

**Pakistan
Demographic
and Health
Survey
2006-07**

**Preliminary
Report**

This report summarises the findings of the 2006-07 Pakistan Demographic and Health Survey (PDHS) carried out by the National Institute of Population Studies. The Government of Pakistan provided financial assistance in terms of in-kind contribution of government staff time, office space, and logistical support. Macro International provided financial and technical assistance for the survey through the MEASURE DHS programme, which is funded by the U.S. Agency for International Development (USAID) and is designed to assist developing countries to collect data on fertility, family planning, and maternal and child health. Additional support for the PDHS was received from the United Nations Population Fund (UNFPA)/Pakistan and from UNICEF/Pakistan. The opinions expressed in this report are those of the authors and do not necessarily reflect the views of the donor organisations.

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PAKISTAN DEMOGRAPHIC AND HEALTH SURVEY

2006-07

PRELIMINARY REPORT

National Institute of Population Studies
Islamabad, Pakistan

MEASURE DHS
Macro International Inc.
Calverton, Maryland, U.S.A.

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USAID
FROM THE AMERICAN PEOPLE



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1. INTRODUCTION

The 2006-07 Pakistan Demographic and Health Survey (PDHS) was carried out by the National Institute of Population Studies (NIPS) from early September 2006 to late-February 2007. The PDHS is one of the largest household-based surveys ever conducted in Pakistan. Teams visited 972 sample points across Pakistan and collected data from a nationally representative sample of over 95,000 households. Unlike the standard DHS design, the PDHS was designed with the objective of obtaining data related to maternal and neonatal health, especially to obtain an accurate measure of the maternal mortality ratio, as well as to obtain data on the causes of deaths to women and children. Consequently, all households were interviewed with a questionnaire that elicited information on recent births and deaths to household members. Recent deaths to adult women and children under five were followed with a more detailed interview on symptoms and characteristics of the deceased. In a subset of about ten percent of all households, a longer questionnaire was used that, in addition to the data on births and deaths, also included information on housing characteristics. In this subset of households, all ever-married women aged 12-49 years were eligible to be individually interviewed.

As mentioned above, the 2006-07 PDHS was designed to provide data to monitor the population and health situation in Pakistan, with an explicit goal of providing reliable information about maternal and neonatal health and mortality. Specifically, the PDHS collected information on fertility levels, marriage, fertility preferences, awareness and use of family planning methods, breastfeeding practices, childhood and maternal mortality, maternal and child health, and awareness and attitudes regarding HIV/AIDS. Information on causes of deaths to children under five and adult women was collected through detailed questionnaires (verbal autopsies).

This preliminary report presents the results of some selected key indicators from the 2006-07 PDHS. A comprehensive report of the findings of the survey will be published in late 2007 or early 2008. While considered provisional, the results presented here are not expected to differ significantly from those to be presented in the detailed report.

2. SURVEY IMPLEMENTATION

2.1. Sample Design

Since a primary objective of the 2006-07 PDHS is to provide reliable estimates of the maternal mortality ratio, a large sample was required. Based on prior estimates of the level of maternal mortality in Pakistan, it was concluded that a sample of about 100,000 households would be necessary to provide information on a sufficient number of maternal deaths in order to calculate a reasonably precise maternal mortality ratio for the whole country. Since it was also expected that the survey would provide some indication of how maternal mortality and other key indicators vary by province as well as for urban and rural areas separately, the sample was not spread geographically in proportion to the population, but rather the smaller provinces (e.g., Balochistan and NWFP) as well as urban areas were over-sampled. As a result of these differing sample proportions, the PDHS sample is not self-weighting at the national level.

NIPS arranged with the Federal Bureau of Statistics (FBS) to design and select the sample. The sample for the 2006-07 PDHS covered the population residing in households in the country, with the exception of Azad Jammu & Kashmir (AJK) and the Federally Administered National Areas (FANA). Moreover, although the Federally Administered Tribal Area (FATA) was initially included in the sample, it was not possible to cover any of the sample points in FATA due to insecurity problems. Thus, the survey represents all of Pakistan except AJK, FANA and FATA and restricted military and protected areas.

The survey utilised a two-stage sample design. The first stage involved selecting 1000 sample points (clusters), 390 in urban areas and 610 in rural areas, with probability proportional to size; a total of 440 sample points were selected in Punjab, 260 in Sindh, 180 in NWFP, 100 in Balochistan, and 20 in FATA. In urban areas, the sample points were selected from a frame maintained by the Federal Bureau of Statistics (FBS), consisting of 26,800 enumeration blocks each comprised of about 200-250 households. The frame for rural areas consists of the lists of 50,588 villages/*mouzas/dehs* that was compiled in the 1998 population census.

Before selecting primary sample points, the frame was stratified. Each of the large cities—Karachi, Lahore, Gujranwala, Faisalabad, Rawalpindi, Multan, Sialkot, Sargodha, Bahawalpur, Hyderabad, Sukkur, Peshawar, Quetta and Islamabad—constituted a separate stratum and was sub-stratified into low, middle and high-income groups based on data collected during updating of the urban frame. After excluding the population of large cities, the remaining urban population within each of the ex-administrative divisions of the four provinces was grouped together to form an ‘other urban’ stratum. In rural areas, each district in Punjab, Sindh and NWFP Provinces was considered as an independent stratum, while in Balochistan Province, each ex-administrative division was treated as a stratum.

FBS arranged for its staff to undertake a fresh listing of the households residing in the selected sample points. The listing was conducted in May to July 2006. As mentioned above, the 20 sample points in FATA were dropped due to insecurity. An additional eight sample points (four in NWFP and four in Balochistan) were not covered due to inability of FBS to implement the listing and/or refusal of the community to participate in the survey. Thus, the survey covered a total of 972 sample points.

The second stage of sampling involved selecting households. In each point, 105 households were selected systematically by the team supervisors, for a total of 102,037 households selected.¹ Ten households in each sample point were designated for interview with the Long Household Questionnaire as well as the Woman’s Questionnaire for all ever-married women aged 12-49 years who were either permanent

¹ Several clusters consisted of fewer than 105 households, resulting in a shortfall of 23 households.

residents of the households in the sample or visitors present in the household on the night before the survey.

2.2. Questionnaires

Six types of questionnaires were used in the PDHS, namely:

- Community Questionnaire
- Short Household Questionnaire
- Long Household Questionnaire
- Woman's Questionnaire
- Maternal Verbal Autopsy Questionnaire
- Child Verbal Autopsy Questionnaire.

The contents of the household and woman's questionnaires were based on model questionnaires developed by the MEASURE DHS programme, while the verbal autopsy questionnaires were developed by Pakistani experts and the community questionnaire was patterned after one used by NIPS in prior surveys.

NIPS developed the draft questionnaires in consultation with a broad spectrum of technical institutions, government agencies, and local and international organizations so as to reflect relevant issues in population, family planning, HIV/AIDS, and other health issues in Pakistan. A number of questionnaire design meetings were organised by NIPS and the inputs generated in these meetings were used to finalise survey questionnaires. These questionnaires were then translated into Urdu. After the pretest, the questionnaires were further refined and translated into Sindhi, Punjabi, and Pushto.²

The Community Questionnaire was a brief form that was filled for each sample point and included questions about the availability of various kinds of health facilities and services, especially transportation, education, and communication facilities. It also contained a sheet for noting the geographic coordinates of each sample point taken using a geographic positioning system (GPS) unit.

The Short Household Questionnaire was used in 90 percent of the selected households to list all the usual members and visitors. Some basic information was collected on the characteristics of each person listed, including age, sex, marital status, education, and relationship to the head of the household. The main purpose of the short household questionnaire was to identify births and deaths that occurred since January 2003.

The Long Household Questionnaire was used in ten percent of the selected households. It contained all the information in the Short Questionnaire, but also contained a few more details about the people listed (e.g., current school attendance and survivorship of parents of those under age 18). It also provided space for identifying ever-married women age 12-49, who were eligible for an individual interview. The Long Household Questionnaire also collected information on characteristics of the household's dwelling unit, such as the source of water, type of toilet facilities, type of cooking fuel, materials used for the floor, roof and walls of the house, ownership of various durable goods, ownership of agricultural land, ownership of livestock/farm animals/poultry, and ownership and use of mosquito nets.

² The questionnaires were printed in dual languages. The Short and Long Household Questionnaires and the two verbal autopsy questionnaires were printed in English-Urdu only, while the Woman's Questionnaire was printed in English-Urdu, Urdu-Sindhi, Urdu-Punjabi, and Urdu-Pushto versions. The Community Questionnaire was printed in English only.

The Woman's Questionnaire was used to collect information from ever-married women aged 12-49 years and covered the following topics:

- Background characteristics (education, literacy, mother tongue, marriage characteristics, etc.)
- Reproductive history
- Knowledge and use of family planning methods
- Fertility preferences
- Antenatal and delivery care, pregnancy complications
- Breastfeeding practices
- Vaccinations and childhood illnesses
- Woman's work and husband's background characteristics
- Childhood mortality
- Awareness about AIDS and other sexually transmitted infections
- Other health issues, e.g., knowledge of tuberculosis and hepatitis, experience with fistula, use of clean syringes for injections.

The Woman's Verbal Autopsy Questionnaire was administered in households in which a death to a woman aged 12-49 was reported to have occurred in 2003 or later. The questionnaire covered details about the woman's characteristics and the symptoms she may have had prior to her death, with the aim of being able to assign a cause of death. Questions were also asked about any treatment or health care that may have been sought before the woman died.

The Child Verbal Autopsy Questionnaire was administered in households in which a death to a child under age five years or a stillbirth was reported to have occurred in 2005 or later. The questionnaire elicited details about the illness and death from the parents and/or others who knew about the illness and death of the child. Both these verbal autopsy questionnaires are being reviewed by separate teams of physicians to assign causes of death.

