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

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Abstract

Background: In China, the vast majority of induced abortion is performed in public hospitals. However, post-abortion care (PAC) services are provided through the national network of family planning clinics, which are independent of the health care system. The integration of PAC services into abortion clinics in public hospitals is a new concept. This study was aimed to assess post-abortion care (PAC) utilization among abortion patients, and identify the possible factors affecting PAC uptake in Guangzhou, China.

Methods: A cross-sectional survey study was conducted at the Tianhe district of Guangzhou during the period of June to September, 2018. The multivariate logistic regression analysis was used to identify the factors that influenced PAC utilization.

Results: The PAC counseling rate of subjects was noted as 42.1% before left the health care facilities. Meanwhile, multivariate logistic regression analysis showed that unmarried women, women with local household registration, women perceive that 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 develop high-quality PAC services. It should be improved to provide better access for migrant women. The involvement of male partners in counseling is also needed.

Background

Unplanned pregnancies and induced abortions (IA) have remained an important public health issue, especially among women from developing countries because of contraceptive failure or non-use of contraception. 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 lack of quality post-abortion care (PAC) counseling^[2].

WHO has advised the counseling and provision of certain contraceptive services to all those women who wish to prevent unintended pregnancies and subsequent IA^[3]. The term PAC, was first used in 1991, which is referred as an approach to break the continued pregnancies, in turn, may improve women's sexual as well as reproductive health^[4]. The integration of family planning (FP) counseling and method provision into abortion services is an essential part of PAC. Multiple studies have demonstrated the effectiveness of PAC in decreasing repeated IA when offered to abortion patients prior to discharge from health facilities^[5-6]. However, the accessibility and the quality of PAC services remained a challenge in many low and middle income countries including China. The providers' high work-load is the major constraint to the provision of quality individual counseling. Other barriers, such as lack of counseling room and inadequate knowledge on reproductive health from providers also count. Despite the efforts

that have been done in improving the accessibility and quality of PAC, a little bit of research has only assessed the factors that may affect women's acceptance of PAC. Moreover, the quality of PAC at public hospitals in China is often found low, with limited provision of trained staff to abortion patients. This is of particular importance when considering the sexual and reproductive health needs of vulnerable groups such as rural to urban migrant women, young people and those of ethnic minorities.

In China, the vast majority of induced abortion is performed in public hospitals. However, post-abortion care (PAC) services are provided through the national network of family planning clinics, which are independent of the health care system. The integration of PAC services into abortion clinics in public hospitals is a new concept. It was not until in 2010, when the National Population and Family Planning Commission launched a pilot program to include the provision of PAC into 486 hospitals^[8]. Guangzhou, where this study was conducted, was one of the pilot cities where free PAC services were provided in selected public hospitals. So far, it remains unknown to what extent the PAC services are utilized among abortion patients. Furthermore, factors that may be associated with PAC utilization are not well-understood. Hence, this study was aimed to assess post-abortion care (PAC) utilization among abortion patients, and identify the possible factors affecting PAC uptake in Guangzhou, China

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

A cross-sectional survey study was conducted at the Tianhe district of Guangzhou during the period of June to September in 2018. All those women who have experienced at least once IA in the selected public hospitals were included in the present study. However, we excluded women who were unable to speak and listen and to or having psychiatric disorder.

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

Three public hospitals at the Tianhe district which providing PAC services, were pilotly were included in the present study. The average number of PAC users was estimated according to the recent quarterly report of patients flow in each hospital. A systematic random sampling method was applied, and the number of respondents in each hospital was determined using the population proportion to size. The sample size in each selected hospital was seen as 156, 127 and 148 respectively.

Data collection and procedures

The data were collected using an anonymous self-administered questionnaire. The questionnaire was designed with the help of the literature and it was reviewed by the 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.

After obtaining the informed consent, all the participants were interviewed face-to-face, moreover, they were assured regarding their confidentiality of their identity and responses. The data collection phase was completed with the help of seven post-graduate female nurses. They were trained for two days by the principal investigator covering interview techniques, quality control, completeness and ethics of data collection process.

Statistical analysis

The primary data was 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 the differences between PAC users and non-users. The multivariate logistic regression was employed to identify factors that were significantly associated with the uptake of PAC. A p value ≤ 0.05 was considered statistically significant in the analyses.

Ethics

The study protocol was approved by the Research Ethics Board of Southern Medical University, China. All the participants were asked to sign written permission prior to the interviewing.

Results

Of the 431 eligible women, 425(98.60%) consented to participate in the survey. Among them, 413(95.82%) questionnaires were valid.

