From Contraceptive Prevalence to Family Planning Service Users: Implications for Policy and Programmes

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Abstract

Introduction: Contraceptive prevalence rate (CPR) is a widely accepted measure of maternal health and uptake of family planning (FP) services. However, the overall CPR obscures the actual utilization of FP services due to over-representation of long-term methods. This study used CPR from 2007 to arrive at and compare the number of actual number of women who availed different FP services in order to understand issues and gaps in FP services in Pakistan.

Methods: This study used secondary data from the Pakistan Demographic and Health Survey 2006-7 estimate the CPR and modern method mix for 2007.These were then multiplied by the estimated number of married women of reproductive age (MWRA) to arrive at the actual numbers of women using specific FP methods and utilizing FP services in a given year.

Results: In 2007 the CPR was 30% overall and 22% for modern methods. However, the number of women availing FP services decreased to 12% when adjusted for FP users who had availed services in the past 12 months. Within this "service mix", self-procurement of FP commodities directly from stores without a advice from a health provider constitutes around 37% of all FP "services" and the public sector accounts for another 33%. Condoms are the commonest method served, accounting for over half of all "services".

Conclusions: The bulk of FP is self-procured and the service mixed is skewed towards client controlled methods that do not require medical advice. Thus, lack of quality for contraceptive services that require some form of supportive healthcare services and counselling may be a bottleneck to improving CPR.

Keywords: Family planning, CPR, Contraception, Utilization, Policy, Pakistan, Programming, Service delivery.

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Introduction

The contraceptive prevalence rate (CPR) is a widely accepted measure of maternal health and women's empowerment[1] and is used worldwide in different aspects of health policy planning and formulation.[2] However, CPR is not the best tool to measure and plan family planning (FP) services. In this paper we propose a slightly different method of estimating the quantum of FP services from the number of women being served annually to help identify the scope of and gaps in FP services at the national level.

The CPR — described as the percentage of women of reproductive age (i.e. 15-49 years), or their spouse/partner, using any contraceptive method at any given point in time[3] — in Pakistan is the lowest among all its regional neighbours as well as some other developing countries.[4] The average CPR in South Asian countries is around 47% (2000 to 2009).[5] While Pakistan has managed to increase CPR from 4%[6,7] to 30%[8] in the 40 years from 1966 to 2006, its regional neighbours have increased their FP usage much more substantially. Indeed, current CPR in India is 54%, 53% in Bangladesh, 79% in Iran 79%, and 57% in Indonesia.[5] Countries that have implemented FP programmes successfully have demonstrated political support for FP reflected that has translated into effective services and the creation of FP-conducive environments.[9-14] Such policies have helped shape favourable public perceptions for FP and communicate the government's will on FP. While Pakistan has done many of the same efforts as its neighbours, these have been disjointed and inconsistent and backed by inadequate planning or measurement of performance of existing programs[15] that has resulted in dissipation of success of even those programs that had been effective at the beginning.[16] If FP programmes are to succeed in Pakistan and to meaningfully affect population growth, policies and programs will have to be backed consistent support that is informed about performance, successes and gaps in real time and by

specific locations. For this to happen, accurate measure of success and gaps will have to be considered.

Pakistan Government devolved health and population from the federal to provincial governments in 2010-11.[17] This brought the management of these programs one step closer to the grassroots. However, this still means that provincial authorities must decide about remote health facilities located in provinces that have 20-40 districts each and can have up to 96 million population. This means that these officials must have precise, real time data that can discern service delivery and uptake patterns at facility level. Much of this is in the form of service delivery and commodity data of the health and population departments. However, periodically these data must be triangulated with service uptake data from community based surveys to understand gaps, inefficiencies and issues. This paper proposes one such methodology to use existing survey data about FP usage and venues from where services were availed to describe the quantum of services for in depth analysis of service delivery patterns.

