

# **PREVALENCE AND FACTORS ASSOCIATED WITH DROPOUTS IN CONTRACEPTIVE USE IN RURAL AREAS OF PESHAWAR**

**Dr. Najma Sultana**

## **ABSTRACT:**

The problem of discontinuation is a major issue and is critical in rural communities of North West Frontier Province (NWFP) where illiteracy prevails. A cross-sectional study was conducted in a random sample of two hundred women from two union councils of district Peshawar. Factors analysed were socio-demographic, service related factors and knowledge & perceptions of women about contraceptive use. The contraceptive dropout rate was 27.5% (n=200). The dropouts were observed mainly within first year of contraceptive use (87%). Eighty one percent of the women and forty eight percent of their husbands were illiterate. The factors associated with contraceptive dropouts were religious beliefs against contraceptive use, higher income of husband amongst poor community, poor access, improper sources of information, and women's experience of side effects. All these factors have programmatic implications. It is therefore concluded that there are inherent weaknesses in the Family Planning Program that needs to be addressed.

## **INTRODUCTION:**

Modern methods of contraception are very effective in preventing pregnancy as compared to traditional contraceptives. It has been observed that women who use modern methods of contraception discontinue using contraceptive without adopting alternate method, or to traditional and less effective methods, which leads to unwanted pregnancy. In NWFP 83.1% of the population resides in rural areas (Fifth Population and Housing Census, 1998). The women of rural areas in NWFP have limited access to education, health and family planning facilities due to socio-cultural norms and restrictions. There was a need to identify factors involved, which could be reinforced by interventions for

preventing dropouts of contraceptive among users to improve contraceptive prevalence.

The potential significance of contraceptive discontinuation rate in determining population growth has been recognized in the developing world. Pakistan is the sixth most populous country in the world having population of 151 million with growth rate of 1.9% (NIPS, 2004). Though the contraceptive prevalence rate has improved in NWFP from 24% to 31% (MICS, 2002), the problem of discontinuation is still a major issue, which may be more critical in rural communities.

Multiple factors underlay discontinuation of contraceptives and are specific to each society, which can provide a foundation for the development of policies and programs that could more effectively address the obstacles to practice family planning.

Physiological effects of contraceptive methods occur more frequently and are particularly important to women's decision and making judgments that methods are painful or safe and healthy. Health concern reduces prevalence on average by 71% for pills, and 86% for IUCD. However in majority of cases, these effects are not statistically significant (Bongaarts and Bruce., 1995). In Pakistan, one third of women stop using contraceptives and the discontinuation is highest among users of Oral pills, Condoms and injectables. The main reason of discontinuation is side effects as it is in Bangladesh . The discontinuation of condoms and traditional methods like periodic abstinence is faced by accidental pregnancy (Nancy, J P et.al., 2000). A cross sectional study using Life table continuation rates for IUD, Condoms, Withdrawal, and Periodic abstinence carried out in Pakistan indicates 12 months continuation rate for female methods to be 64.6%, 76.9% for couple methods and 72.6% for all methods. The 12 months continuation rates for oral pills was 55.2%, injectables 47.8% and 80% for IUD users. There was no difference in

continuation rate during first year of use and the use thereafter as depicted by similar rates of annual continuation rates and 12 months Life table continuation rates. The older women with high parity and who have been married longer have longer continuation rates. The women who live in urban areas, educated women and women with higher economic status have higher continuation rates than rural women of lower socio-economic status. The reasons for discontinuation of modern methods have been identified as side effects, method switching, desired pregnancy and other personal reasons (Miller, P.C., et al 1997). Similar findings have been reported in a retrospective study of women's records in Alexandria (Egypt), which indicate significant predictors of discontinuation as side-effects, health concerns, and type of contraceptive method used (Mahdy and El-Zeiny, 1999). In rural settings of Bangladesh 36-month continuation rate is about 40 percent. One-third of the users discontinue use within the first six months, one-half within a year, and three-fourths within three years. IUCD users have the least and Condom users the highest discontinuation rate among all contraceptives. (Hossain, M.B and Phillips, J.F., 1996).

Younger women in their teens are more likely to stop using contraceptives in their teens and are more likely to experience an undesirable outcome in the form of either an unplanned pregnancy as compared to older women (Mahdy and El-Zeiny., 1999). Women with high-parity who adopt a method in order to limit rather than space future childbearing and who continue using contraceptive over time with a greater degree of commitment, are less likely to dropout (Hossain, M.B and Phillips, J.F (1996).

