INTRODUCTION
Family planning (FP) is the most economical public health intervention with a potential to reduce maternal and child morbidity and mortality. Rapid population growth hampers in the health, education, and employment development. Many nations have improved their economic growth and development by providing family planning to help women avoid unplanned pregnancies. Being one of the poorest and sixth populous country in the world, Pakistan with other developing countries contributes 50% of the maternal deaths across the world. It is expected that Pakistan’s population will double by 2050. In spite of a long history of FP programs, the growth rate of population is high at 2.1%, with a contraceptive prevalence rate of 35%, unmet need at 20% and the total fertility rate at 3.8. With 35% CPR (according to Pakistan demographic health survey (PDHS) 2013), modern methods contributes only 26% and 20% of patients with an unmet need for family planning. The unintended pregnancies’ prevalence in Pakistan is reported around 38-46%. PPFP is the “Initiation of family planning services within the first 12 months following childbirth to prevent

BARRIERS AND MISSED OPPORTUNITIES TOWARDS IMMEDIATE AND EARLY POST-PARTUM FAMILY PLANNING METHODS IN PAKISTAN.

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ABSTRACT… Objectives: To compare the coverage of immediate and early postpartum family planning to extended postpartum family planning. To analyze the socio demographic barriers for adopting immediate and early postpartum family planning methods. To identify the missed opportunities for immediate and early postpartum family planning. Study Design: Community Based Comparative Cross Sectional study. Setting: Tando Jam and Hali Road Hyderabad, Sindh. Period: Three months from 01-07-2017 to 30-09-2017. Material & Methods: Three Hundred females of reproductive age (15 to 49 years) during immediate, early and extended postpartum period residing in study area were selected through Purposive Sampling Technique. A pre-designed questionnaire was used as a data collection tool. The data was analyzed using SPSS version 16. The participants were inquired about the usage and concerns towards immediate and early post-partum family planning methods. Barriers and opportunities were identified. The association between various socio-demographic variables and family planning method was determined by applying Chi-square test at ≤0.05 level of significance. Results: Highest number of the study participants were practicing extended method of post-partum family planning i.e. 223(74.33%), only 65(21.67%) had adopted early PPFP and 12 (4%) were practicing immediate post-partum family planning. Low socio-economic status, low literacy rate of both partner, young age of women, and permission from husband, fear of health problem due to contraception and previous bad experience with contraceptive methods were identified barriers towards family planning adoption. Deliveries in homes or in maternity home, facilitated by Dais, not going through ante-natal checkups and not bringing the last born for vaccination were reported with non-adoption of immediate post-partum family planning. Conclusion: The coverage of immediate and early postpartum family planning is very low in the community so the barriers and opportunities identified should be addressed to overcome the hindrances.

Key words: Barriers, Early PPFP, Extended PPFP, Immediate PPFP, Missed Opportunities, Postpartum Family Planning.

INTRODUCTION
Family planning (FP) is the most economical public health intervention with a potential to reduce maternal and child morbidity and mortality. Rapid population growth hampers in the health, education, and employment development. Many nations have improved their economic growth and development by providing family planning to help women avoid unplanned pregnancies. Being one of the poorest and sixth populous country in the world, Pakistan with other developing countries contributes 50% of the maternal deaths across the world. It is expected that Pakistan’s population will double by 2050. In spite of a long history of FP programs, the growth rate of population is high at 2.1%, with a contraceptive prevalence rate of 35%, unmet need at 20% and the total fertility rate at 3.8. With 35% CPR (according to Pakistan demographic health survey (PDHS) 2013), modern methods contributes only 26% and 20% of patients with an unmet need for family planning. The unintended pregnancies’ prevalence in Pakistan is reported around 38-46%. PPFP is the “Initiation of family planning services within the first 12 months following childbirth to prevent
closely spaced and unintended pregnancies”. Pregnancies within 12 months after delivery are at greater risk with adverse health consequences both for mother and child. To lessen the risks of closely spaced pregnancies, Postpartum Period is a precarious time to address high unmet family planning need.6 The return of fertility after delivery or childbirth varies and is unpredictable. Female can conceive even before the start of menstrual cycle.7 In Pakistan PPFP was introduced in 2012. Pakistan has 52% of facility-based births which can help this program to reduce population burden on the country.5

