.2	3.0**	5.3	6.5	21.7	22.9
% who are housewives	52.4	73.9*	34.5	68.0**	62.1	88.4**	78.9	87.4	47.8	42.1
% whose partner is univ. graduate	35.4	21.4*	44.2	35.5**	24.6	6.5**	10.5	13.6	69.6	57.9
% living in rural areas	7.2	15.4*	6.7	4.1	15.2	43.2**	31.6	43.5	4.4	4.3
% who share a bedroom with third person, other than baby <12 mos.	13.6	29.3*	14.5	28.7**	10.8	20.6	26.3	47.5	8.7	16.5

*Difference between acceptors of the diaphragm at all clinics and with acceptors of other methods at all clinics is statistically significant at $p < .05$. **Difference between acceptors of the diaphragm at that clinic compared with acceptors of other methods at that clinic is statistically significant at $p < .05$.

curred among women who reported that they did not use the device during every act of intercourse; five of the 10 women terminated their pregnancy in the first trimester. None of the pregnant women applied for emergency contraception.

Age and Education of Users

Overall, women who discontinued using the diaphragm were slightly younger than those who continued use. However, when we excluded women who discontinued due to pregnancy or desire for pregnancy (the majority of whom said they would continue with the diaphragm after the pregnancy or after pregnancy termination), the age difference disappeared.

When we pooled data from all four clinics, we found that women who chose the diaphragm had a mean age of 30, compared with a mean age of 29 among users of other methods (Table 1). Those who selected the diaphragm had an average of 10 years of schooling, whereas women who chose other methods averaged seven years of schooling. A higher percentage of diaphragm acceptors and their partners had a university education (29% and 35%, respectively) than did women who used an alternative method and their partners (14% and 21%, respectively).

When we examined the data by clinic, however, these differences existed among clients in public clinics, but not among those in private ones. For example, 42% of women who chose the diaphragm in Çapa were university graduates, compared with 7% of women using an alternative method. Sixteen percent of clients who selected the diaphragm in Izmir were

university graduates, compared with 1% who chose another method. In İncirli, in contrast, the education level was high for all contraceptive users (12–13 years), reflecting the socioeconomic status of the hospital's clients. Although clients in Denizli had fewer years of schooling (6–7) than did clients in İncirli, there was no significant difference in education between those who selected the diaphragm and those who chose other methods.

Despite a lower educational level, the initial acceptance rate for the diaphragm was higher in Denizli (6%) than it was in Çapa (3%) and in Izmir (1%, not shown). In İncirli, where the education level was the highest, the acceptance rate was 14%. Diaphragm continuation rates ranged from 30% to 48%, although a much higher percentage of users returned regularly for follow-up visits in Denizli than in the other centers.

Compared with women using other methods, those selecting the diaphragm had had the same number of pregnancies but had had fewer children and a higher mean number of abortions (Table 2). Additionally, more women who selected the diaphragm than who chose other methods wanted to be pregnant within a year.

Frequency of Intercourse

The diaphragm is generally thought to be more appropriate for women who have sex occasionally than for

those who have a regular and active sex life. Nevertheless, when asked how often they had sex in a typical week, 47% of diaphragm acceptors answered four or more times, compared with 29% of other method users (Table 3). Additionally, a larger percentage of women who accepted the diaphragm (5%) than who chose other methods (1%) had had more than one sex partner in the last six months.

Among women who reported having had sex more than four times in the past two weeks, 43% discontinued using the diaphragm and 25% continued (not shown). However, the majority of women, regardless of whether they continued or discontinued use, reported having sex between one and three times in the last two weeks.