Geographical area, Socioeconomic and Cultural characteristics relating to women are potential factors affecting her decision to switch methods or to discontinue use. The

likelihood of women to discontinue contraception is determined to have a negative relationship with the family size, i.e, lesser the number of children more are the chances of women to dropout (Fiona and Ian, 1999). Odds ratios for contraceptive continuation is greater than 2.0 among women who do not want more children compared with women who want another child within two years in Morocco (Sian *et. al.* 1996).

Husband's consent has the most powerful effect on the probability of contraceptive use in developing countries. It has been reported that husband's disapproval led to a reduction in use by two third (Bongararts and Bruce, 1995), however these findings are contradictory to the one reported in National Fertility and Housing Survey (NFHS) of Bangladesh, which does not support husband's disapproval to directly influence contraceptive continuation. The survey reveals major reasons for discontinuing to be desire for a child or adverse side effects (Nancy J P.,*et. al.*, 2000)

Client's satisfaction is important for the client to decide to use and to continue using contraceptive. Along with quality, access strongly affects client's satisfaction, which is key to clients' decisions to use and to continue using contraceptive services, and is essential for long-term use of contraceptives. Better services are associated with greater contraceptive use, however quality of care is less important than standard socioeconomic variables in explaining difference in contraceptive behavior. When potentially confounding variables are controlled, the effect of quality on use declines (Barbara, et, al., 1996). In addition to access clinic hours, clinic location, fees and waiting time are important factors determining continuous use of contraceptives(Timothy *et. al.* 2000). The impact of outreach on continuity of contraceptive use in rural Bangladesh indicates that household outreach has pronounced net effect on the continuity of contraceptive use

and the magnitude of this effect increases with time. It means that sustained contraceptive use continues to benefit from home-based outreach even after ten years time. The importance of household visits have been proved by reduction in overall odds of discontinuation by 65 percent, if women are contacted at home at least once in a 90-day period. If the client receives higher standard of care from field workers s/he is significantly more likely to continue using contraceptives as compared to those who feel they receive poor care (Michael et. al. 1997). The principal reasons for discontinuation of use were side effects, travel by either partner, spousal disapproval, and desire for pregnancy. Clients who felt they did not receive adequate counseling abandoned contraceptive use more than those who did receive counseling, in a study conducted in 650 new contraceptive users in Niger and 570 in Gambia. Approximately 30% of new family planning clients discontinued contraceptive use within first eight months (Niki Cotten, 1989-1990)

The purpose of this study was to assess contraceptive dropout rate and various factors leading to dropouts in two rural communities of Peshawar.

## **METHODOLOGY**

Two hundred married women between 15-49 years of age were selected who were current users of modern contraceptives, in a cross-sectional study. The study was carried out of contraceptive users from 1<sup>st</sup> September 1999 to 30<sup>th</sup> Aug 2000 in two Union Councils of District Peshawar. Sampling frame was Family Welfare Centres and Village Based Family Planning Worker's record. Only those women were selected who were using IUCD, Injectable contraceptives or Oral Pills. Other modern contraceptives were excluded as condom users are difficult to trace out, and because of multiple sources from

where they can get the condoms. The use of condoms is also inconsistent there fore only contraceptives used by females were studied. Norplant services are negligible in NWFP Province.