Being directly linked with clients, the provision of immediate postpartum family planning can provide better satisfaction and longer protection from un-intended pregnancies. This can in-turn save the costs of both consumers and health delivery system.8

It is accepted that postpartum time is a critical period when client can be motivated to avoid early pregnancy and initiate contraception especially early post-partum family planning method.9

The national and international studies consistently suggest that immediate and early post-partum period can provide better contraceptive results as compare to any other or extended PPFP method.10,11

Various studies have revealed the constraints among married couples towards the use of contraceptives methods as demographic and socio-economic factors, cultural acceptability, religious beliefs, and perceptions for contraceptives adverse effects, husband and mother in law influences and many others.3,12 Family Planning methods could be adopted by counseling during antenatal, natal, postnatal periods and at child immunization centers that can give positive results.7 Incorporating PPFP services and counselling programs during these periods when couples are in frequent contact with the health care system can help in motivating the pair without substantial increase in staff or infrastructure.6

The objective of this study was to highlight the barriers existing in the community about postpartum family planning and identification of missed opportunities that can be utilized for PPFP services. The result of the study can be used to develop educational programs and strategies for adoption of Postpartum Family Planning (PPFP).

OBJECTIVES
1. To compare the coverage of immediate and early postpartum family planning to extended postpartum family planning methods.
2. To analyze the socio demographic barriers for adopting immediate and early postpartum family planning methods.
3. To identify the missed opportunities for immediate and early postpartum family planning methods.

MATERIAL & METHODS
It was a Community-Based, Comparative Cross-Sectional Study conducted from 01-07-2017 to 30-09-2017 at Tando Jam and Hali Road District Hyderabad, Sindh. The estimated total population of these areas is 80,000 and the women at child bearing age is estimated as 31000. (Source; voters list of 2013 from counselor office of study areas). The met need for family planning in Sindh is 30.9% as compared to total demand for family planning that is 48.6%.13

The sample size of 300 was calculated by using the prevalence rate of unmet need for family planning in Pakistan as 20% (PDHS 2012-2013).

The study was performed on women of reproductive age (15 to 49 years) during immediate, early and extended postpartum period residing in study area and were fulfilling the inclusion criteria:

Immediate Postpartum Family Planning is Any method of family planning adopted during first forty-eight hours of termination of pregnancy irrespective of duration and outcome of delivery.

Early Postpartum Family Planning is Any method of family planning adopted during first six weeks after termination of pregnancy irrespective of
duration and outcome of delivery.

Extended Postpartum Family Planning is Any method of family planning adopted within twelve months of termination of pregnancy irrespective of duration and outcome of delivery.\textsuperscript{14}

The respondents were selected through Purposive Sampling Technique who have delivered within $\leq$ 12 months, irrespective of pregnancy outcome and had adopted the family planning method were selected. The subjects belonging to all ethnic groups and without distinction of any educational or professional background were included in study.

The women of reproductive age who refused to participate, were nulliparous, pregnant at the time of data collection, not adopted any family planning method during 12 months, undergone tubal ligation or spouse has undergone vasectomy were not included in the study.

Approval for the study was obtained from the Research Ethics Committee of the University and after getting informed consent from the subjects, information was collected on pre-designed questionnaire containing detail information about socio-demographic aspects and family planning methods use and barriers. The respondents were explained about the aim of study and assured for keeping the information secret.

The data was entered in SPSS version 16 for analysis. The frequencies of categorical data was calculated as percentages while the continuous variables were computed as mean and standard deviation. The association between various socio-demographic variables and immediate and early post-partum family planning method was determined by applying Chi-square test. The p-value of $\leq$0.05 was taken as the level of significance.