Perceptions of Diaphragm Use

More women (59%) cited safety and freedom from side effects than any other reason to explain why they made the choice

Table 2. Selected reproductive characteristics of women obtaining contraception, by method obtained

Characteristic	Diaphragm	N	Other methods	N	F (means) or chi-square (%s)
Mean no. of pregnancies	3.11±2.33	166	3.36±2.54	736	1.18
Mean no. of living children	1.70±1.09*	145	2.06±1.25	690	1.32
Mean no. of abortions	1.79±1.62*	146	1.44±1.58	671	1.04
Mean no. of children wanted	1.96±0.73*	46	2.18±0.56	217	1.67
% wanting to space	29.5	166	30.4	736	0.05
% wanting next pregnancy within one year	8.2*	166	1.3	736	7.64

*Difference between women who selected the diaphragm and those who selected other methods is statistically significant at $p < .05$.

that they did (Table 4). Among women who selected a method other than the diaphragm, effectiveness was the reason most often given (58%), with practicality (46%) and ease of use (39%) also frequently mentioned. Although the numbers were small, protection from sexually transmitted diseases was mentioned by 2% of diaphragm users and by less than 1% of other method users (not shown).

Women who selected the diaphragm tended to have more experience with other contraceptive methods (IUDs, pills, condoms and spermicides) than did women who chose other methods. Many of those who used the diaphragm spoke of health-related problems associated with other methods, such as mood swings, weight gain and dizziness, or discomfort with the string of the IUD. Indeed, one woman's comment (from a focus-group discussion) seemed to reflect the feelings of many diaphragm users: "I had tried all the methods. There were unbearable side effects with all of them. The diaphragm is a rescuer for me."

Diaphragm discontinuation for all reasons was 50% at six months and 66% at 12 months. Those who continued with the method were much more likely to find it easy to use and convenient (48% and 41%, respectively) than were those who discontinued (14% and 11%, respectively). Continuing users overwhelmingly emphasized the diaphragm's safety and freedom from side effects as reasons for liking the method (70%), as well as its being under the user's control (57%); moreover, a considerable number of women who discontinued use did so also (39% and 34%, respectively). In addition, 53% of those who discontinued for reasons other than pregnancy said that they would recommend the diaphragm to a friend.

These positive reports contrast with negative aspects that both those who continued and those who discontinued use found at the beginning of the study. Among these were such comments as "I am afraid that I cannot place the diaphragm in the right place," "It does not look safe; it can be torn by fingernails," and "At first sight, I thought it would hurt, as the edges of it were very hard." For continuing users, these fears disappeared quite soon after initiation, to the point where "easy to use and comfortable" were the positive features most frequently cited in the follow-up interviews.

Partners' Attitudes

There was a significant difference between continuing users and those who discontinued use in the attitudes of partners to-

ward the diaphragm. Women who discontinued use were much more likely than those who continued use to report that their partner's attitude was negative. Some said that their partner complained he could feel it, while others reported that their partner did not want them to use it or complained that

it interrupted lovemaking. It is noteworthy that nearly 10% of women coming back for a visit during the first 45 days reported that their partner did not know they were using the diaphragm. Furthermore, 8% of continuers said at the 12-month follow-up that their partner did not know about their use of the diaphragm.

The majority of continuers said that their partner was happy with the diaphragm, first because it was new and different, then because it allowed him to relinquish responsibility for contraception. Some reported that their partner was enthusiastic: "My husband boasts about the diaphragm and recommends it to his friends." "We share responsibility. One day he uses a condom, the next time I use the diaphragm." "My husband likes the diaphragm very much. He calls it our hat and jokes that he will never go out without putting on a hat." All the partners interviewed expressed dislike for condoms. More diaphragm users (29%) than users of other methods (19%) said that they could not make their partner use a condom.

Diaphragm Use and Douching Practices

Delaying douching was a problem for some women in Izmir, where women were instructed not to douche for six hours: "The jelly remains inside me. They tell us not to douche. I am very uncomfortable without douching." At the other clinics, women dealt with the issue in a variety of innovative ways. Some women said they douched only after six hours, when they removed their diaphragm. Some douched with the diaphragm in place, and others said they simply washed their genitals without douching. We decided to consult a scholar in Islam about the issue, and his opinion was that women may postpone douching and "gusul" until prayer time. We subsequently decided to include this information in the counseling sessions.

