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Research Article

**INEFFECTIVE USE OF FAMILY PLANNING METHODS  
AMONG ELIGIBLE COUPLES AND ITS EFFECT ON  
MATERNAL AND CHILD HEALTH****<sup>1</sup>Dr. Faiza Akram, <sup>2</sup>Dr Muhammad Nabeel Akbar Chaudary,  
<sup>3</sup>Dr. Muhmmad Kamran Ijaz**<sup>1</sup>Abbotabad International Medical College, Pakistan<sup>2</sup>Medical Officer, DHQ Khushab<sup>3</sup>District Headquarter Hospital Khushab**Abstract:**

**Objective:** The unplanned pregnancies are hazardous to both mother and child health. The ratio of unplanned pregnancies is quite high across the globe. The study aims to determine the effects of unplanned pregnancies on maternal and neonatal health.

**Methods:** The study follows descriptive, case control study design. 900 pregnant ladies were included, the age group was between 15 to 45 years. The study duration was from 2013 to 2015. Fifty percent of enrolled females had planned pregnancies while 50% had unplanned pregnancies, control group and case group, respectively. The data collection was done by researchers themselves, on a pre-designed questionnaire. The biodata, maternal and child health details were recorded on this questionnaire. Analysis was done through SPSS 16 version.

**Results:** 29.4±7 years was mean age. Mostly planned pregnancies were between 20 to 30 years age group. The enrolled females mostly belonged to 20 to 30 years age group. Neonatal intensive care unit admissions OR 2.40 with p-value < 0.001, low birth weight OR 1.25. p value <0.001. Apgar at 5 minutes was less than seven OR 2.07, p value 0.032, pre-term labor OR 2.21, P value <0.001, were more frequently seen in unplanned pregnancies than in planned pregnancies.

**Conclusion:** It was observed that complications like, low birth weight, poor Apgar at 5 minutes after birth, neonatal intensive care unit admission rate and preterm labor were more frequently associated with unplanned pregnancies than in planned one.

**Keywords:** Unplanned, planned, pregnancy, mother, child, health.

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**INTRODUCTION:**

Unplanned pregnancies are quite common across the globe both in married and unmarried females in non Muslim countries. It is necessary to spread awareness to general public about the outcomes and adverse effects associated with unintended pregnancies in order to improve future health of both mother and child [1, 2]. The estimation of burden and complications associated with unintended births lead to achieve pregnancy goals by the couples, if proper counseling is done [2]. The abortions rate can also be reduced by regular awareness sessions and problem estimation.

A healthy woman at the time of conception can give birth to healthy child and can be prevented from the pregnancy associated complications. The planned pregnancies are preceded by lifestyle and nutritional adoptions which help in achieving optimal health level before conception [3,4]. Both micronutrients and macronutrients deficiencies if treated well in time before conception can help reduce adverse events associated with neonatal and maternal health.

Unplanned pregnancies are associated with mental stress as well. Particularly, if pregnancy occurs in unmarried females, then attempts to undergo abortions is also hazardous to the female. Proper birth spacing and use of birth control measures should be promoted among the eligible couples [5].

**MATERIALS AND METHODS:**

This case control study involved 900 pregnant females, 450 females were those with planned pregnancy while 450 had unplanned pregnancy, control and case groups respectively. Certain complication were compared and looked for in both groups. Comparison was done to know which group had higher rate of complications. Study was conducted during 2013 to 2015.

Females in age group 15 to 45 years and viable term pregnancy were included. Those with history of

preterm labor, uterine anomaly, congenital malformation, threatened abortion, multiple pregnancies, maternal illness like, AIDS, TB, hepatitis were excluded. The data collection was done on a questionnaire designed by researchers and accepted by ethical review board. The information regarding biodata, neonatal and maternal history and examination was recorded on the questionnaire after taking informed written consent.

Data analysis was done on SPSS 16. Descriptive variables were described in form of mean and SD of mean. Logistic regression in order to adjust confounding variables like age, gestational age, parity was also used. P value < 0.05 was marked statistically significant.

**RESULTS:**

The participants had mean age group  $29.4 \pm 7.1$  years. Most of them had age between 20 to 30 years. Biodata of participants is mentioned in table 1. Planned pregnancies were from 20 to 30 years age group. In 20 to 30 years age group, odds ratio of planned pregnancies was higher 1.29. In lower socioeconomic class the odds ratio the odds ratio was higher than in middle socioeconomic class, as shown by regression analysis results. Odds ratio 1.14, C.I 95%, 2.35 to .56 vs odds ratio 1.10. The planned pregnancies group mostly used natural contraceptive methods 117 females i.e. 26%. Table 2 depicts the methods distribution for unplanned pregnancies. Table 3 shows factors and results related to mother. Pre-eclampsia was considered a risk to raise unplanned pregnancy rate, OR 1.23. Neonatal intensive care unit admissions OR 2.40 with p-value < 0.001, low birth weight OR 1.25. p value < 0.001. Apgar at 5 minutes was less than seven OR 2.07, p value 0.032, pre-term labor OR 2.21, P value < 0.001, were more frequently seen in unplanned pregnancies than in planned pregnancies [table 5].

Table 1: Demographic details.

