



## Research Article

# Knowledge, Attitude and Practices of Skilled Birth Attendants towards Immediate Postpartum Family Planning Services

Shazia Nasim Akbani<sup>1\*</sup> and Sarah Saleem<sup>2</sup>

<sup>1</sup>MSc Health Policy and Management, Lecturer College of Health Sciences, University of Bahrain, Bahrain

<sup>2</sup>Professor, Head, Population and Reproductive Health Section, Director Continuing Education Program, CHS, Department of Community Health Sciences, Aga Khan University, Karachi, Pakistan

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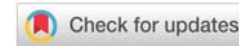
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**\*Corresponding author:** Dr. Shazia Nasim Akbani, MSc Health Policy and Management, Lecturer College of Health Sciences, University of Bahrain, Bahrain, Tel: +973 66627775; E-mail: [dr.shazia.k.alam@gmail.com](mailto:dr.shazia.k.alam@gmail.com); [salam@uob.edu.bh](mailto:salam@uob.edu.bh)

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## Abstract

**Background:** Postpartum Family Planning (PPFP) is one of the “High Impact Practices” to reduce maternal and infant mortality in Low and Middle-Income Countries (LMICs). Health Service Providers (HSPs) need to integrate these services as a core component of maternity services. This study aims to evaluate HSPs’ “knowledge, attitude and practices” regarding immediate PPFP.

**Method:** A descriptive, cross-sectional study carried out in ten public sector secondary and tertiary hospitals in Karachi, Pakistan. Study participants were accredited Skilled Birth Attendants (SBAs) including doctors and nurse/midwives. Results were analyzed using “Statistical Package of Social Sciences (SPSS) version 19”.

**Results:** A total of 237 SBAs were interviewed of which 141(59%) were doctors and 96(41%) were nurses/midwives. Almost equal percentage of doctors and nurses/midwives were knowledgeable about PPFP. Out of the total, 72% SBAs (107 doctors and 63 nurse/midwives) were presently providing PPFP service. Supportive attitude towards PPFP was shown by 79(56%) doctors and 34 (35%) nurses/midwives. Nearly 30% of SBAs had misconception that religion prohibits FP practices. Of those who were not practicing PPFP the main reasons were time constraint and fear of introducing medical complication. Interestingly 30% of nurses/midwives were not allowed by the Head of the Obstetric Units to practice these services thus missing on the available resources for task sharing.

**Conclusion:** PPFP should be mandatory component of maternity care and ongoing efforts are required for knowledge enhancement and behavior change of HSPs. Policy changes are also needed to decrease impediments at the PPFP service delivery level.

## Introduction

Globally approximately 830 women die daily from avoidable reasons associated with pregnancy and childbirth. Approximately 99% of these maternal deaths occur in Low and Middle-Income Countries (LMICs) [1]. Short interval between pregnancies is proven by evidence to be one of the important contributors to maternal mortality [2]. World Health Organization (WHO) recommends “Healthy Timing and Spacing of Pregnancies (HTSP)” which is proven to improve

pregnancy outcomes [3]. Essential information about HTSP and Postpartum Family Planning (PPFP) should be provided to all women who visit health facility for antenatal care and delivery [4].

As a common practice FP is offered in postnatal follow up visit. Evidence reveals that there is suboptimal compliance with postpartum visits due to several obstacles which include transportation, cost of hospital visits, family obligations etc [5]. Therefore, women often end up with a closely spaced,



unplanned pregnancy. Hence, provision of contraception is important at the time of delivery [6].

Promoting HTSP by providing contraception at the time of childbirth is called immediate postpartum family planning which has been acknowledged as “High Impact Practices”. Despite the evidence that PPFPP can prevent more than 30% of maternal deaths and 10% of deaths in children [5], globally 61% of women are not using effective contraception within 24 months postpartum [3]. Studies show that socio-cultural influences, misconceptions about return of fertility and breast-feeding and lack of access to contraceptive services inhibit women from PPFPP [7].