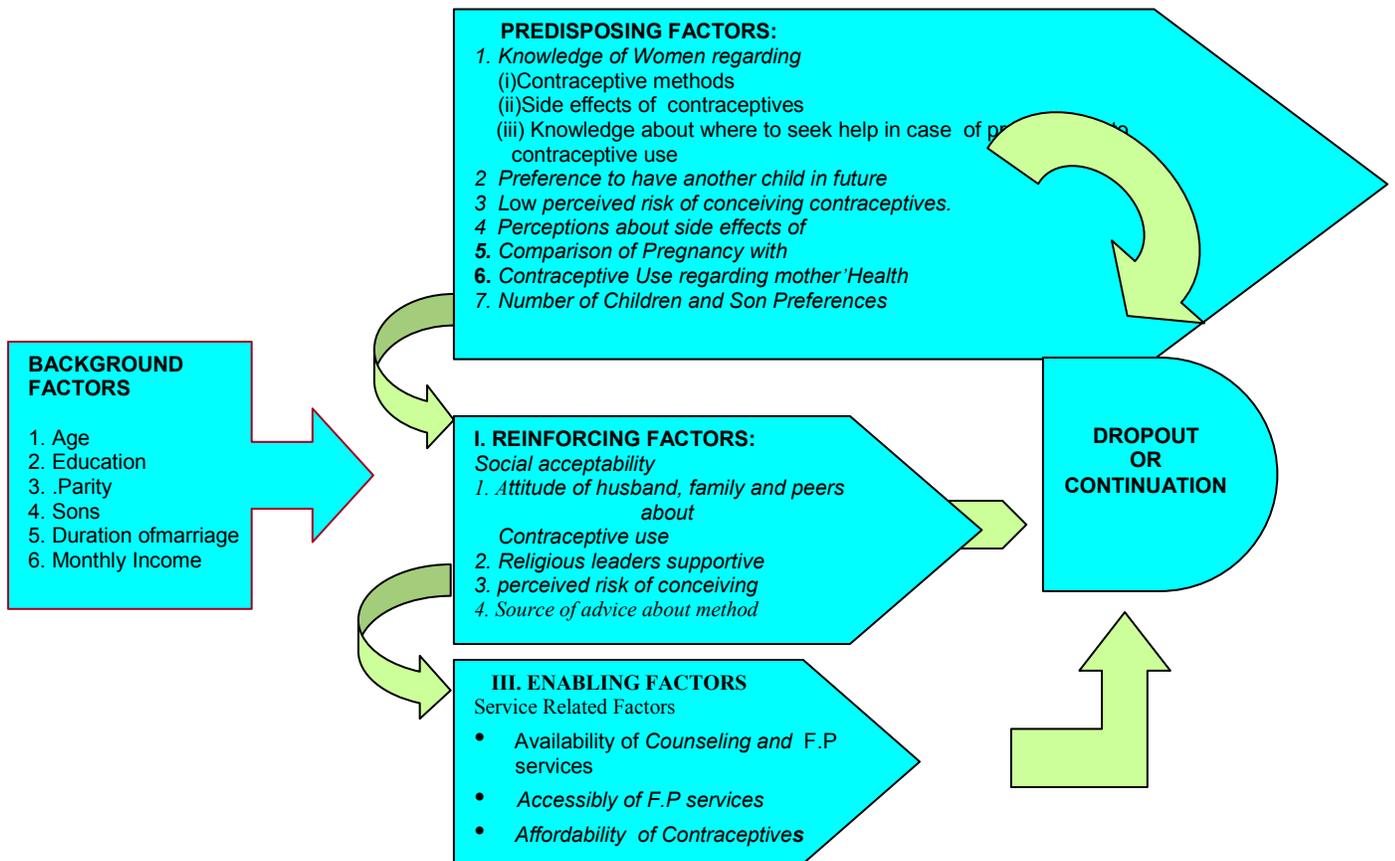
District Peshawar has total population of 2,019,118 with average Population Growth rate of 3.56%. Administratively District Peshawar has only one Tehsil, i.e; Tehsil Peshawar which consists of 42 union councils covering a total number of 338 villages. Two union councils (i) Pishtakhara Payan and (ii) Mathra were selected randomly for the study from rural areas.

The study sample of 200 women was selected by systematic random sampling procedure from Family Welfare Centre and Village Based Family Planning Workers record. who were current users of IUCD, Injectables contraceptives and oral pills from 1<sup>st</sup> September 1999 to 31<sup>st</sup> August 2000. The women who were excluded consisted of (i) menopausal women (ii) who were using modern methods but opted for contraceptive surgery, during study period. (iii) who were separated, divorced, widowed and did not remarry (iv) those who refused to participate in the study (v) and who migrated out. Sample size was calculated with 90% confidence interval and p value of 0.50 because the level of contraceptive dropouts is unknown in rural communities of NWFP. The level of precision was set at 0.06 with Z 1.645.

A specially designed structured questionnaire was used to interview and collect information form the clients. Different variables used to determine the association with the dropouts of contraceptive users (female) are explained in Table .1. The outcome variable was continued use or dropout of contraceptive users.

**Table.1 List of Variables and Indicators**

S.NO	VARIABLE	INDICATOR
1.	<b>DEMOGRAPHIC VARIABLE</b>	1) Age of husband in completed years.
		2) Age of Wife in completed Years
		2) Duration of marriage in years
		3) Number of living children,
		4) Number of Sons
		5) Number of daughters
2.	<b>SOCIO- CULTURAL</b>	1) Monthly income of husband 2) Monthly income of wife
		3 Educational level: husband
		4) Educational Level of Woman
		5) Husbands desire for another child
		6) Contraceptive use acceptable from religious point of view
3	<b>KNOWLEDGE &amp; PERCEPTIONS OF WOMEN ABOUT CONTRACEPTIVE</b>	1) Knowledge about Contraceptives
		2) Knowledge about the source to get Contraceptives
		3) Knowledge about where to get treatment of side effects
		4) %age of women experiencing side effects.
		5) %age of dropouts who have negative perceptions about method specific side effects
		6) Comparison of repeated pregnancy on mother or child health or other benefits as compared to use of contraceptives
		7) Duration of last contraceptive method used
		8) Reasons for discontinuation.
4	<b>SERVICE AVAILABILITY</b>	Time taken to reach the health care facility from home in minutes.
		Presence of Family Welfare Centre, Lady Health Worker, Village Based Family Planning Worker or other facility providing Family Planning services in the area.
		Availability of contraceptives of choice
		Frequency of Village Based Worker or Lady Health Worker during last 4 weeks
		Status of supply of Contraceptives by the Lady Health Worker or Village Based FP Worker to women.