All aspects of the PDHS data collection were pretested in April 2006. Three teams were formed for the pretest, each consisting of a supervisor and 3-4 female interviewers, one of whom was specially trained on conducting the verbal autopsy questionnaires. One team went to Hyderabad, another to Peshawar, and the third worked in Rawalpindi. Each team covered one rural and one urban sampling point. Data collection started on April 25 and took approximately one week. The lessons learnt from the pretest were used to finalise the survey instruments and logistical arrangements for the survey.

2.3. Training

Early in 2006, NIPS staff responsible for the survey spent considerable effort in recruiting people with the requisite skills to work as field staff. Advertisements were placed in local newspapers across the country and after screening applicants, NIPS staff visited the various provincial headquarters to administer tests and interviews before selecting the final candidates. The vast majority of those recruited (92 percent) were university graduates, while half had Master's degrees; many also had experience in a previous survey. They came from 41 of Pakistan's 101 districts. NIPS then organized a 3-week training course for the 214 participants from August 7-26 at the Dreamland Motel in Islamabad.

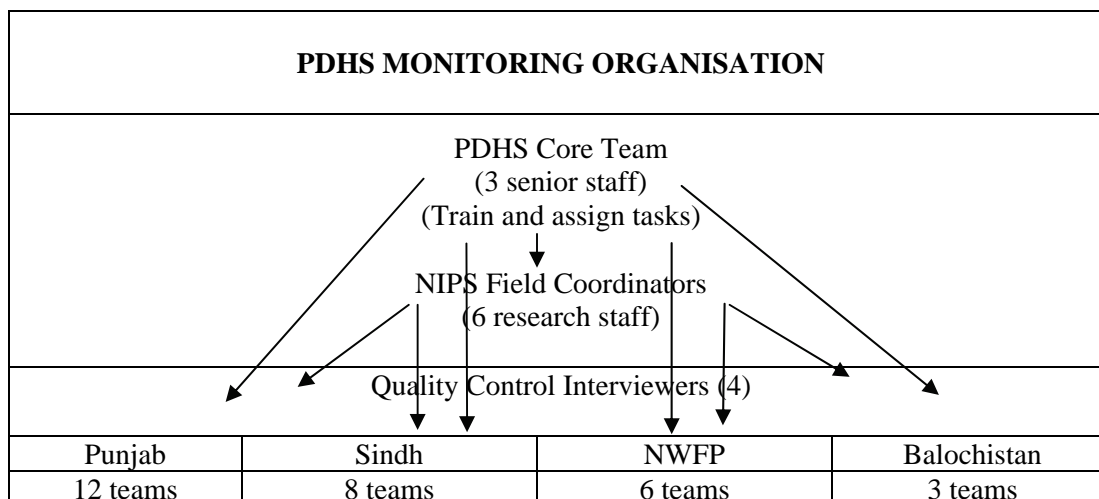
After several plenary sessions covering background to the survey, how to interview and how to fill the Short Household Questionnaire, trainees were divided into two groups. About 120 female trainees, along with the 30 male supervisor candidates, were trained in how to conduct the Long Household Questionnaire and the Woman's Questionnaire, while the remaining female trainees were trained separately on how to conduct both the Child and Woman's Verbal Autopsy Questionnaires. The training was conducted following the standard DHS training procedures, including class presentations, mock

interviews, and a written test at the end of training. Trainers consisted of mainly the NIPS survey staff and Fellows, and for the verbal autopsies, representatives from Aga Khan University and Asia Foundation. Special guest lecturers covered specific topics such as women's reproductive health, HIV/AIDS, and sampling. Towards the end of the training, one afternoon and one morning were set aside for field practice in the Islamabad area. After the practice interviewing, the completed questionnaires were reviewed by team supervisors and senior staff and problems were discussed in plenary sessions. Because of the nature of the verbal autopsies, it was difficult to arrange for practice interviewing with them.

2.4. Fieldwork

A total of 29 teams were organized for the data collection, each comprised of 1 male supervisor and 5-6 female interviewers. Aside from management and logistics arrangements, the supervisor was also responsible for administering the Community Questionnaire, taking the GPS coordinates for each cluster, and selecting from the listing form the 105 households in each cluster to be interviewed. Two female interviewers on each team primarily concentrated on conducting interviews in households selected for the Short Household Questionnaire as well as verbal autopsies for any deaths that were identified in the specified age and date range, while the other 3-4 female interviewers conducted interviews with either the Short or Long Household and the interviews with the Woman's Questionnaire in the designated households. For the first four weeks of fieldwork, one of the more highly qualified interviewers on each team was designated as a field editor, meaning that she checked each of her teammates' completed questionnaires for accuracy and consistency and reviewed any errors with them. After the first month of data collection, the field editor returned to interviewing duties.

In addition to the teams themselves, several types of supervisory staff were designated. Four of the best interviewer candidates from the training were designated as quality control interviewers. NIPS also designated six professionals from its staff to act as field coordinators, who visited the teams assigned to them at least once a month to check on the sample selection procedures, the interviewer assignment process, questionnaire editing, linkage with Federal Bureau of Statistics offices, team coordination and time use efficiency. These field coordinators were usually accompanied by the quality control interviewers who observed interviews, conducted re-interviews, edited completed questionnaires, reviewed any errors with team members, and provided on-the-job training to weaker field staff. After three months of field work, the quality control interviewers from Sindh were asked to replace some of the interviewers who were relieved of their duties. The other two quality control interviewers continued their work beyond their own provinces. In addition, monitoring was also undertaken by staff from Aga Khan University to check on the quality of the data on the child verbal autopsy questionnaires and by staff from the Asia Foundation to check on the quality of the data on the women's verbal autopsy questionnaires. Macro sent a survey specialist to Pakistan who reviewed the work from the office and also visited ten teams in three provinces. The overall supervision and monitoring of the field activities was carried out by the Core Team members.



A number of challenges were faced by the field teams. In several clusters, the teams faced ‘community refusal’, i.e., a majority of the households as a group refusing to participate. Interviewers experienced dog bites, got ill and were hospitalised, one interviewer was attacked by an axe-wielding respondent, and one team was robbed by a group of armed men who threatened to kill the field coordinator. Data collection for the PDHS took place over a five and a half-month period, from 4 September 2006 to late February 2007.

2.5. Data Processing

The processing of the PDHS data began shortly after the fieldwork commenced. Completed questionnaires were returned periodically from the field to the NIPS office in Islamabad, where they were edited and entered by data processing personnel specially trained for this task. Data were entered using the CSPro computer package. All data were entered twice (100 percent verification). The concurrent processing of the data was a distinct advantage for data quality, since NIPS was able to advise field teams of errors detected during data entry. The data entry and editing phase of the survey was completed in late April 2007.

Special analysis is currently being undertaken with regard to the data in the Woman’s and Child’s Verbal Autopsy Questionnaires. Under contract with Macro, the National Committee for Maternal and Neonatal Health in Karachi arranged for panels of three physicians each to individually review all of the woman’s verbal autopsy questionnaires and assign a cause of death. The data on cause of death and estimates of the maternal mortality ratio are not presented in this preliminary report, but will be released later.

Similar procedures are being followed by experts at the Aga Khan University Department of Paediatrics and Child Health to review and assign a cause of death for the data on stillbirths and child deaths that were collected in the Child Verbal Autopsy questionnaires. Results from this analysis will be released later.

3. RESULTS OF THE SURVEY INTERVIEWS

3.1. Response Rates

Table 1 shows response rates for the 2006-07 PDHS. A total of 102,037 households were selected in the sample, of which 97,687 were found occupied at the time of the fieldwork. The shortfall is largely due to structures that were found to be vacant or destroyed. Of the existing households, 95,441 were successfully interviewed, yielding a household response rate of 98 percent. It is encouraging that the response rate was almost identical for households interviewed with the short and long questionnaires.

In the 9,255 households interviewed with the long household questionnaire, a total of 10,601 ever-married women aged 15-49³ were identified, of whom 10,023 were successfully interviewed, yielding a response rate of 95 percent. The principal reason for non-response among eligible women was the failure to find individuals at home despite repeated visits to the household. Response rates are only slightly lower in urban areas than in rural areas.

Table 1 Results of the household and individual interviews					
Number of households, number of interviews, and response rates, according to residence (unweighted), Pakistan 2006-07					
Result	Residence				Total
	Total urban	Major city	Other urban	Rural	
Household interviews (Total)					
Households selected	40,827	21,297	19,530	61,210	102,037
Households occupied	39,060	20,430	18,630	58,627	97,687
Households interviewed	37,909	19,729	18,180	57,532	95,441
Household response rate ¹	97.1	96.6	97.6	98.1	97.7
Short household interviews					
Households selected	36,941	19,272	17,669	55,384	92,325
Households occupied	35,278	18,461	16,817	52,961	88,239
Households interviewed	34,223	17,822	16,401	51,963	86,186
Household response rate ¹	97.0	96.5	97.5	98.1	97.7
Long household interviews					
Households selected	3,886	2,025	1,861	5,826	9,712
Households occupied	3,782	1,969	1,813	5,666	9,448
Households interviewed	3,686	1,907	1,779	5,569	9,255
Household response rate ¹	97.5	96.9	98.1	98.3	98.0
Ever-married women age 15-49					
Eligible women	4,104	2,086	2,018	6,497	10,601
Eligible women interviewed	3,830	1,929	1,901	6,193	10,023
Eligible women response rate ²	93.3	92.5	94.2	95.3	94.5

¹ Households interviewed/households occupied
² Respondents interviewed/eligible respondents

³ The age range for eligibility was actually 12-49; however, the survey identified only 1 ever-married woman age 13 and 6 ever-married women age 14. Since it was not possible to calculate ever-married women factors for these cases, these women's ages were deliberately changed to 15.