In the follow-up interviews, none of the women who stopped using the diaphragm specifically mentioned not being able to douche as their reason for discontinuing the method.

Table 3. Selected measures of sexual behavior among women obtaining contraceptives, by method obtained

Behavior	Diaphragm (N=154-166)	Other methods (N=694-736)
% with >1 sex partner in last 6 mos.	4.8*	1.0
% whose partner has >1 sex partner	6.1*	2.2
% with previous history of an STD	2.4	2.7
% who had intercourse \geq 4 times per week	46.7*	29.1
% who had intercourse 1 time per week	10.3	6.4

*Difference between women who selected the diaphragm and those who selected other methods is statistically significant at $p < .05$.

tinuing the method. In the focus-group discussions in Izmir, however, several women highlighted this as a major problem. About 5% of discontinuers said that they did not like the method because they had to leave it in place while wanting to remove it immediately. It is possible that some of those who specified the diaphragm's inconvenience as their reason for discontinuing were referring to douching, but the fact that this was a low proportion overall (6%) indicates that it was not a major problem. On the contrary, findings from the focus groups suggest that those women who wanted to use the diaphragm found satisfactory ways of dealing with douching.

Providers' Knowledge and Attitudes

Since one of the aims of the study was to examine the kind of service delivery elements that are needed to provide the diaphragm appropriately, we carefully tracked providers over the course of the study. A six-month posttraining questionnaire indicated that providers' knowledge of and attitudes about the diaphragm had improved considerably. Additionally, at the end-of-study evaluation, all providers indicated that they had

Table 4. Percentage of women citing selected characteristics as reason for their method choice, by method chosen

Characteristic	%
Diaphragm	
Is safe and free from side effects	59.0
Is under my control	28.3
Is practical	24.1
Is easy to use	23.5
Is effective	15.7
Can be used only during intercourse	15.7
Want to try a new method	13.8
Does not interrupt lovemaking	12.0
Do not like previous method	7.2
Other methods	
Is effective	58.0
Is practical	46.3
Is easy to use	39.3
Is safe and free from side effects	39.3
Does not interrupt lovemaking	27.1
Do not like previous method	10.3
Other	17.2

learned more about anatomy and that they felt the quality of the care they provided had improved. They said they had begun to speak with clients about their sexual relationships and decision-making with partners, and thereby learned more about the behavior patterns of their clients.

Discussion

The diaphragm continuation rate of 34% is better than the rate of 19% found for progestin-only injectables in an acceptability study in Çapa.¹⁶ It is also close to the continuation rates of the pill and condoms (44%) found in the Turkey Demographic and Health Survey (DHS),¹⁷ yet it is lower than the rates reported in two recent studies in other developing countries. In Brazil, 54% of diaphragm acceptors were still using the method by the end of the first three months;¹⁸ in India, 70% of diaphragm users were still using it after 18 months.¹⁹

Although a variety of factors may affect the continuation rate, both of the other studies gave great importance to service delivery elements. The Brazilian investigators speculated that improved training and preparation of health professionals might be a decisive factor in making the diaphragm a viable alternative for women, since one of the main reasons participants gave for discontinuation was difficulty in handling the diaphragm.²⁰ In India, the lack of user-controlled contraceptive options, especially for spacing pregnancies, may have made the diaphragm an attractive alternative. But the investigators also noted that service delivery factors contributed significantly to women's positive attitude toward the diaphragm: Fieldworkers provided ongoing information and counseling sessions on the diaphragm within the community so that women had time to think about it, did not feel pressured into accepting the method and felt supported after choosing it.²¹