**Fig-1 Conceptual Model**

The Analysis is based upon three hypotheses keeping in view the conceptual model.

The first Null hypotheses ( $H_0$ ) is based upon the assumption that: there is no difference in contraceptive dropouts due to socio-demographic factors among married women using contraceptives

*Non-directional alternative hypothesis ( $H_1$ ):* Contraceptive dropouts differs by socio-demographic factors

Dependant variable is Contraceptive use or dropout. The independent variables are age of women, age of husband, education of women, education of husband, number of living children, number of living sons, religious beliefs, monthly income of husband, and husbands desire to have another child

The second null hypothesis ( $H_0$ ) was based upon the assumption that: there is no difference in contraceptive dropouts due to level of knowledge and perceptions of women. The *directional alternative hypothesis ( $H_1$ )* was that contraceptive use differs by women's knowledge & perceptions about contraceptives.

The *dependent variable* was contraceptive use and dropout The *Independent Variables*: women knowledge about ideal number of children, ideal number of years of spacing, knowledge of women about benefits of family planning., knowledge about source to obtain contraceptives, perception about contraceptives, duration of contraceptive use in completed months, experiencing pain or having side effects of contraceptives.

To analyse the effect of family planning services in the area a third hypothesis *null hypotheses ( $H_0$ )* was based upon the assumption that: there is no difference in contraceptive use due to family planning services related factors. The *directional alternative hypothesis ( $H_1$ )* was, easy access to family planning services leads to lesser discontinuation

*The dependant variables used*: Status of contraceptive use of women: (use and dropout). *Independent Variable*: To analyse the effectiveness of professional advice about family planning or contraceptive method on contraceptive continuation two variable were included *Source of Advice about Contraceptive Method* adopted whether it was from the health workers, self choice, from family member advice or friends advice, and *Source of Advice about Family Planning* indicating same categories as for contraceptive method, Another variable included was availability of choice given to women to choose the contraceptive method.

To determine the role played by grass root level health care workers in contraceptive continuation, the variable of frequency of health care worker visit during last six months (1-2 times, 2-4 times and equal to or more than 5 times) and time passed since health care workers last visit were used as independent variables. The accessibility of health care facility was determined by a proxy variable used was 'the time taken by women to reach health care facility'. Affordability of Contraceptive in terms of price was also included to check the accessibility in monetary terms. Media plays a strong role in family planning programmes. To determine the effectiveness of media, a variable 'number of sources from where respondent gets information' (IPC, printed material, TV, radio others) was

included in service related factors.

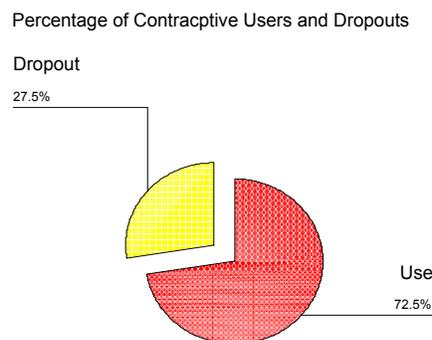
The variables were selected on the basis of their anticipated association with contraceptive use or non use.

Univariate analysis has been done in the form of frequency tables, mean value, Standard deviation and range. Bivariate analysis is done to identify the association of various variables using cross tabulation. Chi-square test has been applied to test the significance of association of variables with dropouts, Multivariate Analysis has been done using Binomial Logistic Regression. The variable of each model were tested for significance by using “Model chi square test “ or Likelihood ratio test  $-2LL$  to test significance of logit model. A well fitting model is significant at .05 or better. The factors, which were found significant, were entered in Wald Statistics (test) to test the significance of individual logistic regression coefficient for each independent variable.

## RESULTS

The study population comprised of married women between 15-49 years of age with mean age of 31.7 years (S.D  $\pm 5.40$ ). Minimum age of women was 22 years. Mean number of children of study population was 5 (SD  $\pm 1.95$ ). 80.5% of women and 50 % of their husbands were illiterate.

Amongst 200 women 72.5 % women were still using Contraceptives at the time of study, while 27.5% discontinued contraceptive use (Fig-2).