Pakistan, with estimated population of around 21 million [8], is the sixth highly populated country in the world. It has a low contraceptive prevalence rate of 34% with only 25% using a modern contraceptive method and there is 17% unmet need for FP [9]. In the first year postpartum only 22% couples use any contraceptive method [10], making them vulnerable to unplanned pregnancies. As a result, approximately 34% births occurring within short interval of less than 2 years (10) causing adverse maternal, fetal and infant outcomes [11].

Childbirth taking place at health facility is an opportunity to provide PPFPP, but this is not regularly followed at the hospitals in Pakistan [12]. The known barriers are client’s lack of awareness or apprehension of side effects and non-availability of FP services at the place of delivery (Labor room/ operation theaters) [11]. Besides these factors, Health Service Providers (HSPs) are one major influencing factor in FP uptake [13]. HSPs, which are “skilled birth attendants (SBAs)” conducting delivery, can act as “gate keeper” and “decision-maker” to clients’ choice of attaining PPFPP services. Provider’s outlook may be based on their knowledge, skills, attitudes, community environment and social will [14]. The personal, social and organizational biases of these essential partners limit clients’ access to these interventions [14]. To maximize the role of service providers, it is fundamental to analyze SBAs knowledge, attitude and practices as these influence their support to PPFPP [15]. Various studies have been carried out to ascertain “how” the service providers behave towards FP, but this study was conducted to understand “why” they have a certain attitude towards these highly sought services especially in postpartum period.

## Methods and materials

### Study design

A descriptive, cross-sectional survey was conducted in July-Aug 2018.

### Setting and sample

The study was conducted in Karachi, a metropolitan city in Pakistan which has diverse population of around 15 million [9]. Non-probability convenience sampling was done to select hospitals and participants. Ten public sector, secondary and tertiary care facilities were selected which cater to high volume of women from low socio-economic class [16].

These hospitals had round the clock childbirth facilities and conducted minimum 50 deliveries per month. PPFPP training had been done in most of these hospitals. A permission letter was obtained from all the participating hospitals. Participants which were accredited SBAs (doctors and nurse/midwives) were purposively selected from Obstetrics /Gynecology Department of study hospitals. Informed consent on a printed consent form was taken. Presence of different cadre of SBAs in these hospitals was an additional gain.

### Data collection

Prior to data collection ethical approval was obtained by the Ethics Review Committee of Aga Khan University, Karachi, Pakistan.

Data was collected from 237 SBAs by two study research assistants using a self-administered questionnaire which was prepared in English and translated in Urdu language. It was based on the review of literature and similar studies conducted elsewhere and was pilot tested to check for understanding and clarity [17,18].

Information about the demographic characteristics of HSPs was collected. Questionnaire assessed the knowledge of HSPs, their attitude and practices related to immediate PPFPP.

### Statistical analysis

Descriptive analysis of data was done for all the variables using “Statistical Package of Social Sciences (SPSS) 19 version”.

Demographic information was analyzed in the form of frequencies and percentages. Knowledge of participants regarding immediate PPFPP was assessed by assigning scores. To the best of our knowledge no standard pretested scale was available to assess HSPs’ knowledge regarding immediate PPFPP methods. An arbitrary scoring system was developed after discussion with three experts: practicing Consultant Gynecologist and two Public Health specialists presently running postpartum family planning programs.

There were 15 questions in the knowledge component. Weightage of two was given to the questions which were regarded as mandatory (B1, B2, B3, B4, B5, B9, B10 and B15). Rest of the questions were given weightage of one. B6 and B7 had four correct responses each. B8, B11, B12, B13 and B14 had one correct response each. Thus, the total score was calculated as 29 and the cut off for knowledge was set at 20. SBAs who scored 20/29 i.e. >69% were considered knowledgeable as was suggested by the experts.

