

Original article

Assessment of contraceptive utilization pattern of Kola Diba health centre

Solomon Demamu ¹

Abstract: Three years record of family planning in Kola Diba health centre was analyzed to assess clients' regularity and continuity of collecting monthly pills after adoption. Records of all new acceptors during the study period were retrospectively examined for 24 months to calculate interruption and discontinuation rates. Out of a total of 283 new acceptors identified only two used IUD while the rest (99.3%) used the combined pill in a 3 to 1 urban-rural ratio. Of the 281 pill users, fifty (17.8%) and 22(7.8%) disappeared after first and second contacts with the health centre, respectively. By the 24th month 223(79.4 %) have discontinued collecting their monthly pills. The median duration of stay in the programme after adoption was eight months. Being in the programme, 80(28.5%) clients interrupted collecting their monthly pills at least once. The number of pill collection missed by single and/or first interruption ranged between one and 17 months with a median of three. Interrupters or discontinuers did not significantly differ from regular or /continuous acceptors by age or area of residence($p > 0.05$). Such high irregularities and drop-outs could be minimized by counselling, attractive service environment, a wide range of method choices, and use of community based distribution and education. The rates could be analyzed from routine reports of health institutions to monitor and improve FP programme performance. [Ethiop. J. Health Dev. 1996;10(2):123-127]

Introduction

Contraceptive prevalence rate (1) and over-all programme efforts in developing countries, including in Ethiopia, are low (2). In these areas, the task required to make families knowledgeable about child spacing/family planning (FP) and still more to change their attitude and urge people to use modern contraceptives is extremely challenging.

Even after a client adopted a contraceptive method, negative influences she already overcome plus new societal prejudices continue to operate against her. Whether she continues to use or drop out is determined, among other things, by the balance of power between the provider environment (mainly by counselling) and established taboos and prejudices in the community (3).

In Ethiopia, since the dominant outlet for integrated FP service are health institutions (3) and since oral contraceptives may continue to be the most available and popular method (1, 4), their utilization needs to be looked at critically.

In a country where FP programme is in its infancy, the addition or loss of a single client is not simply plus or minus one. As a continuing client serves positively by attracting others, a client who pulls out would slow the programme by forcing current users to later pull-out and, worse still, by influencing undecided non-users to remain away.

New acceptors of a FP method should be comforted by counselling and a convenient service environment (5). They must have a provider to confide with so as not to feel guilty of their new behaviour and finally run away in double/triple conflict avoidance. This is a key element lacking in all programmes practised in Ethiopia today.

¹From the Department of Community Health, Gondar College of Medical Sciences, P .O.Box 196, Gondar, Ethiopia

FP programme efficiency can include service (method) convenience, counselling cost and provider environment and is assessed by acceptor, continuation (6) and interruption rates. Interruption rate is concerned with the regularity of receiving monthly pill supplies and is mainly affected by such factors as type, availability and accessibility of methods, and provider convenience as well.

Moreover, variables related to continuation and interruption rates are more readily influenced by program administrators than by -demographic, socio-economic or cultural factors (7).

Given the current health services management situation and prevalent discrepancy between level of knowledge about FP and contraceptive practice in the country (1,8), this study describes the utilization pattern at a government health centre using new acceptor, interruption and discontinuation rates in an attempt to assess the performance of available FP programmes. FP programmers and providers shall be alerted by the immensity of under-service/under-utilization and take action to introduce change in similar institutions elsewhere. The use of the rates in routine reporting to monitor programme performance, and to identify possible discontinuers from interruption patterns is also indicated.

Methods

The study was conducted at a government health centre in north-west Ethiopia which renders FP services integrated with other MCH programmes on a daily basis. The centre has medical doctors, mid-wife and MCH nurses and other allied health workers as part of its comprehensive service for the district population. The urban-to-rural distribution of the catchment population is roughly 1:3. FP service is given only by this health centre inside its clinic. There is no appreciable Information, Education and Communication (IEC) activity outside of the health centre. The FP record book of Kola Diba HC was reviewed to obtain a list of all new contraceptive .acceptors during the period of 1:1amle 1980 'E.C (July 1988 G.C) to Sene '1983 E.C (June 1991 G.C). A descriptive study was employed by retrospectively following all new acceptors for 24 months starting in the month of adoption, to document frequency and duration of interruption (of collecting monthly pills) and time of discontinuation. Other variables obtained were: age of client, month of adoption and discontinuation and residence.