The pregnancy rate of 18% in our study is well within the wide range reported for the diaphragm in the studies we reviewed (2–21%), although it is higher than the rates found in the other centers involved in the study (11% for Colombia and 8% for the Philippines).²² Since safe abortion is readily available in Turkey, diaphragm users may have been less careful about using the method consistently, an observation borne out by the fact that only one of the pregnancies could be ascribed to method failure as opposed to user failure. This is further supported by the failure rates calculated retrospectively for withdrawal, condoms and pills in the 1998 DHS (33%, 16% and 13%, respectively).²³

In our study, service provision was clearly the most important contributor to diaphragm user satisfaction. The finding that the private clinics had a higher uptake of the diaphragm, despite the differing educational backgrounds of users, indicates that private clinics are probably the best setting for providing the diaphragm in Turkey, at least initially. It is likely that their smaller client load, combined with a more personalized approach, enables providers to give the kind of information and reassurance needed for satisfied diaphragm use. As nearly half of all contraceptives are provided by the private sector, this may be a realistic option. The lack of a difference in age and education between users of the diaphragm and users of other methods in the private clinics and the lower education level of diaphragm users in Denizli, compared with those who selected alternative methods at other clinics, indicates that clients' age and education may not play as important a role as service delivery.

The data from Denizli provide evidence that physicians are not needed for diaphragm provision. There, nurse-midwives both counseled clients and provided them with contraceptives, while a physician saw women for checkups and pelvic exams. Our recommendation is that the diaphragm be provided by nurses or midwives who have been trained appropriately, in order to alleviate overcrowding for physician services and to provide a more client-oriented approach.

The need for adequate information and support from providers has frequently been cited as a disadvantage of the diaphragm. We would argue, however, that this kind of attention should be given as a matter of course to beginning users of any contraceptive method. The advantage of the diaphragm is that once a woman is using it satisfactorily, she is not likely to come back with problems over the long term.

Women who continued using the diaphragm had sex at least as frequently as those who discontinued use and those who chose other methods, indicating that participants did not view the diaphragm as an occasional method. This is different from the finding in India, where, unexpectedly, 95% of diaphragm users reported having sexual intercourse once a week or less.²⁴ Although restriction on the timing of douching was mentioned in some of the focus-group discussions as a problem, women who wanted to use the diaphragm found satisfactory ways of dealing with the issue.

It is clear from our study that there is a small niche for the diaphragm because of

its desirable feature—the lack of side effects. This is an important finding, since side effects and health concerns constitute the principal reason that people discontinue or switch contraceptives in Turkey.²⁵ Because this niche is currently being filled by withdrawal,²⁶ the diaphragm provides a valuable option. Protection from certain STDs might also make the diaphragm an attractive alternative for some women. Although more clients who chose the diaphragm than who chose other methods gave this as a reason for their choice, very few diaphragm acceptors mentioned it overall. This probably reflects the low consciousness level about STDs within the general population.

Partners, who seemed to have had an influence on women's decision to discontinue diaphragm use, should be taken into account in information and counseling activities. We recommend that men be targeted to receive information about the diaphragm. Furthermore, the quality and nature of the information given clearly plays a critical role in the contraceptive choices that people make. To avoid bias, our study protocol prohibited a public information campaign about the diaphragm. As a result, participants found out about the method only through the clinics involved in the study, and almost two-thirds of clients who chose to use the diaphragm made their decision during counseling. While counseling may be key for this method, making information more widely available would allow women who discontinue other methods because of side effects to consider using the diaphragm, rather than relying on withdrawal with abortion as backup.

Improvements in providers' knowledge about and attitudes toward the diaphragm, as a result of training and service provision, were encouraging. The training needed for high-quality service must give providers the skills to discuss anatomy and genital manipulation with their clients, which is often lacking during training for the provision of hormonal methods. Given the preexisting mechanism for continuing education within the national family planning program, integration of diaphragm provision into the program would probably add little extra cost.

We conducted interviews in Istanbul and Izmir with physicians who were not involved in the study and who indicated a considerable degree of prejudice against the diaphragm. Many agreed with the statement: "The diaphragm is not very suitable for Turkey. It is suitable for women who are living in America or Europe, who

are not married, who do not have a continuing relationship and who have intercourse infrequently." This highlights the importance of ongoing education of providers for overcoming their biases.