RESULTS

Three hundred forty two (342) subjects were approached to complete the required sample of 300 with response rate of 86.7%. The participant’s range of age was 18-45 years with a mean age of 27.5 ± 2.8 years. Majority of women were un-educated (53.3 %), Muslims (79.3 %) and belonging to rural areas as compared to urban (55.7 % vs 44.3 %). Among them 88.3 % were housewives, involved in unskilled house-hold work, whereas 53.3 % of the spouses were skilled and engaged in some occupation. Respondents belonging to lower socio-economic group whose total monthly income was less than ten thousand rupees were in preponderance.

Highest number of the study participants i.e. 223(74.33%) were practicing extended method of post-partum family planning as shown in Figure-1 as compared to early PPFP 65(21.67%) and immediate PPFP 12 (4%).

Table-I illustrates the barriers or reasons for not adopting immediate & early PPFP methods, illiteracy of woman (p=0.05), high parity (p=0.04), myths about family planning (p=0.03), non-satisfaction with family planning method (p=0.04) & previous bad experience of family planning (p=0.02) were found statistically significant.

Deliveries conducted at homes or in maternity home, facilitated by dais, not attending ante-natal checkups & bringing the last borne for vaccination at centers were reported with non-adoption of immediate and early post-partum family planning and these are the areas which can be utilized for post-partum family planning education.
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| Barriers                                      | Immediate PPFP | Early PPFP |
|-----------------------------------------------|----------------|------------|
| Younger Age Of Woman                          | 5 (4.58%)      | 22 (20.18%)|
| Illiteracy Of Woman                           | 9 (5.62%)      | 29 (18.12%)|
| Illiteracy Of Spouse                          | 7 (6.25%)      | 19 (16.96%)|
| Lower Socio-Economic Status of Family         | 9 (6.12%)      | 35 (23.80%)|
| Non Permission From Family                    | 11 (8.39%)     | 51 (38.93%)|
| High Parity                                   | 7 (4.69%)      | 35 (23.48%)|
| Myths About Family Planning                   | 11 (6.58%)     | 36 (21.56%)|
| Non-Satisfaction with FP Method               | 5 (10.63%)     | 9 (19.14%) |
| Previous Bad Experience of FP                 | 4 (2.33%)      | 15 (8.77%) |

Table-I. Relationship of barriers towards immediate & early post-partum family planning (FP).

| Missed Opportunities         | Immediate PPFP | Early PPFP |
|------------------------------|----------------|------------|
| Place of Previous Delivery   |                |            |
| Home                         | 0 (0%)         | 13(18.57%) |
| Hospital                     | 12(7.5%)       | 34(21.25%) |
| Maternity home               | 0(0%)          | 18(25.71%) |
| Mode of Previous Delivery    |                |            |
| Normal vaginal delivery      | 10(4.20%)      | 53(22.26%) |
| Cesarean section             | 2(3.22%)       | 12(19.35%) |
| Previous Delivery Conducted by|               |            |
| Doctor                       | 10(6.57%)      | 33(21.71%) |
| Paramedic                    | 2(3.43%)       | 19(23.17%) |
| Dai                          | 0(0%)          | 13(19.69%) |
| Ante-natal Checkup During Previous Pregnancy |         |            |
| Yes                          | 10(4.08%)      | 49(20.0%)  |
| No                           | 2(3.63%)       | 16(29.09%) |
| Post-natal Checkup After Previous Delivery |             |            |
| Yes                          | 6(4.54%)       | 30(22.72%) |
| No                           | 6(3.57%)       | 35(20.83%) |
| Vaccination of Last Born Baby |               |            |
| Yes                          | 11(4.36%)      | 51(20.23%) |
| No                           | 1(2.08%)       | 14(29.16%) |

Table-II. Missed opportunities in relation to immediate and early postpartum family planning.