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)

Concerning the reproductive history participants, no significant differences were noticed between PAC users and non-users. (Table 2)

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

Multivariate logistic regression analysis revealed the factors that may influence the PAC use as shown in Table 4. Unmarried women were found two times more likely to receive PAC than married women (OR:2.146, 95% CI: 1.253–2.414). The odds ratio of women having local household registration was higher as compared to the migrants (OR:2.478, 95% CI: 1.989–3.743). In addition, the main decision-maker to avail the PAC was seen as a significant factor for seeking PAC. Moreover, the odds ratio of receiving PAC among patients who were self-decision makers was three times higher as compared to those women whom deciders were husband/partner(OR:2.901, 95% CI: 2.005–3.416). In this study, significant use of PAC was noticed among those patients who were conscious that they could be pregnant sooner. Further, the women who know that fertility might be faced within 10-14 days were observed to utilize PAC three times more, when compared with those who do not know about it (OR:3.116, 95% CI: 1.971–3.878).

Discussion

This study was aimed to determine the proportion of women who received PAC among abortion patients and the possible factors that may be associated with PAC utilization in Guangzhou, China. The degree of PAC counseling before they leave the health care facilities was found 42.1% which seems to be lower than a previous European framework project done in three cities of China^[9]. The prevalence rate was even lower than the studies conducted in the middle region hospitals (71.8%), wet region hospitals (58.4%) and east region hospitals (43.1%) in China^[10], 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 the health care system. Since 2010, a very small proportion of public hospitals were included in a project to pilot the provision of post-abortion FP services, generally known as ‘the PAC project’^[7]. However, PAC provision has not yet been integrated into the Chinese health system. The majority of women seeking an abortion, therefore, were often unaware of the benefits of FP

services, thereby deeming it as an inappropriate occasion for accepting PAC counseling. Moreover, some service providers have perceived difficulties for migrant women to access PAC services due to non-transferrable health insurance and different welfare policies between provinces. Additionally, PAC providers recognized their inadequate knowledge on reproductive health and poor counseling skill may limit its practice.

In this study, unmarried women were seen 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^[11]. However, a cross-sectional facility data from 30 provinces of China found only 31% of PAC service users were unmarried^[12]. Considering the fact, it could be concluded that unmarried women had a good awareness of reproduction and contraception. Moreover, in Guangzhou, the government at all levels has taken initiatives to educate young and unmarried people regarding reproductive health knowledge including explicit attention to discussing ambivalent attitudes towards their sexuality and developing youth-friendly stance in counseling. The efforts have also been made to overcome certain barriers with large migrant populations. On the other hand, schools have also played an important part in this field. Additionally, the seek for PAC services suggests contraceptive methods have not been appropriately used to avoid unintended pregnancies. Developing critical thinking on cultural and ethical dimensions attached to adolescent sexuality may be effective here.

The odds ratio of using PAC was higher among those women who had local household registration as compared with migrants. Less than 20% of migrant women received PAC, suggesting under-utilization 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. Henceforth, additional studies are required 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 comparable with previous studies conducted in Ethiopia, suggesting that FP utilization is associated with a decrease in repeated IA^[11]. It implied that post-abortion period is the appropriate time to provide reproductive health knowledge. However, the rigid workload of PAC providers in China may prevent them from spending prolonged durations on elaborating details of contraception with each abortion woman. Moreover, the training on PAC providers was not sufficient, and thus their knowledge related to PAC was much lower than their self-evaluation. Therefore, efforts should be made to improve counseling skills, which would increase the practice of PAC effectively.

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. A similar study from three cities in China revealed that a couple's joint decision on the use of PAC services appeared to show better compliance of FP methods^[13]. This may be explained by their being 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 counseling together, while in most of the hospitals, male

partners were just given some materials regarding reproductive knowledge. Our study supported other findings that women perceived men's participation in contraception as a support for them^[14-15]. 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 the health care system. 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, the self-reported questionnaires administered to the women covered sensitive issues. This could lead some women to respond in a way they believed was more acceptable. Secondly, the causal relationship between variables and PAC utilization can not be drawn due to the cross-sectional nature of our study. Thirdly, the findings might not be representative of abortion patients in China, since participants were recruited from Guangzhou, China.

Conclusions

In conclusion, the lower utilization of PAC services in Guangzhou, China suggested an urgent need to develop high-quality PAC services. PAC services should be improved to provide better access for migrants. The involvement of male partners in counseling is also needed.

Declarations

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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.

Abbreviations

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

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Tables

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

Variables	Users of PAC (n=174)		Non-users of PAC (n=239)		χ^2	<i>P</i>
	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 (n=174)		Non-users of PAC (n=239)		χ^2	<i>P</i>
	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 (n=174)		Non-users of PAC (n=239)		χ^2	<i>P</i>
	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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