It may be a disincentive for women to continue using the diaphragm if spermicides are not readily available at pharmacies or other distribution points. One woman in our study ran out of spermicide and was unable to go back to the clinic—which was quite far from where she lived—to get a new supply. She thought that she could not use her diaphragm without a spermicide, so she used nothing and became pregnant. Regular supplies of spermicide need to be guaranteed, preferably through a variety of outlets. This problem will hopefully be solved once the application for registration of the diaphragm and spermicide is accepted by the Ministry of Health, when a wide range of pharmacies will be able to sell these products.* Clients can also be told that using the diaphragm without spermicide is better than not using any contraceptive. While the efficacy of using the diaphragm without spermicide is still unclear, there is some evidence that it may be as effective as use with a spermicide.²⁷ However, further studies are needed to confirm this finding.

Additionally, alternating diaphragm use with other contraceptive methods may offer further options, and should be emphasized by service providers. The most obvious approach is to alternate diaphragm use with other barrier methods, such as condoms, or with the rhythm method or withdrawal. Our focus-group discussions indicated that women will use the diaphragm when they think they need protection most—during their fertile period. Nevertheless, the focus-group discussions, as well as the 1998 DHS, revealed that few women (18%) knew exactly when this was.²⁸ This highlights an important area to be included in information and counseling sessions. Emergency contraception can also be used as a backup to the diaphragm, and women need to know that this possibility exists if they have not been able to use the diaphragm or if they suspect it was ill-placed or dislodged.

Because it has almost no side effects and protects against upper genital tract infections, the diaphragm could be an important contraceptive option for women in

developing countries. It requires adequate provider training and initial support to the client, a regular and easily accessible supply of spermicide, backed up by public information and a positive attitude on the part of providers. We believe this under-used method should be introduced into Turkey and into other developing countries wanting to expand the options available to couples.

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Resumen

Contexto: En Turquía, que presenta una prevalencia de uso de anticonceptivos de aproximadamente 65%, un gran número de parejas utiliza el retiro y el DIU. Si bien el país ha mantenido un programa nacional de planificación familiar desde hace 35 años, el diafragma no ha sido introducido como opción anticonceptiva.

Métodos: Se ofreció a las mujeres el diafragma como una nueva opción anticonceptiva durante las reuniones de consejería realizadas en cuatro clínicas de planificación familiar en la región occidental de Turquía—dos clínicas del sector público (una en Çapa, Estambul, y la otra en Izmir) y en dos clínicas del sector privado

*After preliminary results of this study were disseminated, the Ministry of Health showed interest in the diaphragm and a company applied for registration of a spermicide.

(una en Incirli, Estambul, y la otra en Denizli). Las mujeres que escogieron el diafragma fueron entrevistadas en el momento del ingreso al programa y se las invitó que asistieran a reuniones de seguimiento a las dos semanas después y en cualquiera oportunidad más tarde. Asimismo, se recopilaban datos demográficos de 740 mujeres que optaron por otros métodos anticonceptivos y se realizaron discusiones de grupos focales con las usuarias del diafragma y sus parejas, con las usuarias de otros métodos y con los proveedores del servicio.

Resultados: En general, 166 mujeres escogieron el diafragma y 161 participaron en el estudio. Las tasas iniciales de aceptación fueron más elevadas en las dos clínicas privadas (14% y 6%) que en las clínicas públicas (3% y 1%). En las clínicas del sector público, las mujeres que elegían el diafragma presentaban un nivel superior de educación y eran más propensas a tener un empleo profesional que las mujeres que escogieron otros métodos anticonceptivos. En Çapa, el 42% de las mujeres que escogieron el diafragma eran graduadas universitarias, en comparación con el 7% de aquellas que optaron por otros métodos. A pesar de las diferencias de los niveles de educación entre las clientas de las dos clínicas privadas, en ambos lugares estas diferencias no se encontraron entre las aceptantes del diafragma y las usuarias de otros métodos alternativos. Entre las mujeres que optaron por el diafragma, el 47% indicaron que mantenían relaciones sexuales cuatro o más veces por semana, en comparación con el 29% de las que escogieron algún otro método. Más de la mitad de las mujeres que seleccionaron el diafragma (59%) indicaron que habían escogido este método por su seguridad y ausencia de los efectos secundarios. Un porcentaje similar de mu-