**FIG. 2 Percentage Contraceptive Users & Dropouts**

There was no significant association between contraceptive method used and frequency

of dropouts. (Table-3). Most commonly used method was injectable contraceptive, used by 54% of women. Maximum dropouts percentage (37.84%) was among oral pill users. Table.1.

**Table 1. Contraceptive Method Used**

Contraceptive Method	Users	Dropouts	Total	%age Dropout
IUCD	42	13	55	23.64
Injectable	80	28	108	25.93
O.Pills	23	14	37	37.84

The dropouts decrease with increase in duration of contraceptive use. 87% % of all the dropouts were observed during first 12 months and 48% were within 1-6 months (p.value=0.000) Table 2.

**Table-2**

**Duration of Contraceptive Use \* Contraceptive Status Crosstabulation**

		Contraceptive Status			
		Use	Dropout	Total	
Duration of Contraceptive Use	1-6 months	Count	26	24	50
		% within Contraceptive Status	17.9%	43.6%	25.0%
		% of Total	13.0%	12.0%	25.0%
	7-12 months	Count	70	24	94
		% within Contraceptive Status	48.3%	43.6%	47.0%
		% of Total	35.0%	12.0%	47.0%
	>12 months	Count	49 <sup>a</sup>	7	56
		% within Contraceptive Status	33.8%	12.7%	28.0%
		% of Total	24.5%	3.5%	28.0%
Total	Count	145	55	200	
	% within Contraceptive Status	100.0%	100.0%	100.0%	
	% of Total	72.5%	27.5%	100.0%	

a. Pearson Chi-Square p.value:.000

The main reason for dropout was ‘health concern’ followed by ‘worry about side effects’ and the third most common reply was ‘wanted more children’. (Table.3). Women gave multiple responses so the total did not add up to 55 (27.5%) dropouts.

**Table. 3. Reasons of Dropouts of Contraceptive Methods**

REASONS OF DROPOUTS	NUMBER OF RESPONSES	%CATEGORY
Health concern	25	45.5
Worry about side effects	22	40.0
Want more children	19	34.5
Husband opposed	9	16.4
Hard to get method	9	16.4
Other reasons	3	5.5
Other people opposed	2	3.6
Don't know	1	1.8
Cost too much	1	1.8
Religion	1	1.8
Difficult to get pregnant	1	1.8
Husband absent	1	1.8
Total responses	100	

Note: Total responses may not add to 55 because of multiple responses given by women.

### **SOCIODEMOGRAPHIC CHARACTERISTICS**

Women were categorized into various groups to analyze data for identifying association of various socio-demographic characteristics and contraceptive dropouts as indicated in Table-4. The chances of dropouts are higher if the women had less than 4 children (p.value 0.001). The chances of discontinuation are higher is women either she do not have son or only one son (p.value 0.000).

**Table 4. Socio-demographic Characteristics of Study Population & Dropouts**

CHARACTERISTICS VARIABLES	CONTRACEPTIVE STATUS		TOTAL N=200	p. value*
	Users (Row %)	Dropouts (Row %)		
<b>Number of Living Children</b>				0.001
1-3	35(55.6%)	28(44.4%)	63	
4-6	86 (82.7%)	18 (17.3%)	104	
>7	24(72.7%)	9 (27.3%)	33	
<b>Number of Sons</b>				0.000
0-1	26 (53.1%)	23 (46.9%)	49	
>2	119 (78.8%)	32 (21.2%)	151	
<b>Monthly Income of Husband</b>				0.005
<2999	82 (81.2%)	19 (18.8%)	101	
>3000	63 (63.6%)	36 (36.4%)	99	
<b>Age of Women</b>				0.107
22-29	49 (67.1%)	24 (32.9%)	73	
30-39	77(72.6%)	29 (27.4%)	106	
>40	19 (90.5%)	2 (9.5%)	21	
<b>Education of Women</b>				0.646
Illiterate	120 (71.9%)	47(28.1%)	167	
Literate	25 (75.8%)	8 (24.2%)	33	
<b>Education of Husband</b>				0.366
Illiterate	74 (69.8%)	32 (30.2%)	106	
Literate	71 (75.5%)	23 (24.5%)	94	
<b>Religious Beliefs</b>				0.001
Against Contraceptive use	107(67.3%)	52(32.7%)	159	
Not against Contraceptive Use	38 (92.7%)	3 (7.3%)	41	
<b>Husband's Desire to have another Child</b>				0.000
Want	36(55.4%)	29 (44.6%)	65	
Do Not Want	109(80.7%)	26 (19.3%)	135	

\* Chi square test: p value significant at 0.05

The contraceptive continuation is higher when monthly income of husband is less than Rupees 2999 per month as compared to higher income. Women religious beliefs against contraceptive use are associated with higher chances to dropout (p.value0.001). Women whose husbands desired to have another child were more likely to discontinue use (0.000). Age and education of women or her husband has were not significantly associated with contraceptive use or non use.