3.2. Characteristics of Respondents

The distribution of ever-married women aged 15-49 years by background characteristics is shown in Table 2. The proportion rises with age to age group 25-29, after which it declines. This pattern reflects the fact that many younger women have not yet married, while the decline among older women reflects the effects of past high fertility that creates larger cohorts at each younger age.

Almost all ever-married women (95 percent) are currently married. Three percent are widowed, one percent is separated and less than one percent is divorced. One-third of ever-married women live in urban areas. Almost three in five respondents live in Punjab Province, while almost one-quarter live in Sindh, 14 percent in NWFP and five percent in Balochistan. Almost two-thirds of ever-married women 15-49 have never been to school, while only 6 percent have gone beyond secondary school.

Background characteristic	Number of women		
	Weighted percent	Weighted	Unweighted
Age			
15-19	5.7	569	578
20-24	15.0	1,499	1,560
25-29	20.0	2,006	2,010
30-34	17.8	1,786	1,716
35-39	16.5	1,654	1,649
40-44	13.0	1,301	1,282
45-49	12.1	1,208	1,228
Marital status			
Married	95.3	9,556	9,580
Divorced	0.5	53	44
Separated	1.0	98	79
Widowed	3.2	316	320
Residence			
Total urban	33.4	3,350	3,830
Major city	18.9	1,898	1,929
Other urban	14.5	1,452	1,901
Rural	66.6	6,673	6,193
Province			
Punjab	57.9	5,800	4,263
Sindh	24.0	2,410	2,716
NWFP	13.5	1,351	1,862
Balochistan	4.6	462	1,182
Education			
No education	65.2	6,539	6,686
Primary (Class 1-5)	13.9	1,394	1,323
Middle (Class 6-8)	6.3	634	589
Secondary (Class 9-10)	8.1	809	759
Higher (Class 11 +)	6.4	646	666
Total 15-49	100.0	10,023	10,023

Note: Education categories refer to the highest level of education attended, whether or not that level was completed.

3.3. Fertility

Fertility data were collected in the survey by asking each of the women interviewed for a history of her births. The information obtained on each of the woman's births included the month and year of the birth. These data are used to calculate two of the most widely used measures of current fertility, the total fertility rate (TFR) and its component age-specific fertility rates.⁴

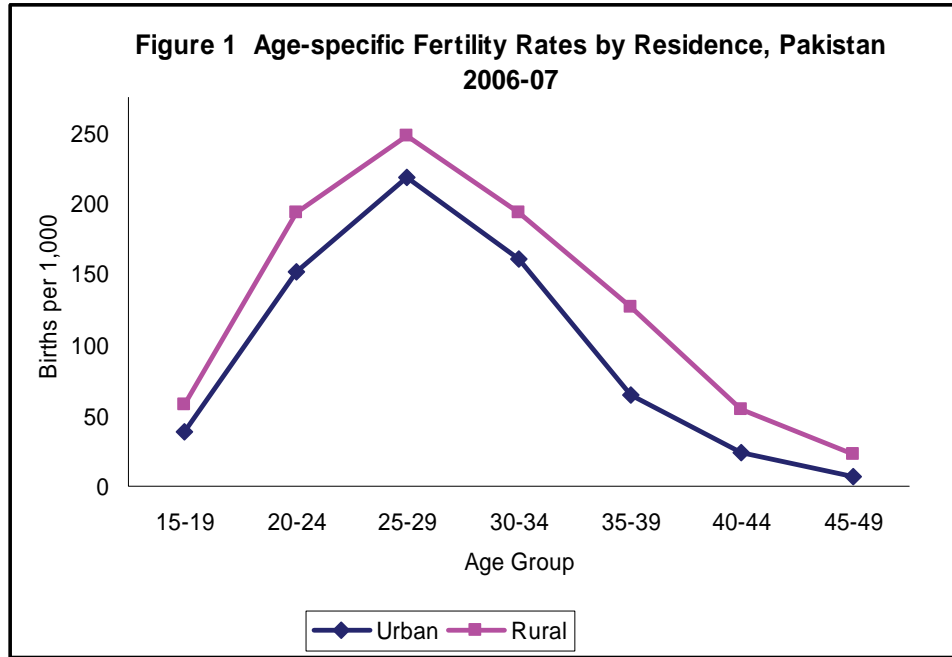
As indicated in Table 3, the total fertility rate is 4.1. This means that on average, a Pakistani woman who is at the beginning of her childbearing years will give birth to 4.1 children by the end of her reproductive period if fertility levels remain constant at the level observed in the three-year period before the survey.

The TFR in rural areas (4.5 births) is considerably higher than the rate in urban areas (3.3 births). The results also show that urban-rural differences in childbearing rates are evident for all age groups, but are relatively larger at older ages (Figure 1).

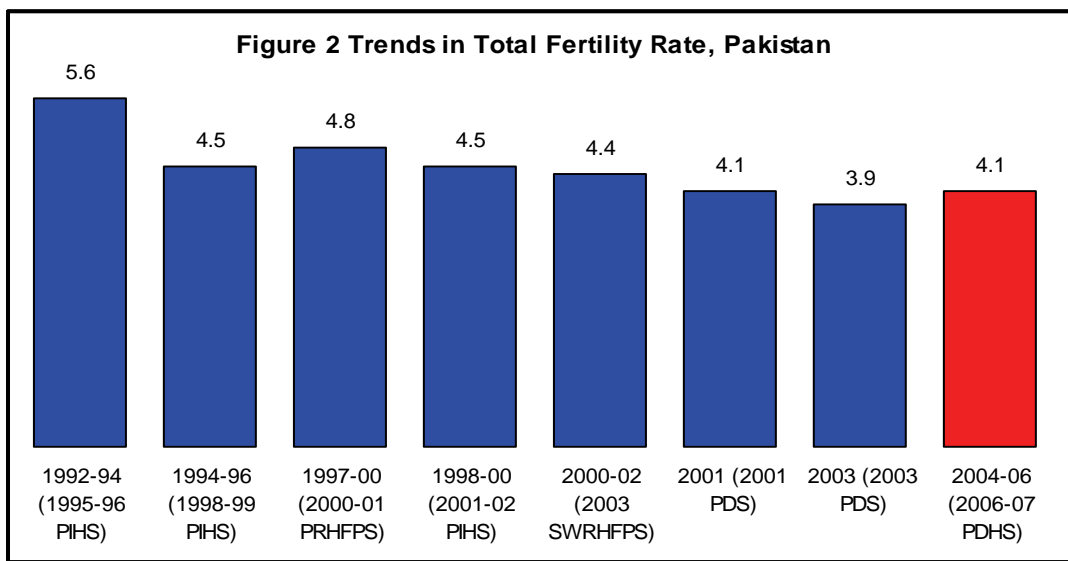
Age group	Residence				Total
	Total urban	Major city	Other urban	Rural	
15-19	39	36	44	58	51
20-24	152	131	178	194	178
25-29	218	213	225	248	237
30-34	161	157	167	194	182
35-39	65	46	95	127	106
40-44	24	19	33	54	44
45-49	7	0	16	23	18
TFR	3.3	3.0	3.8	4.5	4.1
CBR	27.6	25.6	30.2	32.3	30.7

Notes: Age-specific fertility rates are per 1,000 women. Rates for age group 45-49 may be slightly biased due to truncation. Rates are for the period 1-36 months prior to interview and are based on all women. Since only ever-married women were interviewed, factors were applied to inflate the denominator to reflect all women (see footnote in text).
TFR: Total fertility rate for ages 15-49, expressed per woman
CBR: Crude birth rate, expressed per 1,000 population

⁴ Numerators for the age-specific fertility rates were obtained by classifying births during the 3-year period prior to the survey into standard five-year age groups, according to the mother's age at the time of birth, and summing. Denominators for the rates were the number of person-years lived by all women in each five-year age group during the period. Since only ever-married women were interviewed in the PDHS, it was necessary to inflate the number of person-years lived by ever-married women by factors representing the proportion of women who were ever-married in each age group. These factors were calculated from the data collected in the household schedule. Never-married women were presumed not to have given birth. In Pakistan, very few births occur outside of marriage so that any underestimation of fertility from this source is likely to be negligible.



The results indicate that Pakistan’s fertility has declined over time. Figure 2 shows the decline in the TFR from 5.6 births per woman in the early 1990s to 4.1 births in the period 2004-06.



3.4. Family Planning

Information about knowledge and use of contraceptive methods was collected from women by asking them to mention any ways or methods by which a couple can delay or avoid a pregnancy. For each method known, the respondent was asked if she had ever used it. Women who reported they had ever used any method were asked if they or their husband were using a method at the time of the survey.

Table 4 shows the level of knowledge, ever use and current use according to specific contraceptive method as reported by currently married women. Contraceptive methods are grouped into two types in the table, namely modern and traditional methods. Modern methods include female sterilisation, male sterilisation, pill, IUD, injectables, implants, condom, and emergency contraception. Traditional methods include periodic abstinence (rhythm), withdrawal, and folk methods.

The pill is the most widely known method, followed closely by injectables and female sterilisation; around 90 percent of married women have heard of each of these methods. Three in four married women have heard of the IUD and 68 percent have heard of the condom. Almost half of women know about the rhythm method and withdrawal. Far fewer women know about male sterilisation, implants, emergency contraception, and folk methods. Almost half of currently married women say they have used a contraceptive method at some time in the past. Condoms, withdrawal and the rhythm method are the most common methods ever used; 17 percent of married women say they have ever used these methods. Twelve percent of married women have ever used the contraceptive pill and 11 percent have used injectables. Eight percent of women have been sterilised, while the same proportion have ever used the IUD.