Methods

This study used data from PDHS 2006-07 to compute the annual CPR for 2007 and to estimate the number of women who availed FP services in 2007. According to the Pakistan Bureau of Statistics, there were 24 million MWRA in 2006-07. This is an estimate based on extrapolation of the 1998 census data using an annual population growth rate of 2.1% (UNFPA 2012).

The number of MWRA using FP and particular methods were calculated from the distribution of women for age groups of 15-19, 20-24, 25-29, 30-34, 35-39, 40-44 and 45-49. In each of these age groups, we multiplied the proportion of users of each method by the total number of women in each group to arrive at actual number of users of each FP method by age groups. Total number of users of each method was calculated as the sum of all users of that method in each age group. Since IUDs and female sterilization are multi-year methods, women who had received an IUD or sterilization in the last 12 months were added to all users of condoms, pills and injections to arrive at the number of women who avail any FP service in a year.

The PDHS also asked women about where they had received their FP methods from. These include the several types of facilities in the public and private sectors and self procurement from stores. Women who reported receiving their method from friends or relatives were counted as having self-procured their method. Current users of modern FP methods were adjusted for methods received within the past 12 months as above. This included all users of condoms, pills and injections along with 18% women with an IUD and 9% with sterilization. The proportion of women by each source of FP was multiplied with actual number of services users to estimate the number of women that availed FP services from each of these sources.

Results

Approximately 7 million women use some form of family planning. Among these, 5.3 million use a modern contraceptive method, while others use a traditional method. When modern contraception users were adjusted for women who had availed contraceptive services within the past one year, the number of women drops from 5.3 million modern contraception users to 3 million women — around 12% of the MWRA — that avail FP services in any given year (Table-1). This change alters the method mix in that condom provision becomes the predominant "service" accounting for 55% of all FP services followed by pills and injections; while female sterilization that had constituted 38% of the method mix in the CPR only accounts for 6% of all FP services (Table-2).

A more pertinent pattern that emerges is that services for long term methods such as male or female sterilization and IUDs constitute a small proportion of the "service mix". Only around 0.18 million women receive female sterilization, 0.1 million receive IUDs and nearly no men receive male sterilization. Thus less than 0.3 million individuals receive any long term method services in any given year.

Another salient finding is the distribution of services between the public sector, private doctors, NGOs and the number of women who directly buy services from stores or chemists/ pharmacies. All told the public sector serves around one million women. The Ministry and Departments of Population Welfare serve 0.47 million women while the Ministry and Departments of Health serve 0.53 million women. Together that accounts for approximately 4% of all MWRA. NGOs and private health provider account for approximately 16% of the services (2% of MWRA), while a staggeringly high 35% of women directly buy FP supplies from stores where they are extremely unlikely to receive any instructions or counselling

Table-1: Services provided last year (PDHS 2006-07).

