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CONTRACEPTIVE USE AND UNMET FAMILY PLANNING NEEDS IN DERA GHAZI KHAN

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Abstract

This study, conducted at AIMS Muzaffarabad (April–September 2024), compared 12 mg and 15 mg doses of bupivacaine for spinal anesthesia in elective cesarean sections. Maternal hypotension occurred in 16% of patients with 12 mg and 24% with 15 mg. Other complications like bradycardia, respiratory depression, nausea/vomiting, and patient discomfort were also assessed. The study concludes that 12 mg bupivacaine results in less hypotension, potentially reducing the need for interventions such as vasopressors or fluid overload.

INTRODUCTION

The family planning (FP) services are described as "enlightening, immense and broad social or medical activities that enable people, woman of reproductive ages (15-49 years), to decided freely the number and spacing between their children and to choose methods through which this could be attained" [1]. Family planning could involve thoughtfulness of number of offspring a couple desire to have as well as the option to have no offspring and age at what they desire to have children [2].

The United States CDC (Center for Disease Control) published a recommendation in 2006, encouraging females and males to develop reproductive life schedule to assist them in preventing unplanned pregnancies and to bring improvement in women health and to decrease adverse outcomes of pregnancy [3].

Family planning can assist ensure that adequate resources are accessible and mother in addition to health of child remain satisfactory [4].

Family planning novel techniques comprise birth control, FP programs and ARTs (assisted reproductive technologies). Regarding utilization of contraceptive modern techniques, The UNFPA (United Nation Population Fund) describes that, “Contraceptives avert unplanned pregnancies, decrease abortions quantity and reduce rate of mortality and disability associated with pregnancy and childbirth complications” [5].

The prevalence rate of contraceptive is described by world health organization is “The female percentage who are presently utilizing or whose sexual partners presently using minimum one contraceptive methods irrespective of method utilized.”

“By definition it can be said; unmet need for FP points out towards those childbearing age group females who desire to postpone pregnancy or do not desire to become pregnant but not capable to acquire any current contraceptive technique or method” [6].

The modern contraceptives unmet need in Pakistan is much high. Among married females, 17% have yet unmet need about family planning. In Pakistan, 66% potential FP demand is being met.

Among cases in which couples have no current desire for children, FP programs assist a lot. Among developing states, 214 million female of childbearing age who have no desire to get pregnant are not utilizing any novel contraceptive method [7]. It could be due to limited option regarding contraceptive methods, inadequate access to the contraception, religious issue, cultural issues, fear of side effects, lack of better quality services, provider or user bias and gender-based barricades. In Africa, almost 24.2% female of childbearing age are unable to get access to novel contraception while 10-11 percent unmet need is recorded in Latin America, Caribbean and Asia. Fulfilling contraceptive unmet need could avoid 104,000 maternal mortalities each year, almost 29 percent decrease of females dying due to unsafe abortions or postpartum hemorrhages [8].

"The Pakistani government desires to make stability in population (attain 0 growth rate) till the year 2020. And increasing the utilization of FP methods is an important pillar of public program" [9]. The current PDHS carried out by Macro International along with collaboration of NIPS (National Institute of Population Studies) registered FP use in the country to be thirty percent. However, this demonstrates a rise from twelve percent during 1990-91 (PDHS 1990-91) and 8 percent of these are consumers of conventional methods [10,13,14]. The contraceptive unmet need has remained very high at about 25 percent of all wedded females childbearing age [11,12,13]. At present government of Pakistan contributes almost one-third of entire family planning services while private sector as well as Nongovernmental organizations (NGOs) the rest [10].

Methods and Materials

A cross sectional study was conducted in catchment area of Tehsil Dera Ghazi Khan (District D.G. Khan) involving help of 40 lady health workers selected from Tehsil, D.G. Khan. These lady health workers provide primary health care awareness, counselling and reproductive health services to the women of their catchment area at women's door step. Home visiting and registration of pregnant women is done by these Lady health workers. They maintain proper records of women of child bearing age during and after their pregnancies. Health education, nutrition care of mother and child, growth monitoring and family planning services are important part of their job. Proper record of families, deaths and births, immunization, antenatal, post-natal is maintained by all Lady health workers of their catchment areas.

Target population was married women in child bearing age (15-49 yrs.) who are fecund and sexually active randomly selected from computer generated number from catchment area of randomly selected lady health workers of her own catchment area of Tehsil, D.G.Khan. Women with early menopause, have history of hysterectomy, women not living with their husband, widows, divorced, and separated single women were excluded from the study group. Multistage sampling technique was used.

The duration of study was two months after approval of synopsis.

The sample size was calculated through WHO Sample Size Calculator. The value of "P" (Anticipated population proportion) was derived from PDHS 2016-17.