The significance of individual socio-demographic characteristics were tested for hypothesis-1 in Model-1(Table-5). Though the number of children and monthly income of husband were found significant at initial step of model significance, there effect was nullified in the final model. The only significant predictor was religious beliefs (p.value. 0.003) of women against contraceptive use. The odds of discontinuation increases 7 times if the respondents religious beliefs are against contraceptive use

**Table-5:**

**-2 Log Likelihood 200.642**

<b>Model-1 Socioeconomic &amp; Demographic effect on Contraceptive Use</b>				
		<b>Coefficient (B)</b>	<b>Sig.</b>	<b>Exp(B)</b>
Step 1 <sup>a</sup>	Monthly Income of Husband < 2999	-.691	.055	.501
	CHILDREN		.158	
	1-3 Children	.285	.650	1.330
	4-6 children	-.567	.246	.567
	Husband wants another child	.725	.129	2.065
	Religious Beliefs against	1.904	.003	6.711
	Constant	-2.418	.002	.089

<sup>a</sup>. Variable(s) entered on step 1: MIH11TT, CHILDREN, HW43, RB31T.

## **WOMEN KNOWLEDGE & PERCEPTIONS**

The proxy indicators examined about knowledge of women regarding family planning were Ideal number of children in the family, desired years of spacing between children, benefits of family Planning, and knowledge about source to get treatment or advice in case of side effects. None of these factors were associated with dropouts. 32% of the women response was 1-2 years while the remaining said more than 3 years. Majority (82%) of women's opined the ideal number of children to be more than three.

Women desire to have another child was associated higher chances of dropouts (p value. 0.000).

**Table-6 Women Perception and Experience their effect on Contraceptives Use**

CHARACTERISTICS	CONTRACEPTIVE STATUS		TOTAL	p. value*
VARIABLES	Users (Row %)	Dropouts (Row %)	Total n=200 (Column%)	
<b>Women Perceive contraceptive to be painful</b>				0.018
Yes	46 (62.5%)	27 (37.5%)	72(36%)	
No	100 (78.1%)	28 (21.9%)	128 (64%)	
<b>Ideal number of Years of Spacing</b>				
1-2	43 (67.2%)	21(32.8%)	64(32%)	0.218
>3	102 (75%)	34 (25%)	136(68%)	
<b>Experience Side effects</b>				0.000
Yes	55(55%)	45(45%)	100 (50%)	
No	90(90%)	10 (10%)	100(50%)	
<b>Duration of Contraceptive Method Used</b>				0.000
1-6 Months	26(52 %)	24(48%)	50(25%)	
7-12 Months	70(74 %)	24(25.5%)	94 (47%)	
≥13 Months	49(87.5%)	7(12.5%)	56 (28%)	
<b>Women Desire to have another Child</b>				0.000
Want	30 (52.6%)	27 (47.4%)	57(29%)	
Do Not Want	115 (80.4%)	28 (19.6%)	143(72%)	

\*p.value significant at 0.05

Women who had perceptions about contraceptives were more likely to dropouts than those without it (P.value=0. 018). Women actually experiencing pain or unpleasant side effects due to contraceptive use were associated with higher chances to dropout. (p.value 0.000, Table.6). The chances of discontinuation of contraceptive use are higher (48%) in the initial 1-6 months period. The chances to dropout decrease to 25.5% during 7-12

months period. 95.5% of respondents reported contraceptive use either beneficial for mother or child. Its significance could not be observed due to uniformity of response.

The significance of coefficient of each independent variables of Women Perceptions and Knowledge on contraceptive use were tested for second hypothesis in Model-2 The variables which were proved to be significant predictors were women experience of side effects and duration of contraceptive use.(Table-7)

**Table-7**  
-2 Log likelihood 182.825,

<b>MODEL-2 WOMEN KNOWLEDGE AND PERCEPTIONS ABOUT CONTRACEPTIVES</b>				
		Coefficient (B)	Sig.	Exp(B)
Step 1	<sup>a</sup>			
	Experience Side Effects	2.079	.000	7.998
	Method Painful	.145	.741	1.156
	BEMOTHER		.358	
	Beneficial for Mother's Health	-.857	.371	.424
	Beneficial for Child Health	.008	.995	1.008
	Duration Of Contraceptive Use		.001	
	1-6 Months	2.027	.000	7.588
	7-12 Months	.861	.092	2.366
	Constant	-2.558	.014	.077

a. Variable(s) entered on step 1: ES28, MP27TT, BEMOTHER, DU21TS.