The following operational definitions were used in the analysis of the data. Pill- discontinuer is a woman-client who missed three or more months ,of pills in a row without ever reappearing during the rest of the follow-up period. As such, women who received any of the 21st, 22nd or 23rd cycles without reaching the 24th months are considered as continuers and the month they reached last is plotted as shown in figure 1. "Pill-interrupter" is a woman-client who missed collecting at least one month's supply of pill before she discontinued or the end of the follow-up period. A client may

interrupt up to five times in which a single interruption could last from one to seventeen months in a row before she returns back to the programme.

Data were entered and analyzed using Epi- Info version 5 computer software program. Simple descriptive statistics and contingency tables were used and test statistics done.

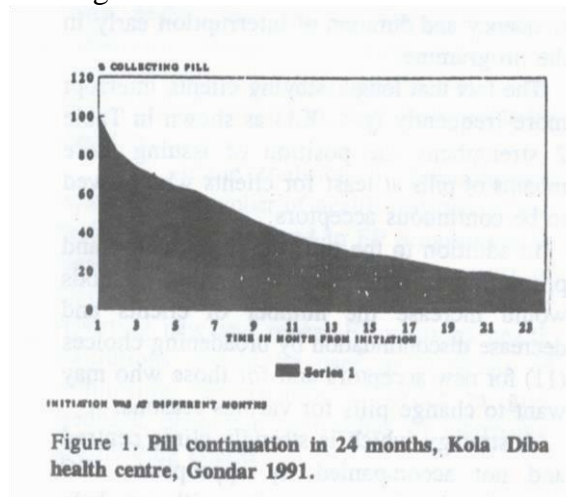
Results

During the three years reference period a total of 283 women were registered as new acceptors of modern contraceptives of which only 2 used Intra Uterine Contraceptive Device (IUCD). The rest 281(99.3%) used combined oral contraceptives (pills) in an urban-rural ratio of 3 to 1. The mean age of the pill adoptors was 24.8 ± 6.6 years. The three years' average number of monthly new acceptor ranged between 6 (month of July) and 10 (months of March and May). The lowest number of new acceptors was shown during the rainy season followed by harvest seasons, and the highest number of discontinuers during the harvest season, of the three years in aggregate (Table 1)

Table 1: Quarterly distribution of New Acceptors and Discontinuers, Kola Diba, Gondar, 1991.

Quarter of Year	New Acceptors		Discontinuers	
	#	%	#	%
July-September	60	21.3	46	20.6
October-December	64	22.4	74	33.2
January-March	77	27.4	51	22.9
April-June	80	28.5	52	23.3
Total	281	100.0	223	100.0

Fifty (17.8 %) women have discontinued by the first month pill 72(25.6%) by the second month, and 223(79.4%) by the 21st month, in cumulative (Fig. 1) .The median duration of stay in the programme after adoption was eight months.



Out of all pill adopters, 80(28.5%) have interrupted collecting their monthly pills at least once with mean frequency of interruption of 1.5 ± 0.81 months. The number of monthly pills missed by single and/or first interruption ranged from one to seventeen months with an arithmetic mean of 3.6 ± 3.8 months. Box-plots compare the number of monthly pill missed by all interrupters ($n=80$), discontinuers ($n=46$) and Continuers ($n=34$) in 24 months (fig. 2). The median number of months of interruption for all was three. A non parametric test (Kruskal Wallis) showed a significantly greater number of months of interruption by continuers than discontinuers ($p < 0.001$).

Table 2: Frequency distribution of total months interrupted by time last pill collected kola Diba, Gondar,

Time in Month	# of months interrupted			
	1-3	4-6	7-18	Total
1-6	5	0	0	5
7-12	16	7	1	24
13-18	5	6	3	14
19-24	13	9	15	37
Total	39	22	19	80

$p=0.0053$

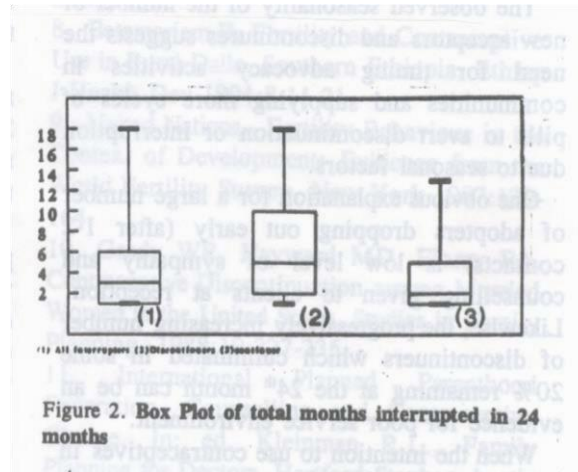


Table 3 summarizes the results of a simple linear regression analysis done to determine whether frequency or duration of interruption at ninth and twelfth months of stay in the programme is correlated with (would predict) the number of last cycles to be reached (nth cycle discontinued) afterwards in 24 months. Contrarily, among at least nine month users, the number of months interrupted correlated significantly positively with time of discontinuation during 24 months.