Sample size is calculated to be 345 (n=345), which is rounded up to 800 for ease of calculation. The following formula was used to calculate population size.

$n = z^2\ 1 - \alpha\ P\ (1-P) / d^2$ 40 Lady health workers (LHW) were randomly selected by using Random Number Tables. All selected LHWs were requested to furnish a list of married women of child bearing age (15 to 49 years) who are fecund and sexually active in their catchment area. Random Number Tables were used to select 20 women for the study from each one Lady health workers out of 40 Lady health workers. A questionnaire was used to ask different questions to gather data. Proper consent was obtained.

Data was analyzed using SPSS version 23.0. Frequency tables were generated for all possible variables. Means and other parameters of central tendency was calculated. For continuous data Chi-Square was applied to find out association between categorical variables. Means were compared using student's t test or ANOVA where applicable. Bar and pie diagrams were used to present categorical data whereas Line, Histogram, Scatter plot and Box plot were used for continuous data. Scatter plot and Box plot were used for continuous data. Odds Ratio along with 95% Cl was calculated for various variables followed by Logistic Regression to adjust the values.

Results

The results of this study showed that among 800 married women, 192 (24.0%) were up to 25 years old, 425 (53.1%) were 26-35 years old and 183 (22.9%) were more than 35 years old. The mean age of married women was 30.75 ± 6.60 years.

Table 1: Frequency of contraceptive use among study participants.

Are you using any contraceptive measures n = 800	**Frequency**	**Percentage** (%)
Yes	571	71.4
No	229	28.6
Total	800	100.0
For which reason you are using contraceptive method (n = 571)		
Limiting	171	29.9
Spacing	400	70.1
Total	571	100.0
(If not using any FP method) Are you pregnant or postpartum amennorhic? (n = 229)		
Yes	81	35.4
No	148	64.6
Total	229	100.0
This is a planned pregnancy (n = 81)		
Yes	56	69.1
No	8	9.9
LA (Lactational *amenorrhoea)*	11	13.6
PPA (Post-partum amenorrhea)	6	7.4
Total	81	100.0

Table2: Comparison of socio-demographic factors associated with contraceptive prevalence rate

Factors associated with CPR	**Category**	**Use any contraceptive** No n (%)	Yes n (%)	**p Value**
Wife education	**Illiterate**	101 (30.1%)	235 (69.9%)	.445
	Literate	128 (27.6%)	336 (72.4%)	
Husband education	**Illiterate**	82 (31.2%)	181 (68.8%)	.263
	Literate	147 (27.4%)	390 (72.6%)	
Wife occupation	**House wife**	219 (29.1%)	533 (70.9%)	.218
	Others	10 (20.8%)	38 (79.2%)	
Source of information	**Health workers**	176 (23.9%)	559 (76.1%)	.000*
	Others	53 (81.5%)	12 (18.5%)	
Restriction for FP use	**Husband's restriction**	25 (86.2%)	4 (13.8%)	.000*
	Other factors	204 (26.5%)	567 (73.5%)	
Husband Decision for FP	**Husband**	161 (32.5%)	334 (67.5%)	.002*
	Others	68 (22.3%)	237 (77.7%)	
Wife decision for FP	**Wife**	5 (14.3%)	30 (85.7%)	.055
	Others	224 (29.3%)	541 (70.7%)	
Unmet need	**Met**	106 (15.7%)	571 (84.3%)	.000*
	Unmet	123 (100.0%)	0 (0.0%)	
Access to media	**No**	76 (38.2%)	123 (61.8%)	.001*
	Yes	153 (25.5%)	448 (74.5%)	

See/hear any ad on media	No	61 (33.3%)	122 (66.7%)	.109
	Yes	168 (27.2%)	449 (72.8%)	
Ever visited FP center	No	109 (64.1%)	59 (35.9%)	.000*
	Yes	120 (19.0%)	512 (81.0%)	
Ever counselled by FP worker	No	73 (82.0%)	16 (18.0%)	.000*
	Yes	156 (21.9%)	555 (78.1%)	
Know side effects of FP	No	115 (44.7%)	142 (55.3%)	.000*
	Yes	114 (21.0%)	429 (79.0%)	
Discuss FP with husband	No	58 (69.9%)	25 (30.1%)	.000*
	Yes	170 (23.7%)	546 (76.3%)	
Family type	Joint	142 (39.2%)	220 (60.8%)	.000*
	Nuclear	87 (19.9%)	351 (80.1%)	

Table 3: Comparison of reproductive factors associated with contraceptive prevalence rate