jerres que utilizaban otros métodos (58%) mencionaron como factor preponderante la eficacia del método. El 50% de las usuarias del diafragma habían dejado de utilizar este método después de un período de seis meses y el 66% lo habían hecho después de un año.

Conclusiones: Un pequeño porcentaje de las clientas de clínicas tanto públicas como privadas tenían interés en usar el diafragma y lo consideraron aceptable. En los países menos desarrollados, el diafragma puede ser una opción anticonceptiva viable si los proveedores pueden ofrecer información y apoyo adecuados.

Résumé

Contexte: En Turquie, où la prévalence contraceptive est d'environ 65%, un grand nombre de couples pratiquent la méthode du retrait ou du stérilet. Malgré l'existence d'un programme national de planning familial depuis 35 ans, le diaphragme n'a pas été introduit comme option contraceptive.

Méthodes: Le diaphragme a été proposé aux femmes comme option contraceptive dans le cadre des consultations de quatre cliniques de planning familial de Turquie occidentale: deux cliniques du secteur public (l'une à Çapa, Istanbul, l'autre à Izmir) et deux du secteur privé (l'une à Incirli, Istanbul, l'autre à Denizli). Les femmes ayant choisi la méthode ont été interviewées au moment de leur choix et invitées à participer à une étude de suivi à deux semaines puis à trois, six et 12 mois. Les caractéristiques démographiques de 740 femmes ayant choisi une autre méthode contraceptive ont également été recueillies, et des discussions de groupe ont été menées avec les utilisatrices du diaphragme et leurs partenaires, avec les utilisatrices d'autres méthodes et avec les prestataires de services.

Résultats: Au total, 166 femmes ont opté pour le diaphragme, et 161 ont accepté de participer à l'étude. Les taux d'acceptation initiaux se sont avérés supérieurs dans les deux cliniques privées (14% et 6%) que dans celles du secteur public (3% et 1%). Dans les cliniques du secteur public, les utilisatrices du diaphragme étaient davantage instruites et plus susceptibles d'occuper un emploi professionnel que les femmes qui avaient choisi d'autres méthodes. A Çapa, 42% de celles qui avaient choisi le diaphragme étaient diplômées universitaires, par rapport à 7% de celles qui avaient choisi une autre méthode. Malgré les différences observées entre les deux cliniques privées quant au niveau d'instruction de la clientèle, cet écart était inexistant, aux deux sites, entre les femmes qui avaient accepté le diaphragme et les utilisatrices des autres méthodes. Parmi les premières, 47% ont indiqué qu'elles avaient des rapports sexuels au moins quatre fois par semaine, par rapport à 29% de celles qui pratiquaient d'autres méthodes. Plus de la moitié des femmes qui avaient opté pour le diaphragme (59%) ont cité, comme raison de leur choix, la sécurité et l'absence d'effets secondaires. Parmi les utilisatrices des autres méthodes, un pourcentage comparable (58%) citait la raison de l'efficacité. Cinquante pour cent des utilisatrices du diaphragme avaient abandonné la méthode au suivi de six mois, et 60% à celui de 12 mois.

Conclusions: Dans les cliniques privées comme dans celles du secteur public, une petite proportion des clientes ont manifesté un intérêt pour le diaphragme et l'ont trouvé acceptable. Dans les pays moins développés, le diaphragme peut représenter une option contraceptive viable pourvu que les prestataires soient en mesure de fournir une information et un soutien adéquats.