Table 3: Summary-simple linear regression analysis for last cycle used (n) and frequency of interruption and # of months interrupted. Kola Diba, Gondar, 1991.

		r.sq	95% c.i.
Frequency at Month 12	-0.16	0.03	-0.44-0.14
Frequency at Month 9	0.06	0.00	-0.22-0.34
Interrupted at Month 12	0.25	0.06	-0.05-0.51
Interrupted at Month 9	0.39	0.15	0.12-0.61

Discussion

The family planning method mix dominated by pills in Kola Diba (99.3%) is quite different from the national 63.5% pill(8). Compared to the health centre's catchment population distribution by area of residence, the observed urban-to-rural ration of pill adopters is very high.

A monthly average range of 6-10 new acceptors, when compared to the population which needs the service, clearly indicates under- utilization.

The observed seasonality of the number of new acceptors and discontinues suggests the need for timing advocacy activities in communities and supplying more cycles of pills to avert discontinuation or interruption due to seasonal factors .

One obvious explanation for a large number of adopters dropping out early (after 1-2 contacts) is low level of sympathy and counselling given to clients at reception. Likewise, the progressively increasing number of discontinuers which culminated in some 20% remaining at the 24th month can be an evidence for poor service environment.

When the intention to use contraceptives in developing countries (except where average length of breast feeding is short and socio-economic development is relatively high) generally inclines towards stopping child birth than birth spacing(9), it will be unwise to suspect that 50% of clients had purposely resorted to use pills for eight or less months as observed, or such a high proportion discontinued because of other pill-related factors. Rather, this a good indication to doubt the provider's ability to keep its clients for a long time.

Where the chance of getting methods from other sources in the locality is practically nil, a 28.8% interruption should be considered high. How these women continue receiving the pills without conceiving, for instance after interrupting up to nine months, raises the question of prevalence of changing exposure to unintended pregnancy by avoiding intercourse periodically (10). Nonetheless, it is an indication as to how the difficult task of requiring a client to come to the health centre every month to collect pills could be a source of programme failure.

Contrary to expectation, the regression analysis showed a positive correlation between higher months of interruption at nine month use and longer stay in the programme (late or no discontinuation) beyond the ninth month in 24 months. Other spurious variables need to be sought for. From the other regression analysis, the data failed to demonstrate prediction of time of discontinuation from frequency and duration of interruption early in the programme.

The fact that longer staying clients interrupt more frequently ($p < .001$) as shown in Table 2 strengthens the position of issuing more months of pills at least for clients who proved to be continuous acceptors.

In addition to the pill, the introduction and promotion of other family planning methods would increase the number of clients and decrease discontinuation by broadening choices (11) for new acceptors and for those who may want to change pills for various reasons. A strategy which is strongly clinic centred and not accompanied by appropriate IEC activities in the community will not help achieve the objectives of FP programmes. Existing FP service rendering health institutions should be reoriented to the use of Community based distributions (3) along with well designed IEC activities. Such a strategy will also guarantee the equitable expansion of FP services both to the rural and urban population.

It is wrong to believe that clients coming by their own to adopt use of contraceptives always have firm knowledge about, and Positive attitude towards, a FP programme. Providers should be sympathetic at reception and spend enough time counselling them (5) .This is particularly important during the first few months of initiation to prevent early drop outs. Improving the convenience of the service environment will further minimize discontinuation and interruption later in the programme.

After identifying clients who find the method convenient, are committed and reliable, providers can give more months of pill supplies at a single visit to prevent interruption and, as a result, discontinuation (12). Making long acting methods, such as IUDs, injectables and others available will reduce discontinuation due to pill inconvenience (13) (14).

In the light of the observation that up to 50% of interrupters miss up to three cycles without discontinuation, though the risk of conceiving is there even after missing a pill over night, the service definition of a continuous acceptor "a client who never missed her monthly supply of pills (still using) in 12 months" ; should be reconsidered for FP statistics.

The simple tradition of counting and reporting the number of health institutions and health workers involved in FP programmes is meaningless unless supported by a measure of their effectiveness. The current practice of reporting new and repeat FP visits by health institutions should be used as a means of monitoring performance in order to give feedback on better approaches of increasing and holding clients.

Acknowledgments

I am very thankful to the staff of the MCH section of Kola Diba Health Centre who willingly provided the records, cooperated in sorting out documents and assisted in listing down the data.

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