Current use of family planning methods is considerably lower than ever use. The contraceptive prevalence rate is 30 percent. Modern methods of contraception are more commonly used (22 percent) than are traditional methods (8 percent). Female sterilisation is the most common method being used (8 percent), followed by condoms (7 percent), withdrawal (4 percent) and rhythm method (4 percent). Two percent of married women report using the IUD, injectables and the pill. The contraceptive use rate among currently married, non-pregnant women is 34 percent. These women have higher levels of use for each method than all married women; nevertheless the pattern of use by specific method is similar.

As shown in Table 5 and Figure 3, some women in Pakistan are more likely to use contraceptives than others. The proportion currently using any method of contraception rises with age from only 7 percent of married women age 15-19 to 42 percent among those age 40-44. The most popular methods among women under age 30 are the condom, followed by withdrawal and rhythm method. Women in their early 30s tend to use condoms and sterilisation, while among women in their late 30s and 40s, female sterilisation is the most widely used method.

Table 4 Knowledge and use of family planning methods

Percentage of currently married women who have heard of, ever used and are currently using specific contraceptive methods and percentage of currently married, non-pregnant women who are using, Pakistan 2006-07

Contraceptive method	All currently married women			Married, non-pregnant women
	Heard of method	Ever used	Currently using	Currently using
Any method	95.9	48.7	29.6	33.8
Any modern method	95.7	38.8	21.7	24.8
Female sterilisation	86.7	8.2	8.2	9.3
Male sterilisation	40.7	0.1	0.1	0.1
Pill	91.7	12.4	2.1	2.3
IUD	74.8	8.1	2.3	2.6
Injectables	89.5	11.4	2.3	2.6
Implants	32.1	0.6	0.1	0.2
Condom	68.1	17.2	6.8	7.7
Emergency contraception	18.0	0.9	na	na
Any traditional method	63.8	25.5	7.9	9.0
Rhythm	49.2	16.8	3.6	4.1
Withdrawal	48.9	17.1	4.1	4.7
Folk methods	2.9	0.8	0.2	0.2
Number of women	9,556	9,556	9,556	8,364

na = Not applicable

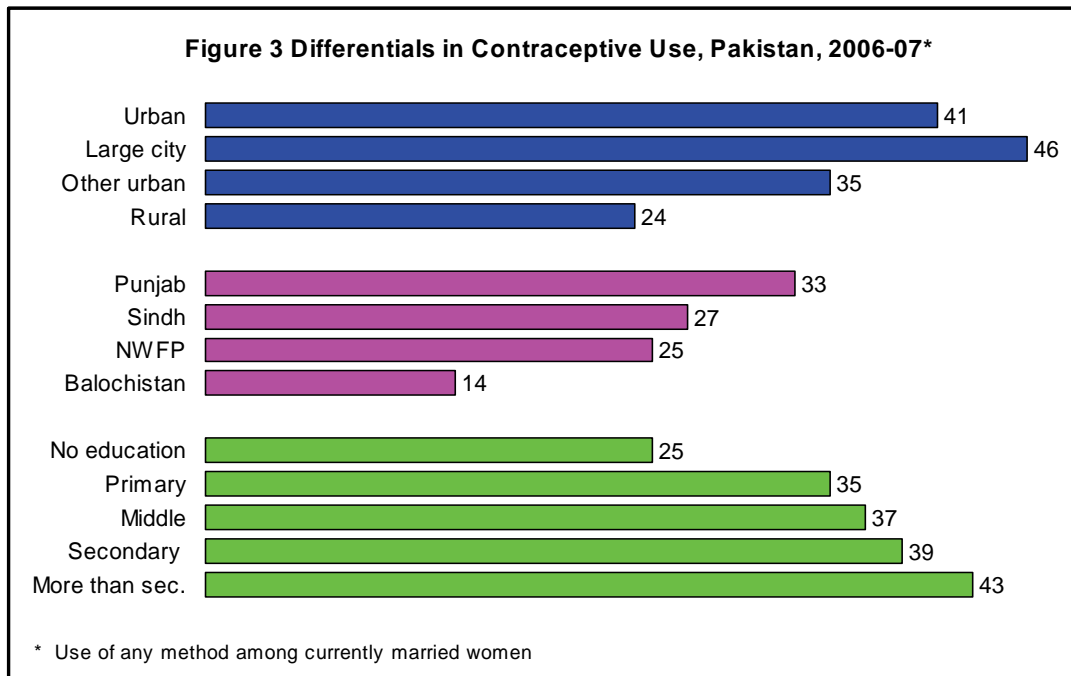
Table 5 Current use of contraception

Percent distribution of currently married women by contraceptive method currently used, according to background characteristics, Pakistan 2006-07

Background characteristic	Any method	Any modern method	Modern method							Any traditional method	Traditional method			Not currently using	Total	Number of women
			Female sterilisation	Male sterilisation	Pill	IUD	Injectables	Implants	Condom		Rhythm method	Withdrawal	Folk method			
Age																
15-19	6.7	4.2	0.0	0.0	0.8	0.5	0.3	0.0	2.6	2.5	1.2	1.3	0.0	93.3	100.0	559
20-24	15.4	10.6	0.9	0.0	1.3	1.2	2.0	0.1	5.2	4.8	2.1	2.6	0.1	84.6	100.0	1,463
25-29	24.8	17.2	1.9	0.0	2.0	2.1	2.7	0.3	8.1	7.6	3.4	4.0	0.2	75.2	100.0	1,965
30-34	35.6	26.9	7.2	0.0	3.2	3.4	3.7	0.1	9.3	8.7	3.6	5.0	0.1	64.4	100.0	1,729
35-39	39.9	29.8	12.5	0.1	2.7	3.8	2.0	0.1	8.6	10.2	4.5	5.4	0.3	60.1	100.0	1,565
40-44	41.6	31.4	19.1	0.3	2.1	1.8	2.2	0.0	5.9	10.3	4.9	5.1	0.3	58.4	100.0	1,208
45-49	31.5	23.6	16.7	0.2	1.2	1.2	1.5	0.3	2.6	7.8	4.4	3.4	0.0	68.5	100.0	1,067
Residence																
Total urban	41.1	29.9	10.2	0.2	2.6	2.6	2.3	0.2	11.9	11.2	4.9	6.1	0.1	58.9	100.0	3,191
Major urban	45.9	33.0	10.7	0.1	2.9	2.8	1.9	0.2	14.4	12.9	6.3	6.6	0.0	54.1	100.0	1,815
Other urban	34.7	25.8	9.5	0.2	2.3	2.3	2.9	0.1	8.5	8.9	3.2	5.5	0.3	65.3	100.0	1,376
Rural	23.9	17.7	7.2	0.0	1.8	2.1	2.3	0.1	4.2	6.2	2.9	3.1	0.2	76.1	100.0	6,365
Province																
Punjab	33.2	23.1	9.2	0.1	1.4	3.1	2.0	0.2	7.1	10.1	5.3	4.6	0.2	66.8	100.0	5,495
Sindh	26.7	22.0	9.0	0.0	2.3	1.0	2.3	0.1	7.2	4.7	1.5	3.1	0.0	73.3	100.0	2,317
NWFP	24.9	18.7	3.6	0.1	3.1	1.7	4.0	0.0	6.1	6.2	1.0	5.1	0.1	75.1	100.0	1,301
Balochistan	14.4	13.4	4.6	0.0	5.3	0.6	1.4	0.0	1.6	1.0	0.3	0.5	0.2	85.6	100.0	443
Education																
No education	25.2	18.8	8.6	0.0	2.0	1.9	2.1	0.2	4.1	6.4	3.0	3.2	0.2	74.8	100.0	6,193
Primary	34.7	26.2	9.0	0.1	2.1	2.6	3.8	0.1	8.6	8.4	3.4	4.9	0.1	65.3	100.0	1,342
Middle	37.2	26.5	8.1	0.0	1.8	1.8	3.2	0.0	11.5	10.8	5.5	5.1	0.2	62.8	100.0	609
Secondary	39.1	25.8	5.3	0.2	2.1	3.3	1.7	0.3	12.8	13.3	6.5	6.8	0.0	60.9	100.0	785
More than secondary	42.6	31.4	5.6	0.2	2.9	4.5	1.1	0.0	17.0	11.1	4.0	7.2	0.0	57.4	100.0	626
Living children																
0	0.6	0.5	0.0	0.0	0.1	0.0	0.0	0.0	0.4	0.1	0.1	0.0	0.0	99.4	100.0	1,278
1-2	20.3	13.2	1.3	0.0	1.7	1.1	1.7	0.1	7.4	7.0	3.3	3.7	0.0	79.7	100.0	2,565
3-4	39.2	28.9	9.7	0.1	2.8	3.8	3.0	0.1	9.4	10.3	4.5	5.6	0.2	60.8	100.0	2,604
5+	41.2	31.5	15.9	0.1	2.6	2.9	3.2	0.2	6.6	9.7	4.5	5.0	0.2	58.8	100.0	3,109
Total	29.6	21.7	8.2	0.1	2.1	2.3	2.3	0.1	6.8	7.9	3.6	4.1	0.2	70.4	100.0	9,556

Note: If more than one method is used, only the most effective method is considered in this tabulation.

