Factors associated with seeking post-abortion care among women in Guangzhou, China

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Abstract

Background: Post-abortion care(PAC) service in China relies on integrating post-abortion family planning (PAFP) services into existing abortion services in hospital settings where the vast majority of induced abortion is performed. This study aims to assess post-abortion care (PAC) utilization and identify factors affecting PAC uptake among clients on the day of abortion in Guangzhou, China.

Methods: A cross-sectional study was conducted involving a total of 423 abortion clients in the selected hospitals of Guangzhou From June to September, 2018. The anonymous, self-reported questionnaires regarding associated factors were administered to all participants. Multivariate logistic regression model was used to determine associated factors of PAC utilization.

Results: The magnitude of PAC counseling before they leave the health care facilities was 42.1%. Multivariate logistic regression showed that unmarried women, women with local household registration, knowing fertility could return sooner after abortion and women themselves as the main decider on PAC use were significantly associated with PAC utilization.

Conclusions: The utilization rate of PAC was low in Guangzhou, China. There's an urgent need to improve the awareness of regular use of PAC and provide better access for migrants. Partners should be involved during counseling after obtaining women's consent. Women empowerment through enhancing health education on own decision making in PAC utilization should also be strengthened.

Background

Unplanned pregnancies and induced abortions (IA) have constituted important public health issues, especially among women from developing countries because of ineffective or non-use of contraception or contraception failure. Estimates suggest that the average IA rate is approximately 58 per 1000 women worldwide^[1]. In China, IA is a legal procedure in the first trimester of pregnancy. The number of IA recently is reported between 6 and 9 million per year^[2]. Nearly half of the low-income urban women had experienced IA with 31% being repeated abortions^[2]. The causes are complicated. One of the major reasons is limited access to high quality post-abortion care (PAC), which is a key component for contraception initiation^[2].

WHO recommends that counseling and contraceptive services be provided to all women to prevent unintended pregnancies and subsequent IA^[3]. The term PAC, first used in 1991, refers to an approach to break the cycle of unwanted pregnancies and improve women's sexual and reproductive health and life^[4]. Integration of family planning (FP) counseling and method provision into abortion services is the essential part of PAC. Multiple studies have demonstrated the effectiveness of PAC in decreasing repeated IA when offered to abortion clients prior to discharge from health facilities^[5-6]. However, the uptake of PAC remains a challenge in many low and middle income countries including China. Numerous barriers exist, including facility-level constraints such as lack of counseling room and trained staff,

provider-level constraints such as lack of knowledge and inclination towards certain groups, and client-level constraints such as stigma, fear of side effects and partner disapproval. Despite the efforts have done in improving the accessibility and quality of PAC, little research has assessed the factors that affect women's acceptance of PAC. Quality of PAC in public hospitals of China is often low, with limited provision of trained staff to abortion clients. This is of particular importance when considering the unmet reproductive health needs of vulnerable groups such as migrants, young people and adolescents.

PAC service in China relies on integrating post-abortion family planning (PAFP) services into existing abortion services in hospital settings where the vast majority of IA is performed^[7]. FP services provide contraceptives and counseling to local residents, which are independent of health care system. It was not until in 2010, when the National Population and Family Planning Commission launched a pilot program to include the provision of PAFP into 486 hospitals^[8]. Since 2011, the family planning branch of Chinese Medical Association formulated the guidelines of PAFP. Guangzhou, where this study was conducted, was one of the pilot cities where free PAC services were provided for women. So far, it remains unknown to what extent the PAC services are utilized. Addressing barriers to the use of PAC services requires detailed and context-specific information, which is often lacking. Furthermore, health care system factors that might influence the uptake of PAC among women are not well-understood. Hence, this study aims to assess PAC utilization and identify factors affecting PAC uptake among clients on the day of abortion.

Methods

Study setting

Guangzhou is the capital city of Guangdong province, an economically developed province in south China. Tianhe district, where this study was conducted, was the pilot district that free PAC is offered in public hospitals.