Appropriate attitude was assessed by scoring 7 questions. Double weightage was given to questions which depicted high support towards immediate PPFPP (C4, C5, C6 and C7). Those SBAs who scored 8/11 i.e. > 70% were considered as “more supportive” towards these services.

### Appropriate practices were assessed by 10 questions in form of frequencies and percentages.

This study was a descriptive study and sample size was not



built to do regression analysis. Health service providers who were part of this study had varying professional qualifications, years of experience and were at different levels of their career path thus finding correlation with a statistical model was difficult with the given set of data. If regression analysis was performed in the given circumstances the results generated could be misleading and may not have represented the situation accurately. This would have compromised the stability, validity and reliability of the survey.

## Results

Interviews were completed on 237 SBAs of which 59% were doctors and 41% were nurses, midwives and LHVs. The doctors were at different levels of their career path and included Head of Departments, Woman Medical Officers, postgraduate trainees and interns. Only 14% of the SBAs had received FP training during their pre-service years. Majority (64%) had received FP training while in service whereas nearly quarter of SBAs (22%) were not trained to provide these services. More than half of the SBAs (56%) had less than five years' experience of working in Obstetrics and Gynecology unit, around a quarter (29%) had six to ten years' experience and 15% had more than 10 years' experience (Table 1).

### Knowledge of SBAs regarding immediate PPF

The mean score on the knowledge component was 23.2 (with standard deviation 1.28), out of a possible score of 29. It is encouraging to know that around equal percentage of doctors and nurse/midwives were knowledgeable (Midlevel 90% vs doctors 87%) (Table 1).

Results revealed that 57% SBAs were aware that after a live birth 24 months interval is recommended before next conception. Around 80% were aware that contraceptive method can be initiated immediately after delivery of placenta.

Regarding eligibility for immediate PPF it was alarming to know that around 50% of SBAs believed that primigravidas were not eligible. Most SBAs were aware of the contraceptive options for breast feeding mothers. Around two thirds of the providers agreed that long acting reversible contraceptives could be an alternate to permanent contraceptive methods (Table 2).

### Attitude of SBAs towards immediate PPF

The analysis shows that 56% of doctors were in the category 'more supportive' towards PPF, as compared to 35% of nurse/midwives. The supportive SBAs accepted that it is their responsibility to counsel clients and provide them with immediate PPF. Amongst those who did not support these services (52%), one third of the doctors and nearly half of the mid-level providers mentioned that counseling and giving contraception is time consuming. These SBAs did not favour adoption of immediate PPF by primigravida. Nearly 30% of SBAs were reluctant in providing PPF services due to misconception that religion prohibited FP practices. 22% SBAs thought that religion did not permit FP and 8% were unsure (Table 3).

## Practices of SBAs regarding immediate PPF

Data revealed that 170 (72%) SBAs were presently providing these services. Of these 107 (63%) were doctors and 63 (37%) were nurse/midwives.

**Table 1:** Demographic characteristics of the participants, n= 237.

	(n)	(%)
<b>Profession</b>		
Doctor	141	59
Nurse	33	14
Midwife	41	17
LHV	22	9
<b>Designation</b>		
Head of Department	6	3
Women Medical officer	60	25
Postgraduate student	52	22
House Officer	21	9
Staff Nurse	40	17
Midwife	58	24
<b>Family Planning Training status of the participants</b>		
Pre-service	33	14
In service	152	64
Not done	52	22
<b>Years of experience of the participants</b>		
Less than 5 years	133	56
Between 6 to 10 years	69	29
More than 10 years	35	15
<b>Knowledge of the participants about PPF</b>		
Yes	208	88
No	29	12

**Table 2:** Knowledge about Immediate PPF (n= 237).

	Yes (n)	(%)
<b>Eligibility of clients</b>		
Primi gravida	132	56
Multi gravida	194	82
After c/section	176	74
Breast feeding mothers	136	57
Not sure	5	2
<b>Contraceptive methods for breast-feeding mother</b>		
Lactational Amenorrhea	123	52
Combined oral contraceptive pills	8	3
Progesterone only injections	116	49
Implants	99	42
IUCDs	179	76
Condoms	3	1
Not sure	13	5
Long acting reversible contraceptive (LARC) as an alternative to tubal ligation	162	68



Preferred method for PPFPP were IUCD (67%), Lactational Amenorrhea (15%), progesterone only injections (8%) and implants (6%) (Table 4).