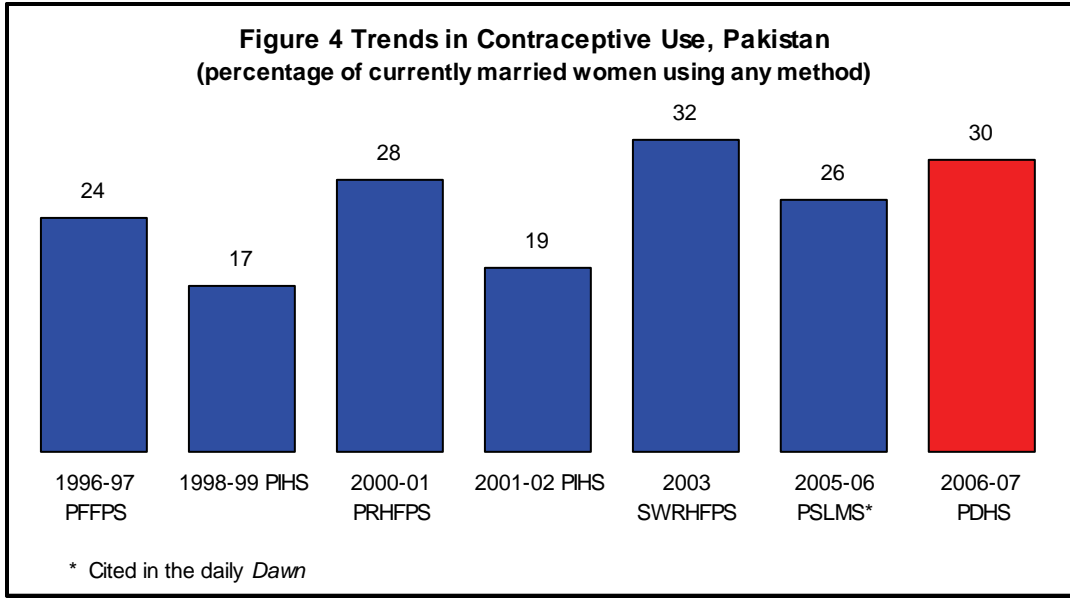
Married women in urban areas are considerably more likely to use contraception (41 percent) than those in rural areas (24 percent). Use is higher in major urban areas (46 percent) than in other urban areas (35 percent). Use is higher in urban areas for each of the specific methods except injectables, which is used by the same proportion of urban and rural women and folk methods.



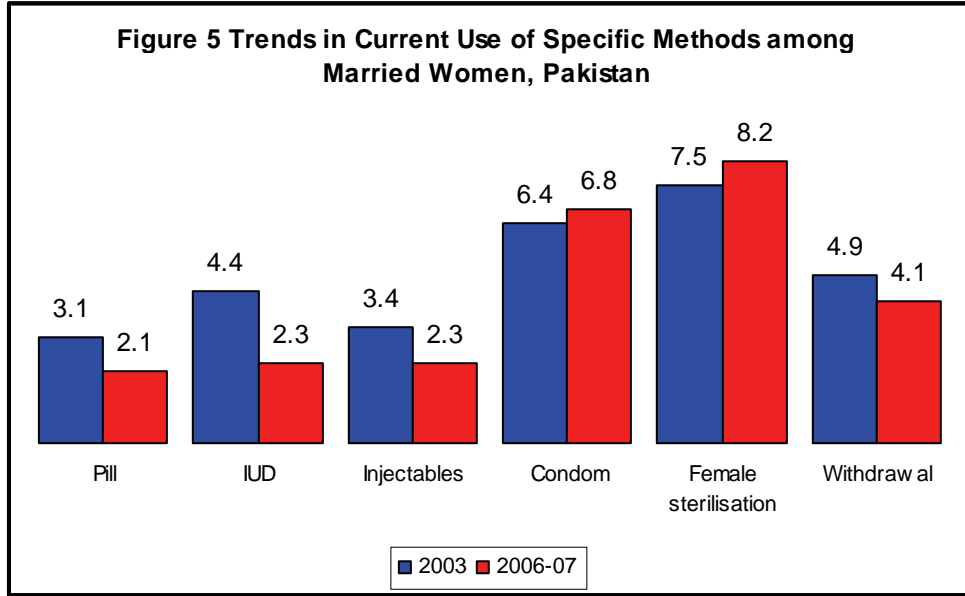
Contraceptive use among currently married women is highest in Punjab Province (33 percent), followed by Sindh (27 percent) and NWFP (25 percent) provinces and lowest in Balochistan Province (14 percent). In Punjab and Sindh, female sterilisation is the most commonly used contraceptive, followed by condoms, while in NWFP, condoms and withdrawal are the most popular methods; contraceptive use in Balochistan consists almost entirely of the pill and female sterilisation.

Use of both modern and traditional methods increases with educational attainment. More than four in ten married women with some secondary education (43 percent) use a method, compared to only 25 percent of those with no education. In general, women do not begin to use contraception until they have had at least one child.

As shown in Figure 4, trends in contraceptive use are erratic, with some indication of a gradual increase over time and a possible plateau in recent years.



As shown in Figure 5, changes in use of specific methods in recent years have been small, with a slight decline since 2003 in the use of the pill, IUD, injectables, and withdrawal, while the use of condoms and female sterilisation has increased slightly during this period.



3.5. Fertility Preferences

Several questions were asked in the survey concerning women’s fertility preferences. These questions included: a) whether the respondent wanted another child and b) if so, when she would like to have the next child. The answers to these questions allow for the estimation of the potential demand for family planning services either to limit or space births.

Table 6 shows that there is considerable desire among Pakistani women to control the timing and number of births. Among all currently married women, 20 percent would like to wait for two years or more for the next birth, and 52 percent either do not want to have another or are sterilised. Twenty-one percent of married women would like to have a child soon (within two years). The remaining women are uncertain about their fertility desires or unable to get pregnant (infecund).

Desire for children	Number of living children ¹							Total
	0	1	2	3	4	5	6+	
Have another soon ²	81.3	38.6	24.0	15.1	8.2	4.7	1.8	21.1
Have another later ³	5.2	49.9	39.7	22.8	13.2	5.7	3.4	19.6
Have another, undecided when	2.7	4.2	3.6	2.2	0.6	0.8	0.6	2.0
Undecided	3.0	1.6	3.6	2.9	2.2	2.6	1.7	2.4
Want no more	0.5	4.1	24.6	48.2	60.2	68.2	72.3	43.3
Sterilised ⁴	0.0	0.4	2.0	6.3	12.9	16.1	15.2	8.2
Declared infecund	7.0	1.2	2.1	2.4	2.6	2.0	4.9	3.2
Missing	0.3	0.1	0.4	0.1	0.1	0.0	0.1	0.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of women	947	1,298	1,408	1,365	1,312	1,090	2,136	9,556

¹ Includes current pregnancy
² Wants next birth within 2 years
³ Wants to delay next birth for 2 or more years
⁴ Includes both male and female sterilisation

Fertility preferences are closely related to the number of living children a woman has. The vast majority of currently married women without a child (81 percent) would like to have one soon. Women show greater interest in controlling the pace of childbearing once they have a child. Half of women with one child want to delay their next birth. Interest in controlling the number of births grows rapidly as the number of children increases; the proportion wanting no more children or sterilised rises from 5 percent among women with one child to 88 percent of women with six or more children.

3.6. Maternity Care

Proper care during pregnancy and delivery are important for the health of both the mother and the baby. In the PDHS, women who had given birth in the five years preceding the survey were asked a number of questions about maternal and child health care. For the last live birth in that period, mothers were asked whether they had obtained antenatal care during the pregnancy and whether they had received tetanus toxoid injections and/or iron supplements while pregnant. For each birth in the same period, mothers were also asked what type of assistance they received at the time of delivery. Table 7 presents the results of key maternity care indicators.

Antenatal Care

Only six in ten mothers (61 percent) reported seeing a health professional—a doctor, nurse, or Lady Health Visitor—at least once for antenatal care for the most recent birth in the five-year period before the survey. The differentials in antenatal care coverage are large. Coverage is highest for births to women age 20-34 and it is much higher in major urban areas (85 percent) than in other urban areas (71 percent) or rural areas (54 percent). Across provinces, the proportion of mothers reporting they received antenatal care from a health professional is markedly lower in Balochistan (41 percent) and NWFP (51 percent) than in Punjab (61 percent) or Sindh (70 percent). As the mother's educational level rises, so does the likelihood that she will see a health professional for care during pregnancy. In fact, the antenatal care coverage is twice as high among women with more than a secondary education as those with no education (96 percent vs. 50 percent).

Tetanus Toxoid

Tetanus toxoid injections are given during pregnancy to prevent neonatal tetanus which continues to be an important cause of infant deaths. Table 7 indicates that tetanus toxoid coverage is far from universal among pregnant women in Pakistan. Only about six in ten babies are fully protected against neonatal tetanus. The pattern of differences by background characteristics follows that for antenatal care, with children born to urban mothers, in Punjab and Sindh Provinces and to better educated mothers being much more likely than other children to be protected against tetanus.

Postnatal Care

Receiving a check-up from a health professional soon after birth can significantly reduce illness and deaths due to sepsis and other maternal causes. However, the data in Table 7 show that postnatal care is not common in Pakistan, with only 22 percent of mothers reporting it. As with antenatal care and tetanus injections, those more likely to have received a postnatal check-up are urban mothers—in particular those in major urban areas—mothers in Sindh and Punjab, and those with more education.

Delivery Care

Proper medical attention and hygienic conditions during delivery can reduce the risk of complications and infections that could cause the death or serious illness of the mother and/or the baby. Table 7 shows that only 4 in 10 births in Pakistan (39 percent) are delivered by a health professional. One-third (34 percent) of deliveries take place in health facilities.

Differentials in delivery care by background characteristics of the mother are generally similar to those for antenatal care. Rural women and less educated women are less likely than others to receive medical assistance during delivery and to deliver in a health facility. For example, urban mothers (60 percent) are twice as likely as rural mothers (30 percent) to have a medically assisted delivery. The likelihood of a medically assisted delivery also increases substantially with the mother's educational level, from 27 percent among mothers with no education to 86 percent among mothers with more than secondary schooling. Mothers in Sindh Province are about twice as likely as those in Balochistan to receive medical assistance during delivery and to deliver in health facilities.