The odds of discontinuing contraceptive use increases 8 times, if a woman experiences side effects. The likelihood of contraceptive dropouts decreases with increase in duration of contraceptive use. The odds of contraceptive dropout are eight times higher during first 1-6 months period and twice higher during 7-12 months than later.

### **SERVICE DELIVERY FACTORS**

For the purpose of analysis the time required to travel was dichotomized, into equal to or less than 30 minutes and 30+ minutes. The discontinuation increased if it took more than 30 minutes of women to reach the health care facility (p value 0.001), the longer the time taken the higher were the dropout. (Table-8). Information received by women through a

single source was also associated with higher chances of dropouts than when she had information through two or more sources (p.value 0.002)

The health care worker (Village Based Worker) was available in the community to 40 percent of women but only 8% of women have received contraceptive supply from them. It was despite more than 5 times visit during last six months of Village Based Worker in 63% of cases.

The source of advice to women about family planning method was from a non-professional person in 69% of cases. Higher percentage of dropouts was observed when the source of advice about family planning or contraceptive method was from a non-professional person. Though both of these factors had no significant association with contraceptive discontinuation (Table-8).

**Table.8. Service Delivery factors and Contraceptive Use**

<b>CHARACTERISTICS</b>	<b>CONTRACEPTIVE STATUS</b>		<b>TOTAL</b>	<b>p. value*</b>
<b>VARIABLES</b>	Users N(Row %)	Dropouts N(Row %)	N=200 (Column %)	

<b>Health Care worker in Village</b>				0.518
Yes	56 (70.0%)	24(30.%)	80 (40%)	
No	89(74.2%)	31(25.8%)	120(60%)	
<b>Contraceptive Supply from worker</b>				0.350
Yes	10(62.5%)	6 (37.5%)	16 (8%)	
No	135(73.4%)	49 (26.6%)	184(92%)	
<b>Lady Health worker or Village Based Worker Last Visited house of woman</b>				0.933
During Last 1-2 weeks	18(72%)	7(28%)	25(12.5%)	
Last 3- 4 weeks	36(74.5%)	13(25.5)	51(25.5%)	
> 5 weeks	89 (71.8%)	35(28.2%)	126(63%)	
<b>Distance Travelled from Home to the Health Care Facility</b>				0.001
< 30 minutes	124 (78%)	35 (22%)	159 979.5%)	
> 30 minutes	21(51.2%)	20(48.8%)	41(20.5%)	
<b>Source of Advice about family Planning</b>				0.673
Lady Health worker, Village Based FP Worker, Family Welfare Centre staff	43 (70.5%)	18(29.5%)	61(30.5%)	
Friends, Family members, Others	102 (73.4%)	37 (25.6%)	139 (69.5%)	
<b>Source of Advice about Contraceptive Method</b>				0.308
Friends, family members, self, others	108 (74.5%)	37 (25.5%)	145 (72.5%)	
Health Care worker	37 (67.3%)	18 (32.7%)	56 (28%)	
Information media				
One Media	32 (57.1%)	24 (42.9%)	56 (28%)	0.002
Two or More media	113 (78.5%)	31 (21.5%)	144 (72%)	

\*p.value significant at 0.05

The significance of coefficient of each individual service related factor was tested for

-2 Log Likelihood 214.087

### Model-3 Family Planning Services Effect on Contraceptive Use

		Coefficient	Sig.	Exp(B)
		(B)		
Step 1	<sup>a</sup>			
	Information Media(1)	1.138	.001	3.121
	Time taken to reach Health Care Facility < 30 min	-1.349	.000	.259
	Constant	-.318	.336	.728

a. Variable(s) entered on step 1: INFORMTS, DISTH41T.

third hypothesis in Model-3 . The significant predictors of contraceptive dropouts or continuation were; ‘time taken to reach health care facility’ and ‘single or multiple sources of information medium’. The odds of discontinuation decreased by 72.5% for the time taken to reach health care facility equal to less than 30 minutes. The longer it took to reach health care facility the higher was the likelihood to dropout The odds of contraceptive dropouts increase 3 times if only single source of information is available, to a women as compared to two or more sources.

## **DISCUSSION:**

Policies and programs to control population growth rate are adversely affected by number of factors. The predisposing factors associated with a woman’s behavior to dropout are multiple. There was no significant difference between early and late age dropouts in women because the minimum age of study population was 22 years. The age difference observed in past studies (Ann and Ann, 1998) was in adolescent women. The effect of education could not be ascertained due to prevailing low female literacy in the area. A number of studies have shown positive effect of education on continuation rate. A study carried out in Bangladesh revealed lower risk of discontinuation in women who were educated to ten grades (Fiona and Ian 1999). As of the women under discussion only 2% women were educated to 10 grades, was a very small number for proving association of dropouts therefore its effect could not be demonstrated. Number of children and family composition is vital issue in poor rural communities of NWFP. Having more number of sons is considered a pride and strength for the family. Though both these factors were not proved to be strong predictors in this study. The only strong

predictor of all socio-demographic characteristics was religious beliefs of women against contraceptive use.