Out of the 67 (28%) SBAs who were not providing these services considered it time consuming and feared medical complications. Lack of knowledge, skills and mentorship also acted as a barrier for SBAs (Table 5). It is interesting to note that 30% of nurse/midwives were not permitted by head of the departments to provide PPFPP thus an opportunity of task sharing was missed.

## Discussion

This study showed that majority of the service providers had not received pre-service FP training revealing the gap in their pre-service curriculum. Knowledge assessment of SBAs

showed that majority of the HSPs (88%) were knowledgeable about PPFPP and if formally trained could efficiently provide these services. Study by Giri, Purushottam A Bangal (2013) also suggested that health care providers had received information about FP by various means but were not well trained [17]. A study by Chitashvili, T., Holschneider, S., & Clark, P. A. (2016) has identified insufficient (pre-service, in-service) medical education with inadequate ongoing professional growth and skills maintenance after training as some technical barriers for PPFPP [18]. Study conducted by Parihar and Bhalerao-Gandhi (2006) also highlighted lack of knowledge and skills of HSPs and have emphasized the need of revision in the pre-service curriculum of all cadres of HSPs. Our results also implicate inclusion of pre-service FP training with emphasis on PPFPP for all HSPs [19].

The results showed that HSPs have various myths and misconceptions regarding FP which strongly influence their attitude and practices. These findings are similar to results of situation analysis done in Pakistan which revealed that provider's misconceptions for eligibility of clients for hormonal contraceptives due to age and parity deprived about one half of them from reliable contraception [20]. Another study by Christine Dehlendorf (2010) recognizes provider bias as one of the factors which contribute to deprivation of specific group of clients from adopting FP [21]. In the present study that specific group is of primigravidas as around half of both doctors and midwives do not think primigravida is eligible for immediate PPFPP and majority of midlevel providers are of the opinion that primigravida should complete her family before opting for FP method. Majority of the primigravidas being deprived of PPFPP are supposedly young and uneducated as country's demographic statistics (PDHS 2017-18) reveal that childbearing starts at young age and 49% of ever-married women age 15-49 years have never been to school [11]. Several studies have suggested that unmet need for FP is higher among uneducated, younger (15-19 years) women [18,22,23].

The self-imposed limitations of the SBAs based on a medical rationale which is not scientifically proven have been identified as "medical barriers" in a study by Jane T. Bertrand (2015) [24]. With large proportion of married women in reproductive age in Pakistan being young and illiterate SBAs act as "decision makers" as identified by Shelton, J. D. (2001) [13]. Therefore, attitude transformation efforts are needed to help the SBAs to overcome their biases and cater to the high unmet FP need in primi gravidas.

Religious and social myths are the known reasons affecting contraceptive uptake. The results of this study illustrate that sixteen percent of doctors and more than a quarter (31%) of mid-level providers perceive that religion restricts use of FP and around one third were not sure of the role of religion. Study by Josephine MN (1997) explains that every person including health professionals differ in their religious, ethical, social views which mould their attitudes and perceptions on FP [25].