Table 7 Maternal care indicators

Percentage of ever-married women who had a live birth in the five years preceding the survey who received antenatal care from a health professional for the last live birth and whose last live birth was protected against neonatal tetanus, and among all live births in the five years before the survey, percentage delivered by a health professional and percentage delivered in a health facility, by background characteristics, Pakistan 2006-07

Background characteristic	Percentage with antenatal care from a health professional ¹	Percentage whose last live birth was protected against neonatal tetanus ²	Percentage who received professional postnatal care for last birth within 24 hours ¹	Number of women	Percentage delivered by a health professional ¹	Percentage delivered in a health facility	Number of births
Mother's age at birth							
<20	59.0	56.3	19.8	460	38.8	32.5	963
20-34	63.7	61.0	23.5	4,303	40.5	36.1	6,984
35+	48.9	46.7	14.0	915	28.8	24.5	1,175
Residence							
Total urban	78.1	72.0	36.9	1,714	60.1	56.2	2,699
Major urban	84.7	77.0	47.2	909	75.0	71.4	1,390
Other urban	70.7	66.4	25.3	806	44.4	40.1	1,310
Rural	53.5	52.4	15.1	3,962	29.8	25.0	6,422
Province							
Punjab	60.9	64.1	20.9	3,182	37.7	33.3	5,125
Sindh	70.4	56.1	30.3	1,404	44.4	41.6	2,284
NWFP	51.3	48.9	13.8	827	37.9	29.7	1,312
Balochistan	40.7	30.7	10.0	264	23.0	18.2	400
Education							
No education	50.1	46.5	13.2	3,694	26.8	22.2	6,028
Primary	70.5	70.9	23.6	829	46.7	40.4	1,312
Middle	81.9	82.9	38.2	353	59.9	54.5	538
Secondary	88.1	86.3	45.5	461	74.9	72.8	722
More than secondary	96.1	93.0	59.4	341	86.0	83.7	522
Total	60.9	58.3	21.7	5,677	38.8	34.2	9,121

Note: If the respondent mentioned more than one source of antenatal or delivery care, the most qualified person is considered here.

¹ Doctor, nurse, midwife, or Lady Health Visitor

² Includes mothers with two injections during the pregnancy of the last live birth, or two or more injections (the last within 3 years of the last live birth), or three or more injections (the last within 5 years of the last live birth), or four or more injections (the last within ten years of the last live birth), or five or more injections prior to the last live birth

Trends in Maternity Care Indicators

Analysis of trends in maternity care indicators is complicated by the fact that previous surveys asked questions on antenatal care and tetanus injections for all births in a specified period prior to the survey, whereas the 2006-07 PDHS confined these questions to only the most recent birth. Nevertheless, the 2003 Status of Women Survey showed that only 44 percent of recent mothers received antenatal care and only 28 percent delivered in a health facility.

3.7. Birth Intervals

Examination of birth intervals is important in providing insights into birth spacing patterns and, subsequently, maternal and child health. Studies have shown that children born less than 24 months after a previous sibling risk poorer health and also threaten maternal health. Table 8 provides a glimpse into the birth intervals of children born to Pakistani women of reproductive age during the five years preceding the survey across selected subgroups.

Overall, the median interval between births is 29 months. The shortest birth interval is observed among children born to women age 15-19 (21 months) and children whose preceding sibling died (22 months), while the longest is among children born to women age 40-49 (36 months) and children in Balochistan (33 months). It is also interesting to note that there is a slightly shorter interval after the birth of a female child than there is after a male child.

Overall, 34 percent of Pakistani children are born less than 24 months after a previous birth, an interval perceived to be “too short.” A larger proportion of such children is born to younger women age 15-19 (60 percent) relative to other age groups.

Background characteristic	Months since preceding birth							Total	Number of non-first births	Median number of months since preceding birth
	7-17	18-23	24-35	36-47	48-54	55-59	60+			
Age										
15-19	30.3	29.4	33.3	0.9	0.3	4.0	1.9	100.0	66	20.9
20-24	25.5	24.0	34.0	12.1	2.8	0.5	1.0	100.0	995	24.1
25-29	17.9	18.5	37.6	14.8	5.0	1.3	4.9	100.0	2,234	27.1
30-39	14.0	15.1	31.6	18.5	6.3	3.4	11.0	100.0	3,204	31.6
40-49	9.7	12.0	28.3	19.1	6.3	3.7	21.0	100.0	700	36.0
Birth order										
2-3	17.8	19.5	34.5	14.5	5.4	2.0	6.4	100.0	3,100	27.4
4-6	15.9	15.2	32.5	17.4	5.5	2.5	11.0	100.0	2,777	30.0
7+	14.9	16.1	33.2	18.8	5.2	3.0	8.8	100.0	1,323	30.2
Sex of preceding birth										
Male	14.4	16.9	34.2	16.7	5.7	2.6	9.4	100.0	3,694	29.6
Female	18.7	17.5	32.7	16.0	5.1	2.1	7.8	100.0	3,506	28.0
Survival of preceding birth										
Living	14.5	17.0	34.4	17.1	5.6	2.5	9.0	100.0	6,571	29.6
Dead	37.6	19.4	23.8	9.4	3.7	1.7	4.4	100.0	629	21.9
Residence										
Total urban	18.0	17.9	30.0	15.5	5.1	2.2	11.4	100.0	2,058	28.7
Major urban	18.2	17.5	28.6	14.6	5.6	2.3	13.2	100.0	1,061	30.0
Other urban	17.8	18.2	31.4	16.4	4.6	2.1	9.4	100.0	997	28.1
Rural	15.9	16.9	34.9	16.8	5.5	2.5	7.5	100.0	5,142	28.9
Province										
Punjab	16.6	18.3	33.7	15.8	4.9	2.3	8.3	100.0	4,005	28.2
Sindh	18.0	15.8	33.8	16.3	5.8	2.2	8.2	100.0	1,824	28.7
NWFP	14.9	16.4	32.1	17.1	6.1	2.9	10.5	100.0	1,057	30.0
Balochistan	11.9	14.3	33.3	22.7	6.7	2.4	8.7	100.0	314	33.0

Continued...

Table 8—Continued

Background characteristic	Months since preceding birth							Total	Number of non-first births	Median number of months since preceding birth
	7-17	18-23	24-35	36-47	48-54	55-59	60+			
Education										
No education	16.5	17.2	33.6	16.7	5.4	2.6	8.1	100.0	4,986	28.7
Primary	15.2	17.4	34.1	16.4	4.7	2.6	9.5	100.0	987	29.3
Middle	16.5	20.4	32.5	13.2	5.1	0.8	11.6	100.0	370	28.8
Secondary	17.3	14.9	34.1	14.9	7.3	1.2	10.3	100.0	510	29.8
More than secondary	19.3	17.1	30.1	17.6	5.2	3.0	7.7	100.0	346	28.0
Total	16.5	17.2	33.5	16.4	5.4	2.4	8.6	100.0	7,200	28.8

Note: First-order births are excluded from this table. The interval for multiple births is the number of months since the preceding pregnancy that ended in a live birth

3.8. Child Health and Nutrition

Vaccination of Children

According to the World Health Organisation, a child is considered fully vaccinated if he or she has received a BCG vaccination against tuberculosis; three doses of DPT vaccine to prevent diphtheria, pertussis, and tetanus (DPT); at least three doses of polio vaccine; and one dose of measles vaccine. These vaccinations should be received during the first year of life. The 2006-07 PDHS collected information on the coverage for these vaccinations as well as for hepatitis B (HBV) among all children born in the five years preceding the survey.

The information on vaccination coverage was obtained in two ways—from health cards and from mother’s verbal reports. All mothers were asked to show the interviewer the health cards used for the child’s immunisation. If the card was available, the interviewer copied the dates of each vaccination received. If a vaccination was not recorded on the card as being given, the mother was asked to recall whether that particular vaccination had been given. If the mother was not able to present a card for a child at all, she was further asked to recall whether the child had received BCG, polio, DPT, hepatitis B, and measles. If she indicated that the child had received the polio, DPT, or hepatitis B vaccines, she was asked the number of doses that the child received.

Table 9 presents information on vaccination coverage for children aged 12-23 months, who should be fully vaccinated against the six preventable childhood illnesses. The results are based both on the health card record and information provided by the mother. The table shows that health cards were available for less than one-quarter of the children covered.

Overall, less than half (47 percent) of children aged 12-23 months are fully vaccinated with BCG, measles and three doses of DPT and polio.⁵ Looking at coverage for specific vaccines, 80 percent of children have received the BCG vaccination, 75 percent the first DPT dose and 93 percent the first polio dose (Polio 1). Coverage declines for subsequent doses, with only 59 percent of children receiving the recommended three doses of DPT and 83 percent receiving all three doses of polio. Only 60 percent of children receive the measles vaccine. Six percent of children have received no vaccinations at all.

⁵ Note that the definition of fully vaccinated excludes the hepatitis B vaccine.

Differentials in coverage levels show that the proportion of children fully vaccinated is lower for girls than boys. It is also considerably lower for children in Balochistan (35 percent) and Sindh (37 percent) than children in Punjab and NWFP (53 and 47 percent, respectively). Children whose mothers have no education are about half as likely to be fully vaccinated as children whose mothers have more than secondary education. It is notable that almost one-third of children in Balochistan are reported to have not received any vaccinations at all.

The levels of vaccination coverage from the PDHS are considerably lower than those from past surveys. The proportion of children fully immunised was reported to be 49 percent in the 1998-99 PIHS, 53 percent in the 2001-02 PIHS, and 77 percent in the 2004-05 PSLMS, though the exact methods of measurement may differ between the surveys.