Study design

This was a cross-sectional survey conducted in Tianhe district between June to September in 2018. All women who have experienced IA in the selected public hospitals during the data collection were included in the study. Women who could not talk or listen and have psychiatric disorders were excluded from the study.

Sample size determination

The sample size was determined by using the single population proportion based on the following assumptions, 50% level of significance with a 5% margin error, the expected proportion of PAC utilization to be 57.4%^[9].

$$N = (Z_{\alpha}/2)^2 P(1-p) / w^2$$

$$N=(1.96)^2(0.547 \times 0.426)/0.05^2=375$$

Based on this, and a 15% non-responsive rate was taken into account, the total sample of this study was estimated to be 431.

Sampling procedure

Four public hospitals at Tianhe district which provided PAC pilotly were included in the study. The average number of PAC users was estimated according to the recent quarter report of client flow in each hospital. The number of respondents in each of these hospitals was allocated using population proportion to size. A systematic random sampling method was used. The sample size in each of the hospitals was 156, 119 and 148 respectively.

Data collection and procedures

The data was collected using anonymous self-administered questionnaire. The questionnaire was developed based on literature with consultations from experts in reproductive medicine and clinical epidemiology. After the pilot test, the questionnaire was revised accordingly, covering the following information: 1) socio-demographic characteristics, such as age, marital status, education, employment status, income and migrant characteristics; 2) reproductive history such as parity, previous IA, number of alive children; 3) Contraceptive and reproductive knowledge such as knowing on how soon fertility returns and the time getting pregnant again; 4) Facility related variables such as trained providers and type of health facility.

Face-to-face interviews were conducted before the clients were ready to be discharged. All the participants were assured that their identity and responses were confidential and would not be released to the third party. Seven female post-graduate students with bachelor of nursing and 4 nurses were hired as data collectors and supervisors respectively during the process. Training was offered to them for two days by the principal investigator covering interview techniques, quality control, completeness and ethics of data collection process.

Statistical analysis

Data were entered into the Epidata3.1 before being exported to SPSS20.0.

Categorical variables were presented as counts and proportions. The chi-square test was used to assess differences between PAC users and non-users. Then, the multivariate logistic regression, using step-wise method, was further employed to identify factors that were significantly associated with the uptake of PAC. All tests were 2-sided and $P \leq 0.05$ was considered statistically significant.

Ethics

Written permission was sought from eligible participants. The study was approved by the Research Ethics Board of Southern Medical University, China.

Results

Of the 431 women estimated in sample size, a total of 413 abortion clients were interviewed in this study with a response rate of 95.82%.

Concerning the socio-demographic characteristics of participants, marital status and household registration place were significantly associated with PAC use. Unmarried women were more likely to utilize PAC as compared to married women. Similarly, study participants who had local household registration were observed to seek PAC more often than migrants. (Table1)

No difference was documented between PAC users and their counterparts with respect to reproductive history. (Table 2)

Study participants who know that could get pregnant again soon after abortion (10-14 days) were more likely to seek PAC than those who do not know. PAC utilization was also increased with women who made decisions themselves as compared to their husbands/partners as the main deciders. (Table 3)

Table 4 shows factors influencing PAC use in multivariate logistic regression analysis. Unmarried women were two times more likely to receive PAC than married women (OR:2.146, 95% CI: 1.253–2.414). The odds of using PAC was also higher among women who have local household registration than migrants (OR:2.478, 95% CI: 1.989–3.743). In this study, the main decision maker on PAC use was found to be a significant factor for seeking PAC. The odds of receiving PAC in clients who make decisions themselves were three times more likely to receive PAC as compared to women whom their husbands/partners were the main deciders (OR:2.901, 95% CI: 2.005–3.416). In addition, PAC utilizing was also increased with knowledge of study participants on knowing fertility returns sooner which was significantly associated. Women who knows that could get pregnant again within 10-14 days were observed to utilize PAC three times than those who do not know (OR:3.116, 95% CI: 1.971–3.878).