Other important barriers identified in nearly quarter of the total study population were fear of medical complications, time constraint and lack of knowledge and skills. Similar barriers

**Table 3:** Attitude of SBAs towards immediate PPFPP (n= 237).

	Doctors (n=141)		Nurse/Midwives (n=96)	
	Yes (n)	(%)	Yes (n)	(%)
PPFP is provider's responsibility	135	96	90	94
All skilled birth attendants should be trained for PPFPP	132	94	91	95
It is safe to provide immediate PPFPP	132	94	88	92
Providing PPFPP is time consuming	48	34	46	48
All delivered women at health facility should get modern FP method	118	84	87	91
Primigravida should complete her family first	35	25	60	63
Think FP is prohibited in religion	23	16	30	31

**Table 4:** Preferred PPFPP methods of SBAs providing these services (n= 170).

	Yes (n)	(%)
IUCDs	114	67
Lactational Amenorrhea	25	15
Progesterone only injections	14	8
Implants	11	6
Combined oral contraceptive pills	4	2
Undecided	2	1

**Table 5:** Reasons/ Barriers for not providing PPFPP by type of provider (n= 67).

	Doctors (n=34)		Midlevel Providers (n=33)	
	(n)	(%)	(n)	(%)
Time and effort	12	35	11	33
Fear of Medical complications	12	35	10	30
Lack of practice and confidence	5	15	3	9
Socially inappropriate	3	9	2	6
Side effects	1	3	4	12
Fear of return of fertility	1	3	3	9
Lack of knowledge	18	53	6	18
Lack of skills	9	26	12	36
No mentor to guide	4	12	4	12
Head of department does not allow	1	3	10	30
Fear of disapproval in Islam	2	6	1	3



like religious bias, negative attitude of the provider, their lack of knowledge and awareness and cultural and psychological factors which impede the uptake of contraception have been mentioned by Omishakin, MYJ (2015) [26]. Jane T. Bertrand (2015) suggests that provider bias should be analyzed at both service delivery and policy levels. Effective strategies need to be devised to overcome hinderances like lack of training, absence of commodities and legal permission to the providers [24].

One important finding in this study was that more than quarter of the nurses/midwives were not providing PFP services as they were not permitted from head of departments. Similar hinderance is also highlighted in another study by Singh S, Darroch JE which says that the regulatory barriers inhibit non-physician health care providers from providing PFP services [22]. Shortage of HSPs is one of the factors hindering universal access to reproductive health. WHO has given recommendations for "Task shifting" to promote health-related behavior which includes postnatal care and family planning [27]. Task shifting is a way of efficiently using resources (human and financial) [28], by optimizing the role of health workers (doctors, nurses and midwives) to increase availability of reproductive health services [28]. It has been identified that if doctors shift and/or share tasks with other cadres it can improve the provision of FP services [29]. Research has proved that when midwives can insert contraceptive implants and Intrauterine Devices (IUD) unintended pregnancies are reduced [28].

Though task sharing with mid-level providers is highly recommended globally [30], its implementation to increase access to healthcare provision is still awaited due to numerous barriers indicating that health system strengthening deserves primary focus [27]. Policy changes are needed at level of higher authorities to address this hinderance at the service delivery level. National guidelines or protocols based on WHO recommendations need to be developed with participatory consensus-driven processes. Its inclusion into national programmes and health care services depends on well-planned implementation plan. Local professional societies may play an important role in changing the behavior of health care practitioners and to enable the use of evidence-based practices. This would then create an enabling environment for the implementation of best practices [28]. Specific focus is needed for continuous medical education and behavior change strategies to improve knowledge and skills of service providers and address their misconceptions.

Postpartum family planning has become part of the country's initiative to increase the uptake of family planning. Further research and intervention study incorporating trainings, awareness sessions, mass media campaigns can be done according to the specific local environment and socio-cultural factors. Influence of these initiatives can then be assessed on the supply and the demand side by pre and post analysis.

## Conclusion

Postpartum family planning has to be a mandatory part of pre-service curriculum of all cadres of HSPs for their

knowledge enhancement and behavior change. Need for continuing medical education opportunities related to family planning for the health service through refreshers and hands on trainings could not be over emphasized.

Policy changes are needed to decrease impediments at the PFP service delivery level. National guidelines or protocols promoting task sharing/shifting based on WHO recommendations need to be developed and implemented to improve access to reproductive health services including PFP.

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