Factors associated with CPR	Category	Use any contraceptive		p Value
		No	Yes	
		n (%)	n (%)	
If not using FP, are you pregnant n=229	No	147 (99.3%)	1 (0.7%)	.550
	Yes	81 (100%)	0	
If yes is it planned pregnancy n=82	LA	11		
	No	8		
	PPA	7		
	Yes	56		
Do you want to get pregnant n=573	After 2 years	48 (24.9%)	145 (75.1%)	.000*
	Don't know	53 (39.0%)	83 (61.0%)	
	Not at all	23 (19.8%)	93 (80.2%)	
	Within 2 years	52 (40.6%)	76 (59.4%)	
Gender preference	Both	133 (45.7%)	158 (54.3%)	.005*
	Boy	54 (33.8%)	106 (66.3%)	
	Girl	11 (25.0%)	33 (75.0%)	
Need more children	No	29 (11.3%)	228 (88.7%)	.000*
	Yes	200 (36.8%)	343 (63.2%)	
Does husband need more children	No	32 (9.9%)	292 (90.1%)	.000*
	Yes	197 (41.4%)	279 (58.6%)	
Sex of youngest child	Boy	109 (23.7%)	350 (76.3%)	.548
	Girl	76 (25.7%)	220 (74.3%)	
HO neonatal mortality	Nil	213 (28.6%)	532 (71.4%)	.937
	Yes	16 (29.1%)	39 (70.9%)	
Inter pregnancy interval in last two children	No	117 (42.5%)	158 (57.5%)	.000*
	Yes	112 (21.3%)	413 (78.7%)	
Desired inter pregnancy interval	No	70 (33.8%)	137 (66.2%)	.055
	Yes	159 (26.8%)	434 (73.2%)	
Reason for contraceptive use	Limiting	1 (0.6%)	171 (99.4%)	.301
	Spacing	0 (0.0%)	400 (100%)	
Use of FP in past	No	172 (59.5%)	117 (40.5%)	.000*
	Yes	57 (11.2%)	454 (88.8%)	
Know about FP	No	54 (94.7%)	3 (5.3%)	.000*
	Yes	175 (23.6%)	568 (76.4%)	

Table 4: Comparison of socio-demographic, and family factors associated with unmet need.
p Value < 0.05 = significant*

Factors associated with unmet need	Category	Unmet needs		p Value
		Met n (%)	Unmet n (%)	
Wife education	Illiterate	281 (83.6%)	55 (16.4%)	.507
	Literate	396 (85.3%)	68 (14.7%)	
Husband education	Illiterate	225 (85.6%)	38 (14.4%)	.611
	Literate	452 (84.2%)	85 (15.8%)	
Wife occupation	House wife	635 (84.4%)	117 (15.6%)	.569
	Others	42 (87.5%)	6 (12.5%)	
Family type	Joint	283 (78.2%)	79 (21.8%)	.000
	Nuclear	394 (90.0%)	44 (10.0%)	
Restrictions for FP use	Husband restriction	12 (41.4%)	17 (58.6%)	.000
	Other factors	665 (86.3%)	106 (13.7%)	
Source of information	Health workers	647 (88.0%)	88 (12.0%)	.000
	Others	30 (46.2%)	35 (53.8%)	
Gender preference	Both	234 (80.4%)	57 (19.6%)	.824
	Boy	128 (80.0%)	32 (20.0%)	
	Girl	37 (84.1%)	7 (15.9%)	
Ever counselled by FP workers	NO	45 (50.6%)	44 (49.4%)	.000
	Yes	632 (88.9%)	79 (11.1%)	
Ever visited /FP center	No	113 (67.3%)	55 (32.7%)	.000
	Yes	564 (89.2%)	68 (10.8%)	
FP side effects	No	204 (79.4%)	53 (20.6%)	.005
	Yes	473 (87.1%)	70 (12.9%)	
Need more children	No	233 (90.7%)	24 (9.3%)	.001
	Yes	444 (81.8%)	99 (18.2%)	
Does husband need more children	No	296 (91.4%)	28 (8.6%)	.000
	Yes	381 (80.0%)	95 (20.0%)	
Sex of youngest child	Boy	391 (85.2%)	68 (14.8%)	.985
	Girl	252 (85.1%)	44 (14.9%)	
HO neonatal mortality	Nil	627 (84.2%)	118 (15.8%)	.181
	Yes	50 (90.9%)	5 (9.1%)	