Variables	Odds ratio	p-value	Planned pregnancy		Unplanned pregnancy	
			Percentage	Frequency	Percentage	Frequency
Age in years						
Less than 20	.36 (.7-.17)	.009	4.2	19	12	54
20 to 30	1.29 (2.2-.74)	.396	52.4	236	46.8	211
30 to 40	1.26 (2.2-.71)	.418	37.5	169	34.4	155
More than 40	Reference	-	5.7	26	6.66	30
Education						
Uneducated	2.50 (3.51-1.61)	.045	70.6	268	84	328
Educated	Reference	-	29.3	132	16	72
Socioeconomic status						
Lower	1.14 (2.45-.78)	.650	46.6	210	50.6	228
Middle	1.10 (2.35-.56)	.301	34.4	150	32.2	160
Upper	Reference	-	20	90	13.7	62
Mean age in years±SD	-	.003	28.8±6.7		29.9±6.4	
Mean weight in kg±SD	-	.980	55.5±5.7		56.4±6.7	
Mean weight gain in kg ±SD	-	.756	9.1±2.4		9.5±1.6	

Table 2: list of contraceptive methods opted by both groups.

Contraception method	Odds ratio	P value	Control group		Case group	
			Percentage	Frequency	Percentage	Frequency
Natural	2.37 (3.85-1.24)	<.001	16.6	75	30.6	138
Condom	0.37 (1.45-0.09)	<.001	26	117	21.3	96
Pill	1.58 (2.34-.34)	<.01	19.3	87	28.2	127
Injection	.148 (1.11-0.07)	<.0001	21.1	98	4	18
IUD	.650 (1.2-.05)	<.05	7.55	34	2.8	13
Tubal ligation	.340 (1.1-.06)	.183	0	0	0.8	4
Combined methods	Reference	.253	8.66	39	12	54

Table 3: Factors and effects related to mother in both groups.

Variables	Odds ratio	P value	Control group %	Control group F	Case group %	Case group F
Parity						
1	.84 (1.3-.50)	.05	8	40	7	35
2	.91 (1.21-.68)	.04	58.8	264	57	259
>3	Reference	-	32.4	146	34.4	156
Past history of unplanned pregnancy						
Nil	.12 (.25-.05)	.000	91.5	412	70.6	318
1	.41 (.97-.17)	.043	6.6	30	18	81
>2	Reference	-	1.7	8	11.3	51
Miscarriages						
0	.16 (.33-.07)	.000	93.7	422	82.6	372
1	.29 (.72-.11)	.008	4.2	19	6.7	30

>2	Reference	-	2	9	10.7	48
GDM	.98 (.186-.156)	.065	14.4	65	17.3	78
Hypertension	.865 (1.65-.09)	.061	16.2	73	18.8	85
Preeclampsia	1.23 (2.1-.55)	.035	18.6	84	20.4	92

Table 4: unplanned pregnancy complication in neonates.

Variables	Odds ratio	P value	Control group		Case group	
			Percentage	Frequency	Percentage	Frequency
Admission						
Beside mother	.32 (.6-.17)	.02	83.1	374	80.2	361
1-3 days	.25 (.5-.12)	.04	13.5	61	10	45
>3 days	Reference		3.3	15	9.7	44
Delivery						
c-section	.8 (1.08-.6)	.14	75.1	338	71	319
SVD	Reference		24.9	112	29	131
Preterm labor						
Yes	2.2 (4.4-.78)	.000	16.6	75	27.5	124
No	Reference		83.3	375	72.4	326
Apgar at 1 minute						
<7	2.07 (3.1-.70)	.05	3.8	17	5.5	25
>7	References	-	96.2	433	94	425
Apgar at 5 minutes						
<7	2.07 (3.18-.07)	.032	2.8	9	8.8	18
>7	References	-	97.3	441	91	410
ICU admission	2.4 (3.7-1.3)	.000	8	36	14.2	64
Sepsis	1.64 (2.3-.68)	.160	12.4	56	16	72
RDS	1.76 (2.43-.73)	.053	7.1	32	9.7	44
LBW	1.25 (3.2-.45)	.000	6.2	28	14.8	67

Table5: adjusted model for unplanned pregnancy risk.

Variables	Adjusted RR 95% CI	P value
Weight<2.5 kg	.50 (.29-.88)	.016
Apgar at 5 minutes <7	.32 (.56-.19)	<.001
Hospital admission >3 days	1.5 (3.3-.9)	.004
ICU	.12 (.24-.07)	<.001
Preterm labor	1.34 (3.2-.54)	.002
Less pregnancy age	1.25 (3.25-.45)	.040

**DISCUSSION:**

There is strong association between proper child spacing, pre-conception maternal health with the maternal and pregnancy outcome. A malnourished mother gives birth to low birth weight babies [6]. The study is conducted in order to put emphasis on the need to opt proper spacing methods by the eligible

couples, so that maternal death can be reduced and child health can be improved. [7]

In Pakistan, the desire to have a male child leads to grand multiparity. People in rural areas have certain myths associated with the use of contraception methods. Big family size, poor monthly income and

lacks of education lead to provision of less adequate food to females and as a result it affects neonatal health as well [8]. In Pakistan, the male dominant society gives rise to malnourished females and neglected females health status, before, during and after pregnancies. As a result the neonates born to such females are low birth weight, ICU admission rate and diseases during neonatal life are more. [9] Couples who opt suitable contraception methods and have proper birth spacing have healthy family. The trend of unplanned pregnancies in rural areas is higher than in urban areas, due to awareness and lack of education [10]. There is a need to provide family planning counseling by establishing proper family planning centers in rural areas and to train the staff regularly so that they can interact with public and inform them about the adverse health outcomes associated with unplanned births.

### CONCLUSION:

It was observed that complications like, low birth weight, poor Apgar at 5 minutes after birth, neonatal intensive care unit admission rate and preterm labor were more frequently associated with unplanned pregnancies than in planned one.

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