Discussion

Our study aimed at determining the proportion of women who received PAC among abortion clients and possible factors that may associate with PAC utilization in Guangzhou, China. The magnitude of PAC counseling before they leave the health care facilities was 42.1% which is lower than a European framework project done in three cities of China^[9]. The prevalence rate was even lower than the studies conducted in Southern Ethiopia (61.5%)^[10], Pakistan (72.9%)^[11] and Brazil (97.4%)^[12]. This variation of PAC utilization could be due to the Chinese socio-cultural context, as well as the huge migration from rural areas to cities following rapid economic development. FP services, an integral component of PAC, are provided through the national network of FP clinics, which are almost independent of health care system. Since 2010, a very small proportion of public hospitals were included in a project to pilot

provision of post-abortion FP services, generally known as ‘the PAC project’^[7]. However, PAC provision has not yet been integrated into Chinese health system. The majority of women seeking abortion therefore were often unaware of the benefits of FP services, thereby deeming it as an inappropriate occasion for accepting PAC counseling. Another possible reason may be related to the limited access for migrant women. Due to non-transferrable health insurance and different welfare policies, service stakeholders perceived difficulties for migrants to access FP services. The other explanations could be ascribed to respondents’ level of awareness, religious beliefs, misconceptions about contraceptive and FP services and low counseling skills among different study settings.

Unmarried women were two times more likely to utilize PAC as compared to married women. This finding was consistent with a study in Ethiopia that married women were less prone to adopt PAC^[13]. However, another study found that married women were more likely to use PAC than unmarried women^[10]. It indicated that unmarried women had good awareness of reproduction and contraception. In Guangzhou, governments at all levels have taken initiatives to educate young, unmarried people on reproductive health knowledge including explicit attention to discussing ambivalent attitudes towards their sexuality and developing youth-friendly stance in counseling; efforts to overcome barriers with large migrant population. On the other hand, school’s roles also played an important part. However, seeking PAC suggests contraceptive methods have not been appropriately used to avoid unintended pregnancies. Training to develop critical thinking on cultural and ethical dimensions attached to sexuality among unmarried people may be effective here.

The odds of using PAC were higher among women who had local household registration than those without. Less than 20% of migrant women received PAC, suggesting underutilization of free FP counseling. This could be due to the lack of access to local health insurance and maternal insurance. As a result, a proportion of migrants had used private clinics which are often poorly regulated and unlicensed and tended to overstate the advantage of abortion without providing PAC. Further study is needed to understand the motivation of PAC use among migrants.

In this study, knowing fertility could return within 10-14 days was found to be significantly associated with PAC utilization. This finding was in line with studies conducted in Ethiopia documents at which FP utilization is associated with decreased repeat IA^[13]. It implied that post-abortion period is the right time to introduce reproductive and contraceptive advice because women are more ready to receive messages. However, due to high contraceptive failure, popular use of contraception has not helped to reduce IA. This could be due to inadequate counseling skills of providers. In China, the rigid workload of PAC providers may prevent them from spending prolonged durations on elaborating details of contraception with each abortion woman. On the other hand, the training on FP was not sufficient, and thus their knowledge related to PAC was much lower than their self-evaluation. Efforts should be made to improve counseling skills, which would increase the effective practice of modern contraceptives.

Our survey suggested that women whose husbands or partners were the main deciders on PAC use were less likely to receive PAC as compared to the participants who decide themselves. The same studies from

Egypt and Nigeria concluded that women who failed to receive PAC are because of disapprovals from their husbands^[14-15]. This may be explained by their being not involved in PAC. Men are usually not allowed to access the department of gynecology in China. In some hospitals, male partners were eventually allowed into counseling rooms, thus couples could get advices together, while in other hospitals, male partners were just given some materials regarding reproductive knowledge. A number of studies suggest the importance of male involvement in women's use of contraceptives^[16-17]. Future research could explore whether targeting and including male partners in the provision of PAC could have impact on improving PAC utilization among abortion clients.