Table 5: Comparison of reproductive factors associated with unmet need

Factors associated with unmet need	Category	Unmet need		p Value
		Met n (%)	Unmet n (%)	
Using any contraceptive	No	106 (46.3%)	123 (53.7%)	.000
	Yes	571 (100.0%)	0 (0.0%)	
Know about FP	No	24 (42.1%)	33 (57.9%)	.000
	Yes	653 (87.9%)	90 (12.1%)	
Use of FP in past	No	193 (66.8%)	96 (33.2%)	.000
	Yes	484 (94.7%)	27 (5.3%)	
Reason for contraceptive use	Limiting	171 (99.4%)	1 (.6%)	.301
	Spacing	400 (100%)	0 (0%)	

Inter pregnancy interval in last two children	**No**	218 (79.3%)	57 (20.7%)	.002
	Yes	459 (87.4%)	66 (12.6%)	
Desired inter pregnancy interval	**No**	175 (84.5%)	32 (15.5%)	.969
	Yes	502 (84.7%)	91 (15.3%)	
If not using FP, are you pregnant n=229	**No**	50	98	
	Yes	57	24	
Do you want to get pregnant n=573	**After 2 years**	147 (76.2%)	46 (23.8%)	.000
	Don't know	87 (64%)	49 (36%)	
	Not at all	95 (98.4%)	21 (18.1%)	
	Within 2 years	126 (98.4%)	2 (1.6%)	
Discuss FP with husband	**No**	56 (76.5%)	27 (32.5%)	.000
	Yes	621 (86.7%)	95 (13.3%)	
Wife decides FP	**Wife**	31 (88.6%)	4 (11.4%)	.508
	Others	646 (84.4%)	119 (15.4%)	
Husband decides FP	**Husband**	411 (83.0%)	84 (17%)	.111
	Others	266 (87.2%)	39 (12.8%)	
FP in Religion	**Right**	643 (86.9%)	97 (13.1%)	.000
	Wrong	29 (58%)	21 (42%)	

Discussion

This study was planned to know the contraceptive prevalence rate and unmet need requirement in vicinity of Tehsil Dera Ghazi Khan. Specifically Dera Ghazi Khan. Though family planning services are being run properly by health department and population welfare department as in other areas of Punjab. Total of 800 sample size probed and targeted for this survey with the help of 40 lady health workers in the areas. Lady health workers were selected through randomly computer generated numbers working in health department.

According to latest survey of Pakistan Demographic Health Survey (PDHS) 2017-18, contraceptive prevalence rate (CPR) of Pakistan is 34% and unmet need rate is 17.3% while in this study we have found CPR 71.4% and unmet need 15.4%. Out of 800 study women, 571 (71.4%) are using contraception while 229 (28.6%) are not using these services.

Among the users population we have found that 400 (70.1%) are using contraception for spacing reasons and other 171 (29.9%) for limiting their next pregnancy. Study reveals that these 571 women have 100.0% met their needs while out of 229 non-users family planning methods, 106 (46.3%) have met their needs. However 123 (53.7%) have unmet need requirements.

According to PDHS survey 2017-18, total unmet need calculated is 17.3% while specifically in Punjab its 15.8%. As Tehsil Dera Ghazi Khan is in Punjab so we remain very near to this reading with results of 15.4% unmet need here.

In comparison to PDHS survey 2017-18 results we found that 26% women need another child within two years. 16% want to have after two years, 35% need no more children and 9% women are already sterilized. Also reveal that 16% population is using contraception for spacing and 44% for limiting. While 9% study population have not decided about to have or have not child [15,16].

In past studies, we also look at the results of 41% contraceptive prevalence rate and 19.3% unmet need rate in Lahore, Pakistan. A study done in Rawalpindi, Pakistan showed contraceptive prevalence rate of 56% and unmet need 17.76%. Another study also in Rawalpindi, Pakistan showed 58.7% contraceptive prevalence rate and 32% unmet need. In Nigeria CPR 80.4% and unmet need 11.4% found in a study done there. In Iran, a study shows CPR 85.6% with unmet need 19.5%. In another study by Noreen & Associates, CPR calculated was 57%. A study carried out by Mehmood and coworkers reveal 56% contraceptive prevalence rate and 17.6% unmet need rate.

Our study was done to determine contraceptive prevalence rate and unmet regarding family planning in Tehsil Dera Ghazi Khan. Its determinants and reasons among fecund and sexually active women.

Also to find out factors associated with unmet need for family planning.

Conclusion

It was concluded that contraceptive prevalence rate in Tehsil Dera Ghazi khan is high compared to all Pakistan contraceptive prevalence rate by Pakistan Demographic and Health Survey results of 2017-18 which is 34%. While unmet need calculated is 15.4%, very near to total Pakistan unmet need rate of 17.3% and Punjab 15.8%. Associated socio demographic, family, children and spouse factors have very significant values in relation to Contraceptive prevalence rate and unmet need requirements. Uplifting of socio economic conditions, education, counselling, and media role can enhance outcomes of family planning services in this area.

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