Table 9 Vaccinations by background characteristics

Percentage of children age 12-23 months who received specific vaccines at any time before the survey (according to a vaccination card or the mother's report), and percentage with a vaccination card seen, by background characteristics, Pakistan 2006-07

Background characteristic	BCC	DPT1	DPT2	DPT3	Polio 0 ¹	Polio 1	Polio 2	Polio 3	Meas-les	HBV1	HBV2	HBV3	All ²	No vaccinations	Percentage with a vaccination card	Number of children
Sex																
Male	82.2	77.2	70.1	61.3	59.4	93.4	91.2	84.4	63.1	73.9	67.4	59.8	49.8	5.1	23.9	816
Female	78.2	72.0	62.2	55.2	52.8	92.6	90.0	81.5	56.1	67.7	60.1	54.4	44.3	7.1	23.6	706
Residence																
Total urban	89.3	83.6	77.1	68.4	61.5	93.5	91.4	81.8	68.8	80.5	74.8	67.2	54.2	5.6	26.3	484
Major urban	90.9	82.5	75.1	70.5	63.4	94.4	92.0	82.3	68.8	78.0	72.5	68.5	53.9	4.7	29.5	266
Other urban	87.3	84.9	79.5	65.8	59.2	92.4	90.7	81.3	68.8	83.5	77.6	65.7	54.6	6.8	22.3	218
Rural	76.2	70.7	61.5	53.8	53.9	92.8	90.3	83.7	55.7	66.6	59.0	52.7	44.0	6.2	22.6	1,038
Province																
Punjab	85.5	80.9	72.3	64.5	58.6	95.5	93.4	84.6	65.1	76.9	69.4	63.6	52.6	3.8	23.8	865
Sindh	76.7	67.3	56.4	47.6	51.2	92.2	89.9	84.1	50.7	61.3	53.4	45.2	37.0	6.3	19.7	373
NWFP	71.1	67.5	62.4	56.4	62.6	91.3	87.9	81.0	56.6	67.1	62.3	56.3	46.9	7.5	33.9	222
Balochistan	63.0	60.8	60.0	46.7	32.5	69.2	66.3	62.9	54.0	60.9	58.8	46.3	35.2	28.9	10.6	61
Education																
No education	73.4	65.7	55.9	47.1	49.5	90.9	88.2	79.9	50.1	61.6	53.3	45.7	37.2	8.0	19.1	957
Primary	89.1	84.6	76.6	67.9	56.8	96.0	94.6	87.9	69.3	78.8	72.2	66.5	55.9	2.3	26.5	222
Middle	90.1	91.1	88.3	81.0	73.3	96.3	93.9	87.6	77.4	88.5	86.4	81.4	68.8	3.7	40.1	114
Secondary	97.2	94.5	86.9	83.5	78.4	98.4	96.8	90.9	83.0	95.7	90.0	84.1	70.0	1.2	33.1	133
More than secondary	94.1	95.9	94.6	88.8	72.7	95.9	93.6	87.8	83.3	92.2	89.8	86.4	71.1	4.1	31.7	95
Total	80.3	74.8	66.5	58.5	56.3	93.0	90.6	83.1	59.9	71.0	64.0	57.3	47.3	6.0	23.7	1,522

¹ Polio 0 is the polio vaccination given at birth.

² BCC, measles and three doses each of DPT and polio vaccine (excluding polio vaccine given at birth)

Treatment of Childhood Illnesses

Acute respiratory illness, malaria, and dehydration caused by severe diarrhoea are major causes of childhood mortality in Pakistan. Prompt medical attention when a child has the symptoms of these illnesses is, therefore, crucial in reducing child deaths. To obtain information on how childhood illnesses are treated, the mothers of each child under five years of age were asked whether the child had experienced the

following symptoms in the two weeks before the survey: cough with short, rapid breathing (symptoms of an acute respiratory infection), fever (symptom of malaria), and diarrhoea.

The results show that 14 percent of children under age five years whose mothers were interviewed in the survey are reported to have had a cough with short rapid breathing in the two weeks before the survey (data not shown). Table 10 shows that seven in ten of these children were taken for treatment from a health provider. Less likely to be taken for treatment are older children, rural children, children born in NWFP and Balochistan, and children whose mothers have less education. Very similar levels and patterns of treatment can be seen for fever.

Table 10 also looks at the treatment of diarrhoeal illness. The data indicate that over half of the children who were ill with diarrhoea were taken to a health provider. Rural children and those in NWFP and Balochistan are less likely than other children to be taken for professional medical treatment when they have diarrhoea. Female children are also slightly less likely to receive medical assistance than male children.

Oral rehydration therapy (ORT), which involves a prompt increase in the child's intake of fluids, is a simple and effective response to diarrhoeal illness. Mothers reported that almost half of the children with diarrhoea were treated with some form of oral rehydration therapy (ORT), and 41 percent were given a solution prepared using a packet of oral rehydration salts (ORS). The use of ORT to treat diarrhoea was least common among children in Punjab Province and children under six months of age.

Table 10 Treatment for acute respiratory infection, fever, and diarrhoea

Among children under five years who were sick with a cough accompanied by short, rapid breathing or with difficulty breathing due to chest, congestion (symptoms of acute respiratory infection-ARI) or with fever, in the two weeks preceding the survey, percentage for whom treatment was sought from a health facility or provider, and among children under five years who were sick with diarrhoea during the two weeks preceding the survey, percentage for whom treatment was sought from a health facility or provider, percentage given a solution made from oral rehydration salt (ORS) packets or given prepackaged ORS liquids, and percentage given any oral rehydration therapy (ORT) by background characteristics, Pakistan 2006-07

Background characteristic	Children with symptoms of ARI		Children with fever		Children with diarrhoea			
	Percent-age for whom treatment was sought from a health facility/provider	Number with ARI	Percent-age for whom treatment was sought from a health facility/provider	Number with ARI/fever	Percent-age for whom treatment was sought from a health facility/provider	Percent-age given solution from ORS packet	Percent-age given any ORT	Number with diarrhoea
Age in months								
<6	73.2	116	65.2	261	47.1	24.6	33.6	253
6-11	75.4	156	70.4	344	57.8	41.1	45.4	324
12-23	73.7	253	69.0	598	62.6	48.3	54.5	467
24-35	69.6	252	64.7	515	50.0	43.8	50.3	345
36-47	62.1	236	63.0	494	57.0	45.9	50.0	259
48-59	63.8	164	61.7	357	42.8	33.3	40.9	173
Sex								
Male	70.2	661	67.0	1,397	55.7	41.5	47.2	981
Female	68.1	517	64.3	1,171	53.1	40.6	47.3	841
Residence								
Total urban	80.4	323	75.5	791	65.5	43.8	49.5	532
Major urban	87.0	157	77.4	441	68.4	41.6	47.6	295
Other urban	74.2	166	73.2	350	62.0	46.4	52.0	236
Rural	65.1	854	61.4	1,777	50.0	40.0	46.3	1,290

Continued...

Table 10—Continued

Background characteristic	Children with symptoms of ARI		Children with fever		Children with diarrhoea			
	Percentage for whom treatment was sought from a health facility/provider	Number with ARI	Percentage for whom treatment was sought from a health facility/provider	Number with ARI/fever	Percentage for whom treatment was sought from a health facility/provider	Percentage given solution from ORS packet	Percentage given any ORT	Number with diarrhoea
Province								
Punjab	70.9	611	65.6	1,418	53.7	35.1	40.8	968
Sindh	78.0	354	75.0	730	66.2	53.7	59.3	493
NWFP	49.8	202	50.4	370	40.1	37.5	47.0	301
Balochistan	56.1	11	49.1	50	44.9	51.8	53.7	60
Education								
No education	63.8	782	61.1	1,625	50.7	39.9	45.3	1,201
Primary (1-5)	77.7	189	72.9	414	57.0	48.1	56.1	278
Middle (6-8)	80.1	62	69.6	177	62.8	39.3	46.9	123
Secondary (9,10)	80.7	100	69.9	211	65.5	37.0	43.8	144
More than secondary (11+)	89.0	44	87.1	141	71.7	45.0	52.1	76
Total	69.3	1,178	65.8	2,569	54.5	41.1	47.2	1,821
¹ Excludes pharmacy, chemist, homeopath, dispenser, shop, hakim, dai/tba, other unknown ² Includes ORS from packets and prepackaged ORS liquids ³ Includes ORS from packets, prepackaged ORS liquids, and recommended home fluid								

Ownership and Use of Insecticide-Treated Mosquito Nets

One of strongest weapons in the fight against malaria is the use of insecticide-treated mosquito nets (ITNs) while sleeping. In the 2006-07 PDHS, data were collected from households on ownership of mosquito nets. Respondents were asked to indicate which household members had slept under each net the night prior to the interview. Questions were also asked on the treatment of the nets with insecticide and the last time this was done.

Indicator	Total urban		Major urban		Other urban		Rural		Total	
	Percent-age	Number	Percent-age	Number	Percent-age	Number	Percent-age	Number	Percent-age	Number
Mosquito nets										
Percentage of households with at least one mosquito net (treated or untreated)	3.5	3,159	2.0	1,808	5.5	1,350	7.8	6,096	6.3	9,255
Percentage of households with at least one insecticide-treated net (ITN)	0.7	3,159	0.7	1,808	0.6	1,350	0.8	6,096	0.8	9,255
Percentage of children under 5 who slept under a mosquito net the night before the survey	1.2	2,636	0.3	1,372	2.2	1,264	1.8	6,142	1.6	8,778
Percentage of children under 5 who slept under an ITN the night before the interview	0.2	2,636	0.1	1,372	0.3	1,264	0.2	6,142	0.2	8,778
Percentage of pregnant women age 15-49 who slept under a mosquito net the night before the interview	0.7	364	0.1	192	1.4	172	2.0	829	1.6	1,193
Percentage of pregnant women age 15-49 who slept under an ITN the night before the interview	0.0	364	0.0	192	0.0	172	0.0	829	0.0	1,193
Treatment of fever										
Among children under age 5 with fever in the two weeks preceding the survey, percentage who took antimalarial drugs	2.5	791	1.3	441	4.0	350	3.7	1,777	3.3	2,569
Among children under age 5 with fever in the two weeks preceding the survey, percentage who took antimalarial drugs the same day/next day after developing fever	2.0	791	1.1	441	3.2	350	2.8	1,777	2.6	2,569

¹ An insecticide treated net (ITN) is a permanent net that does not require any treatment, a pretreated net obtained within the past 12 months or a net that has been soaked with insecticide within the past 12 months.