A few policy implications can be drawn from this study to improve the provision of PAC. Firstly, low utilization rate of PAC in public hospitals warrants increased attention from public health authorities to either develop PAC guidelines or new national policies incorporating PAC into health care institutions. Detailed policy provisions are needed to ensure the systematic implementation of PAC. Secondly, PAC should improve its coverage for migrants. This should include enhanced public education programs for young and unmarried migrants, improved access to free guidance and counseling. Thirdly, it's essential for providers to gain additional knowledge about PAC and develop youth and migrant friendly attitudes. Including male partners in the provision of PAC is also needed.

There are several limitations in this study. Firstly, given the sensitivity of the topic, women might feel shy to reveal private information. This may lead some women to report in a more acceptable way due to the stigma associated with it. Secondly, the causal relationship between variables and PAC utilization can not be drawn due to the cross-sectional nature of our study, though the results could provide useful implications for the improvement of PAC. Thirdly, the generalization of the findings would be limited as the recent integration of FP into health care institutions could provide great opportunity for close observation of other districts of Guangzhou.

Conclusions

The utilization rate of PAC was low in Guangzhou, China. Marital status, household registration place, knowing fertility could return sooner after abortion and decider on PAC use were found to be significant factors for PAC use. There's an urgent need to improve the awareness of regular use of PAC and provide better access for migrants. Partners should be involved during counseling after obtaining women's consent. Women empowerment through enhancing health education on own decision making in PAC utilization should also be strengthened.

Declarations

Abbreviations

IA: Repeat induced abortion; FP: Family planning; PAC: Post-abortion care

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Availability of data and materials

The datasets used and/or analyzed during the current study are available from the corresponding author on reasonable request.

Authors' contributions

HW and RX conceived the study, the methodology was developed by RX, RX and YL carried out the interviews. HW and RX analyzed the interviews. HW wrote the first draft of the manuscript and all other authors edited the manuscript. All authors read and approved the final manuscript.

Ethics approval and consent to participate

Ethical approval was obtained from the Research Ethics Board of Southern Medical University on 12th January 2018. Participants were provided with a participant information sheet and asked to sign a consent form prior to the interviews being undertaken. For participant under 16 years old, written informed consent was obtained from her parent or guardian.

Consent for publication

Not Applicable

Competing interests

The authors declare that they have no competing interests.

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Tables

Table1 Socio-demographic profiles of study participants in Guangzhou, China

Variables	Users of PAC		Non-users of PAC		χ^2	P
	(n=174)		(n=239)			
	n	%	n	%		
Age					0.975	0.914
15–19	31	17.8	45	18.8		
20–24	48	27.6	62	25.9		
25–29	46	26.4	70	29.3		
30–34	28	16.1	32	13.4		
≥35	21	12.1	30	12.6		
Marital status					20.772	0.000
Married	97	55.7	88	36.8		
Not married	65	37.4	143	59.8		
Divorced	12	6.9	8	3.4		
Level of education					0.107	0.948
Junior high school or less	36	20.7	51	21.3		
Senior high school	55	31.6	72	30.1		
College or more	83	47.7	116	48.6		
Employment status					0.383	0.826
Employed	95	54.6	136	56.9		
Student	53	30.5	72	30.1		
Unemployed	26	14.9	31	13.0		
Annual monthly income					0.070	0.995
≤2000RMB	41	23.6	55	23.0		
2000– RMB	74	42.5	100	41.8		
5000– RMB	43	24.7	61	25.6		
≥8000RMB	16	9.2	23	9.6		
Household registration place					151.0	0.000
Guangzhou	126	72.4	31	13.0		
Outside Guangzhou	48	27.6	208	87.0		