DISCUSSION

Low uptake of the family planning methods or high unmet need for family planning is the major cause of unintended pregnancies and high Maternal, neonatal and infant mortality in Pakistan. To control the situation multiple programs are working in the country and Post-Partum Family Planning Program is one of them. The current study has tried to assess the coverage of PPFP among women in different postpartum periods and tried to find out barriers and identified opportunities for adopting immediate and early PPFP.

To prevent unintended pregnancy and to achieve appropriate birth space various PPFP methods are available. In this study the method that is utilized most is extended PPFP and the least one is immediate method, whereas Joseph et al study explored that women who delayed to adopt any family planning method ≥ 6 months many of them became pregnant and majority was unintended. This supports if contraception is adopted early the number of unwanted pregnancies could be avoided.

One study assessed the advantages and disadvantages of early post placental intrauterine device (IUD) insertion and suggested that this immediate PPFM method is an effective, convenient, safe, appropriate and low-cost procedure to achieve the results, but the current study reveals least uptake of immediate and early method that may be due to certain barriers or missed opportunities. This shows the need for identifying the breaches to cover the gap.

Different studies have revealed that women age, education, socioeconomic status and occupation are positively associated with the usage of postpartum family planning methods. Most of the respondents in this study have three or more children within the age group of 26 – 35 years. This is supported by another study conducted at Ghana. This suggests that maternal factors, as parity, mother’s education, autonomy along with proper knowledge about FP services can break barriers towards acceptance and perpetuation.

Women who had antenatal visits are more likely to use PPFP, as unmet need for contraception is very high during postpartum period and during antenatal period counselling can be
done. Current study showed that 81.7% study participants had antenatal visit but only 4% had immediate PPFP, 21.67% early PPFP and 74.33% adopted extended PPFP. A study conducted by Wasim T et al published in 2018 revealed that out of 8,000 patients who were counselled during ante-natal visits 3,012 (37.6%) showed positive attitude to use PPFP. This shows that PPFP is acceptable and effective if proper counseling is done at proper time. Another study done in India showed different results, out of 3,209 only 564 adopted PPFP and this may be due to decreased awareness or lack of counselling during ante-natal visit to study population.

Anne Pfitzer et al conducted study in six low income countries and documented that the women delivering at health facility provides opportunity for postpartum family planning and especially immediate PPFP. The researcher revealed that acceptance of PPFP in Pakistan was 2.3% in comparison to 5.8% in the Philippines whereas India had the highest 6.9% of acceptors.

It is believed that institutional deliveries remain important window of opportunities. Current study also showed more than half responder 53.3% had institutional deliveries and half of study participant, deliveries were conducted by doctors but there is a big gap between provisions of FP services. It is supported by another study conducted in Jhung, Pakistan where 41% of the deliveries from community were conducted in institutions but only 11% of women who delivered during last 12 months were using family planning methods. This indicates that education, family consent and the myths related to FP plays very important role in adoption and continuation of these services.

Socio-economic status reflects the monthly income, education and occupation of family and it has direct association with better decision making and strongest drivers for family planning use.

CONCLUSION
Immediate and early postpartum family planning method adoption in women during postpartum period is reported very low. Our study identified the barriers which hinder the effective use of postpartum family planning which are low socio-economic status, low literacy rate of both partner, young age of women, and permission from husband, fear of health problem due to contraception and previous bad experience with contraceptive methods. These barriers should be addressed with proper counselling and interventions during ante-natal, natal and post-natal period, and during immunization sessions to over-come the hindrances so as to improve the contraceptive prevalence rate during postpartum period.

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AUTHORSHIP AND CONTRIBUTION DECLARATION

| Sr. # | Author(s) Full Name         | Contribution to the paper                                                      | Author(s) Signature |
|-------|-----------------------------|-----------------------------------------------------------------------------|---------------------|
| 1     | Yasmeen Abbasi              | Conceptualizing and design of study, data collection.                        |                     |
| 2     | Shazia Rahman Shaikh        | Data analysis and manuscript writing.                                        |                     |
| 3     | Khalida Naz Memon           | Supervised and reviewed the study.                                          |                     |