	Total MWRA with Female sterilization	Total MWRA with IUDs*	Female sterilizations conducted in 2006-7	IUD conducted 2006-7	Pills	Injections	Condoms	Total Modern Method Users	Total contraception services last year	(%)
Public Sector	**1,477,326**	**297,464**	**132,959**	**54,084**	**235,678**	**294,094**	**283,913**	**2,600,373**	**1,000,729**	**33%**
Ministry and Departments of Population Welfare	1,446,718	201,527	130,204	36,641	79,069	162,875	57,459	1,959,701	466,248	15%
Government hospital/RHSC*	1,377,341	156,112	123,961	28,384	66,316	92,660	45,629	1,744,349	356,950	12%
Rural health centre/MCH* centre	48,972	11,354	4,407	2,064	-	23,597	1,690	86,141	31,758	1%
Family welfare centre	-	34,061	-	6,193	12,753	46,618	3,380	96,908	68,944	2%
Mobile service camp	20,405	-	1,836	-	-	-	3,380	26,919	5,216	0%
Male mobilizer	-	-	-	-	-	-	3,380	5,384	3,380	0%
Ministry and Departments of Health	30,609	95,937	2,756	17,444	156,609	131,220	226,454	640,672	534,482	17%
LHW*	8,162	36,331	735	6,606	143,856	77,121	184,205	452,239	412,522	13%
LHV*	14,284	47,117	1,286	8,567	12,753	33,956	32,109	139,979	88,671	3%
Basic health unit	6,122	12,489	551	2,271	-	20,143	8,450	48,454	31,415	1%
Other public	2,041	-	184	-	-	-	1,690	-	1,874	0%
Private Sector	526,450	232,181	47,381	42,215	159,670	240,570	463,048	1,620,522	952,883	31%
Private/NGO hospital/clinic	465,235	196,417	41,871	35,712	53,563	117,983	35,489	872,175	284,619	9%
Pharmacy/ Chemists	-	3,406	-	619	82,130	15,539	387,000	484,541	485,289	16%
Private doctor	61,215	24,410	5,509	4,438	10,713	70,214	10,140	177,665	101,014	3%
Dispenser/ compounder	-	5,109	-	929	10,203	34,532	16,900	64,606	62,563	2%
Other private medical	-	2,838	-	516	3,061	2,302	13,520	21,535	19,399	1%
Other Source	36,729	38,034	3,306	6,915	114,778	40,862	942,996	1,162,900	1,108,858	36%
Shop (not pharmacy/ chemist)	-	-	-	-	36,729	9,208	515,437	554,531	561,374	18%
Friend/ relative	-	-	-	-	21,935	7,482	3,380	32,303	32,797	1%
Dai/traditional birth attendant	-	38,034	-	6,915	6,122	7,482	3,380	53,838	23,899	1%
Other	-	-	-	-	5,101	-	10,140	16,151	15,241	0%
Don't know	24,486	-	2,204	-	39,280	14,388	405,590	484,541	461,461	15%
Missing	12,243	-	1,102	-	5,611	2,302	5,070	21,535	14,085	0%
Total	2,040,505	567,679	183,645	103,214	510,126	575,527	1,689,957	5,383,794	3,062,470	

* RHSC = reproductive health service centre; MCH = maternal and child health; LHW = lady health worker; LHV = lady health visitor; IUD = intrauterine contraceptive device .

Table-2: Percentage change in method mix from 1990 to 2007and the adjusted method mix (2007).

	2007 Population^α	Proportion of all MWRA (%)	Method mix (%)	Number of women served in last one year	Service mix (Services delivered in one year) (%)
Not using any contraception	18,616,206	78	-	-	-
Pills	510,126	2	10	510,126	17
Injections	575,527	2	11	575,527	19
Condoms	1,689,957	7	31	1,689,957	55
IUDs*	567,679	2	11	103,214	3
Female sterilization	2,040,505	9	38	183,645	6
Total	24,000,000	100		3,062,470	

*IUD= intrauterine contraceptive device.
αEstimated by the Pakistan Census Bureau, based on extrapolation on the 1998 census.

about the use of these methods.

Discussion

CPR in Pakistan has shown a modest annual increase in the 6 decades of FP programming. We found that all providers combine to serve 3 million women or around 12% of MWRA with FP services. Most contraception users buy their methods directly from stores without recourse to a health provider. These women are therefore not counselled in the correct use of these methods and don't have recourse when they experience side effects. Many a times these side effects are minor and may not warrant changing or stopping the method and yet without advice, many experts feel that this is exactly what happens and results in very high levels of method switching among modern contraception users in Pakistan.[18]

Over the last 5 decades, CPR has increased by an average of around 0.5 percent annually. During this time the role of the government has shrunk despite investment of over USD 652 million in family planning in the past decade (UNFPA data, Khan, MA. Personal communication). While much of the CPR is due to female sterilization, in effect, very few women receive this method in any given year. Most women use condoms, often directly from stores without advice from a health provider, suggesting that either they are opting for methods that they can control, don't trust health providers or both. Indirectly this has resulted in a service mix that is deeply skewed towards short term methods despite the fact that the unmet need for limiting families remains high.[19]

Despite a quarter of the women having an unmet need, the overall service provision is very low, resulting in a low CPR. Only around 12% of MWRA — less than half as many as the women with an unmet need — receive FP commodities each year and only around 5-6% receive formal FP services from any public or private provider. Despite considerable expenditures, the two government departments of Health and Population Welfare, serve around 2% of MWRA each.