Table2 Reproductive history of study participants in Guangzhou, China

Variables	Users of PAC		Non-users of PAC		χ^2	<i>P</i>
	(n=174)		(n=239)			
	n	%	n	%		
Parity					0.117	0.943
0	67	38.5	90	37.7		
1	58	33.3	78	32.6		
≥2	49	28.2	71	29.7		
Previous induced abortion					0.028	0.921
Yes	83	47.7	112	46.9		
No	91	52.3	127	53.1		
Number of children alive					0.357	0.836
0	68	39.1	87	36.4		
1	55	31.6	81	33.9		
≥2	51	29.3	71	29.7		
Condition of the pregnancy					0.410	0.815
Planned/Wanted	32	18.4	40	16.7		
Unplanned/Wanted	50	28.7	75	31.4		
Unplanned/Unwanted	92	52.9	124	51.9		

Table 3 Reproductive knowledge and facility related factors among study participants in Guangzhou, China

Variables	Users of PAC		Non-users of PAC		χ^2	<i>P</i>
	(n=174)		(n=239)			
	n	%	n	%		
Knowledge on how soon fertility returns and could get pregnant again					128.5	0.000
Within 10–14 days	89	51.1	27	11.3		
After 3–4 weeks	69	39.7	68	28.5		
Don't know	16	9.2	144	60.2		
Any uptake of contraception					0.105	0.949
Yes	78	44.8	110	46.0		
No	85	48.9	113	47.3		
Missing	11	6.3	16	6.7		
Contraceptive use						
(multiple responses allowed)						
None	34	19.5	48	20.1	0.019	1.000
Traditional methods	26	15.0	40	16.7	0.241	0.684
IUD	56	32.2	80	33.5	0.076	0.832
Oral contraceptives	108	62.1	146	61.1	0.041	0.918
Injectables	27	15.5	32	13.4	0.372	0.571
Male condoms	129	74.1	170	71.1	0.456	0.577
Husbands'/partners' attitude on contraceptive use					0.042	0.979
Approve	76	43.7	102	42.7		
Disapprove	66	37.9	92	38.5		
Uncertain	32	18.4	45	18.8		
Decision maker on PAC use					26.481	0.000
Husband/partner	58	33.3	136	56.9		
Women herself	100	57.5	78	32.6		
Don't know	16	9.2	25	10.5		
Room received PAC					0.037	0.982
At the abortion room	70	40.2	94	39.3		
At PAC room	52	29.9	73	30.5		
Other rooms(i.e.OPD)	52	29.9	72	30.1		
Have you feel embarrassed when you receive PAC					0.194	0.908
Yes	68	39.1	98	41.0		
No	97	55.7	130	54.4		
Uncertain	9	5.2	11	4.6		

Traditional methods: rhythm, lactational amenorrhea, and withdrawal; IUD: intrauterine device;OPD:outpatient department

Table 4 Multivariate analysis of factors associated with PAC utilization in Guangzhou, China

Covariates	<i>B</i>	<i>S.E</i>	<i>Wald</i>	<i>P</i>	<i>OR</i>	<i>95%CI</i>
Marital status						
Unmarried	0.712	0.237	29.164	0.002	2.146	1.253–2.414
Married	1.015	0.842	11.039	0.741	0.401	0.091–0.692
Divorced	1.429	0.108	6.780	0.955	0.862	0.324–1.016
Household registration place						
Guangzhou	0.873	0.081	25.187	0.000	2.478	1.989–3.743
Outside Guangzhou	0.212	0.024	19.016	1.149	0.923	0.867–2.036
Knowledge on how soon fertility returns and get pregnant again						
Within 10-14 days	0.161	0.008	45.063	0.000	3.116	1.971–3.878
After 3-4 weeks	0.353	0.104	34.118	0.586	0.769	0.126–1.463
Don't know	—	—	30.025	—	—	—
Decision maker on PAC use						
Husband/Partner	0.130	0.067	17.483	1.063	0.416	0.072–0.928
Woman herself	0.646	0.361	20.018	0.000	2.901	2.005–3.416
Don't know	—	—	14.697	—	—	—

Supplementary Files

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