Lack of proper information and services lead to negative perceptions. Women who think the method to be painful are more likely to discontinue contraceptive use, but it was a weak predictor of contraceptive discontinuation in the study. The discontinuation is higher in women who actually suffer from side effects. This is comparable to the results of past studies.

Household income in rural communities mainly is husband's income (only four women were employed), therefore monthly income of husband is a proxy for household income in these areas. Women having monthly income of their husband less than Rupees 2999 use contraceptives more consistently than those having more than Rupees 2999. These results are contradictory to the results of past studies. The past studies have indicated positive effect of middle and upper class status on contraceptive use (Govindasamy and Malhotra, 1996). Since this study was conducted in the poor rural settings the poorer of the poor behavior was different than middle or upper class people. Difference in results can be attributed to the current economic crunch in Pakistan, which has affected poor community in such a way that they are left with no other option than to limit the number of mouths they can feed, a Malthusian Trap. However this effect was nullified when all the socio-demographic variables significance was observed in the logit model

On the whole 27.5% of the clients discontinued contraceptives. 48% of the dropouts were observed during first six months and 87% during first year. Therefore first year of contraceptive use is the most critical period for a woman to decide about continuation/discontinuation of contraceptives. The discontinuation rate is much higher

than the past studies. The results of past study conducted indicate one-third of the users discontinue use within the first six months, one-half within a year, and three-fourths within three years (Hossain, M.B and Phillips, J.F., 1996).

The rural women stop using contraceptive either due to health concerns or experiencing side effects. Past studies support these findings, by indicating similar reasons for dropouts (Mahdy and El Zeiny, 1999, Nancy *et.al* 2000, Bongaarts and Bruce, 1995).

The positive effect of grass root workers (village Based Family Planning workers) could not be observed in this study. The significant predictors of the service related factors was accessibility in terms of time taken to reach health care facility. The lesser the time taken to reach HCF lesser would be the discontinuation. Information dissemination through single source is associated with higher chances of dropouts than two or more sources.

## **CONCLUSIONS**

All the significant factors associated with contraceptive dropouts have programmatic implications. It is concluded that contraceptive dropout is an important issue in family planning services program. The dropout of modern contraceptives (except condoms) is quite high in rural areas of district Peshawar. One of the reasons of discontinuation is misinformation of women about religious aspect of family planning. Religious beliefs against contraceptive use indicate area of focus for programmatic intervention. High earlier discontinuation during first year of contraceptive use indicates lack of follow up and improper counseling prior to contraceptive dispensation by the health worker. Accessibility of health care facility is a management problem that needs to be addressed at a higher level. Improper information dissemination in rural areas is also a management

issue. Unsatisfactory management of side effects indicates lack of capacity of health workers to counsel and to treat the side effects satisfactorily.

## **RECOMMENDATIONS**

Following recommendations are made based upon results of study, to encourage contraceptive continuation.

- Involvement of religious leaders in family planning programme.
- Establishment of Health Care Facilities closer to community
- Training of Health Care workers to improve their knowledge & skills to treat side effects and counselling techniques.
- Regular follow up of women during first year of contraceptive use, especially during
  - first six months.
- Use of multiple sources of information media suitable for poor rural settings.

The results of this study cannot be extrapolated to larger population because of smaller sample size.

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## **DEFINITIONS**

***DROPOUTS:*** Any married women between the age of 15-49 years who was using modern contraceptive (IUCD, Injectable, or O. Pills) from 1<sup>st</sup> September 1999 to 30<sup>th</sup> August 2000 and stops using that method without shifting to any other modern or traditional method. Also if she is in need of contraceptive protection and is at risk of having an unwanted pregnancy will be considered as a dropout.

***CONSISTENT USERS:*** Those women who after adopting a method for contraception continues to use either the same method or shifts to another modern method without gap, but does not abandon the use.

***INCONSISTENT USERS:*** Those women who after adopting any modern contraceptive stops using for some period and after some time readopts the same or any other method.

***NON USERS:*** (a) Those who discontinue use because they have no current need for contraception due either for desire to have pregnancy or are pregnant due to contraceptive failure,(b) Women who are having infrequent intercourse, among these are women who are having separation from their husband ,or their husbands are away , and those who have reached menopause and consider them selves infertile.(Fiona & Ian 1999).