The data show that only six percent of Pakistani households own a mosquito net and less than one percent owns an insecticide-treated net. Two percent of children under five and the same proportion of pregnant women slept under a mosquito net the night before the survey. It should be noted that the survey was implemented during the dry season and thus may not reflect the true picture of bednet use during the highest malaria transmission period.

About three percent of children who had a fever in the two weeks before the survey were reported to have taken an antimalarial medicine. Most of them took the medicine the same day or next day after developing the fever. It should be noted that mothers may not know the type of medicine given to their children, as health care providers do not always label the medicine or describe it fully to the mother.

Breastfeeding and Supplementation

Breastfeeding practices and introduction of supplemental foods are important determinants of the nutritional status of children, particularly those under the age of two years. With improved nutritional status, the risk of mortality among children under five years can be reduced and their psycho-motor development enhanced. Breast milk is uncontaminated and contains all the nutrients needed by children in the first four to six months of life. Supplementing breast milk before four months of age is unnecessary and discouraged because of the likelihood of contamination, which may result in the risk of diarrhoeal diseases.

Table 12 shows that 84 percent of children aged between 9 and 11 months in Pakistan are still being breastfed. The proportion of children who are still being breastfed declines with age.

Table 12 Breastfeeding status by age

Among youngest children under three years living with their mother, percent distribution by breastfeeding status and the percentage currently breastfeeding; and among all children under three years, percentage using a bottle with a nipple, according to age in months, Pakistan 2006-07

Age in months	Breastfeeding and consuming:						Total	Percentage currently breastfeeding	Number of youngest children under three years	Percentage using a bottle with a nipple ¹	Number of all children under three years
	Not breast-feeding	Exclusively breastfed	Plain water only	Non-milk liquids/juice	Other milk	Complementary food					
0-1	3.0	54.6	12.8	1.1	27.6	1.0	100.0	97.0	282	16.8	284
2-3	3.8	35.7	18.4	1.4	39.1	1.6	100.0	96.2	355	29.7	359
4-5	3.4	23.1	19.6	2.3	38.0	13.6	100.0	96.6	318	33.2	319
6-8	10.0	8.3	17.4	5.1	25.6	33.6	100.0	90.0	443	34.5	447
9-11	15.6	4.2	8.4	3.9	16.2	51.7	100.0	84.4	368	40.2	373
12-17	24.6	2.4	5.2	2.5	7.1	58.1	100.0	75.4	843	37.8	916
18-23	41.4	1.0	2.1	1.1	5.9	48.6	100.0	58.6	494	35.7	606
24-35	73.2	0.2	0.3	0.7	2.5	23.2	100.0	26.8	1,007	32.0	1,668
0-3	3.4	44.1	15.9	1.2	34.0	1.3	100.0	96.6	637	24.0	643
0-5	3.4	37.1	17.1	1.6	35.4	5.4	100.0	96.6	955	27.1	962
6-9	11.2	7.1	15.6	5.0	24.9	36.3	100.0	88.8	566	36.4	573
12-15	21.0	2.8	6.2	2.8	7.2	60.0	100.0	79.0	590	35.3	632
12-23	30.8	1.9	4.1	2.0	6.7	54.6	100.0	69.2	1,337	37.0	1,522
20-23	45.1	1.6	2.3	1.3	7.5	42.1	100.0	54.9	293	39.1	386

Note: Breastfeeding status refers to a "24-hour" period (yesterday and the past night). Children classified as breastfeeding and consuming plain water only consume no supplements. The categories of not breastfeeding, exclusively breastfed, breastfeeding and consuming plain water, water-based liquids/juice, other milk, and complementary foods (solids and semi-solids) are hierarchical and mutually exclusive, and their percentages add to 100 percent. Thus children who receive breast milk and water-based liquids and who do not receive complementary foods are classified in the water-based liquid category even though they may also get plain water. Any children who get complementary food are classified in that category as long as they are breastfeeding as well.

¹ Based on all children under three years

The results in Table 12 also indicate that supplementation of breast milk starts early in Pakistan, with almost one-third of children under two months of age receiving other milk or liquids or food. Bottle feeding among children below three years is widespread. Nearly one in five babies under two months of age is being fed using a bottle with a nipple. This proportion rises to 40 percent of children aged 9-11 months.

3.9. Infant and Child Mortality

Information on infant and child mortality is useful in identifying segments of the population that are at high risk so that programmes can be designed to reduce it. Childhood mortality rates are also basic indicators of a country's socio-economic level and quality of life. Caution should be taken in interpreting the mortality information presented in this report because it uses information from the birth history in the Woman's Questionnaire to construct the rates. It is known that in some communities, women are reluctant to discuss their dead children, which could lead to underestimation of the childhood mortality rates.

Table 13 presents infant and under-five mortality rates from the 2006-07 PDHS. The level of under-five mortality was 94 deaths per 1,000 births during the five-year period before the survey, implying that almost 1 in every 10 children born in Pakistan during the period died before reaching their fifth birthday. The infant mortality rate recorded in the survey was 78 deaths per 1,000 live births.

Comparison of mortality rates recorded in 2006-07 PDHS with earlier surveys shows little if any change in mortality over time. For example, the infant mortality rate measured in the 2005 Pakistan Demographic Survey was 77 per 1000, almost identical to the level of 78 measured in the 2006-07 PDHS.

Years preceding the survey	Neonatal mortality (NN)	Postneonatal mortality (PNN)	Infant mortality (${}_1q_0$)	Child mortality (${}_4q_1$)	Under-five mortality (${}_5q_0$)
0-4	54	24	78	18	94
5-9	52	24	76	18	92
10-14	56	30	86	19	103

¹ Computed as the difference between the infant and neonatal mortality rates

3.10. HIV/AIDS

Acquired Immune Deficiency Syndrome (AIDS) is a serious public health threat in Pakistan. The PDHS included a series of questions that inquired about respondents' knowledge on AIDS and their awareness of modes of transmission of the Human Immunodeficiency Virus that causes AIDS. In addition, respondents were asked if they knew of behaviours that can prevent the spread of HIV.

Table 14 shows that less than half (44 percent) of ever-married women in Pakistan have heard of AIDS. Only one in five says that consistent use of condoms is a means of preventing the transmission of the AIDS virus, while 31 percent say that limiting sexual intercourse to one faithful and uninfected partner can reduce the chances of contracting HIV. Evidently, knowledge that HIV is a sexually-transmitted disease is very limited since only one-quarter of all ever-married women age 15-49 know that abstinence is a way of reducing the chances of getting HIV.

Knowledge about AIDS and its transmission is lower among the youngest women (age 15-19). It also tends to be lower among divorced and separated women than among those who are currently married or widowed; the one exception is knowledge that using condoms can reduce the risk of getting AIDS, which is slightly higher among divorced and separated women. AIDS knowledge is lower among rural than urban women and is also particularly low in Balochistan. Education level shows the most conspicuous

differentials. For example, only about one-quarter of women with no education have heard of AIDS, compared to almost all women with more than a secondary education.

Background characteristic	Percentage who have heard of AIDS	Percentage who say HIV can be prevented by:				Number
		Using condoms ¹	Limiting sexual intercourse to one uninfected partner ²	Using condoms and limiting sexual intercourse to one uninfected partner	Abstaining from sexual intercourse	
Age						
15-19	30.4	10.7	19.9	8.8	14.2	569
20-24	46.4	19.4	31.9	16.5	23.9	1,499
25-29	48.3	22.7	33.0	19.5	25.8	2,006
30-39	44.6	21.1	32.9	18.9	24.4	3,440
40-49	42.0	16.7	28.4	14.4	22.8	2,509
Marital status						
Married	44.3	19.6	31.0	17.1	23.8	9,556
Divorced/separated	39.3	20.8	27.5	17.7	17.6	151
Widowed	43.8	13.7	29.9	11.0	21.7	316
Residence						
Total urban	69.2	31.5	50.0	27.7	38.5	3,350
Major urban	79.2	37.3	58.3	32.7	46.0	1,898
Other urban	56.2	24.0	39.1	21.2	28.7	1,452
Rural	31.6	13.4	21.3	11.6	16.1	6,673
Province						
Punjab	46.8	21.7	33.2	19.0	27.2	5,800
Sindh	42.7	18.1	30.4	15.7	21.7	2,410
NWFP	42.4	16.2	28.5	14.1	17.9	1,351
Balochistan	23.8	7.8	11.5	5.8	6.1	462
Education						
No education	26.6	9.3	16.1	7.8	12.3	6,539
Primary (1-5)	59.3	27.1	41.0	23.0	33.2	1,394
Middle (6-8)	81.7	39.2	60.1	33.8	45.0	634
Secondary (9,10)	89.4	44.8	70.2	41.0	53.7	809
More than secondary (11+)	96.2	55.1	80.6	49.9	59.0	646
Total	44.2	19.5	30.9	16.9	23.6	10,023

¹ Using condoms every time they have sexual intercourse
² Partner who has no other partners

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