This limited scope of services went unnoticed partly due to reliance of CPR. While CPR was low by regional standards, it still showed that a third of the women used some FP. Unfortunately 8% of these were using a traditional method and 10% were women who had received either sterilization or an IUD in a previous year but were still counted as an FP user due to longevity of the method. Thus using not only is CPR misleading when measuring the success of FP programs, nor does it help with planning for services. In this paper we demonstrate that looking specifically at the number of women who avail FP services is a more useful planning and measurement tool.

Looking at the "service mix" also reveals dominance of short term methods that are controlled by users. It shows self procured condoms are the commonest method used and suggests that women are often not using formal providers. This may be due to a lack of access of women/ couples to providers, a lack of trust in existing providers or because don't find value in existing services. In the public sector, most providers and facilities have limited menu of methods available. The lady health workers of the Health Departments provide condoms and pills and have only recently started carrying injections. They almost never ask women about or refer them for long term methods. Basic Health Units of the Health Departments inconsistently stock FP supplies and almost never ask women about their FP needs. The Family Welfare and Reproductive Health Centres of the Population Welfare Departments are perhaps the best stocked in terms of contraceptive choices but have the least "foot traffic" and remain underutilized. Using the number women clients of FP services from PDJS suggests that on average each of the 3300 Population Welfare facilities nationwide conducts one sterilization every week and provides one IUD every other week. Similarly, each of the nearly 100,000 lady health workers serves on average 4.3 women with FP services every year. These limited scope of services in face of fixed costs mean that public sector is

extremely expensive in delivering FP services. Indeed, the cost of FP in the public sector is around USD 42 per woman per year or around 10 times higher than regional averages. However this understanding is only possible when CPR or FP usage is converted into the number of women being served annually.

Looking at actual number of women served each year will not only allow a better understanding of these efficiency issues, it will also allow for better planning and resource allocation. Knowing how many women are served by each type of provider or facility provides a means to use some evidence in planning for resource allocation based on existing service delivery patterns. However, ideally, resource allocation decisions should be local, particularly following the recent devolution of Health and Population Welfare to provinces from the federal levels. Thus, knowing usage patterns of individual districts or better still of individual facilities will allow for more efficient allocation of supplies and personnel and for institution of remedies in case of underperformance. It will also allow NGOs, donors and private sector to understand what services are available in individual locations and where are the gaps. In order for such information to be available, national surveys such as the Demographic Health Survey that was used for this study, will have to be powered to provide such information at provincial, district and even sub-district levels. The current DHS data has limited power to do so. For example, we were unable to estimate service distribution patterns at provincial levels due to insufficient sample size. This lack of power must be addressed for future surveys and if these surveys are to be used to understand, measure or plan ongoing services, they must be conducted regularly enough to provide these information at appropriate intervals.

Our study used existing data from the most recent Pakistan Demographic Health Survey to quantify FP services. This analysis allows a more accurate understanding of quantum of and gaps in FP services than merely looking at changes in CPR. In order to be useful for measuring existing services and to plan future ones, surveys from which data are taken must be sufficiently powered at sub-district levels. More importantly, these and similar analyses must be routinely conducted within the public sector and the academia as repeated cycles of analyses and feedback will improve data quality and make data more user friendly. Other applications of this technique may be in understanding quantum of other services such as skilled birthing that are also measured by the DHS. Future research may include validation of different national surveys that measure similar indicators such as the CPR but sometimes yield differing results.

Acknowledgements

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