

Supplementary materials for Characteristics and Contraceptive Practices in Chinese Women Seeking Abortion: A Multi-central Descriptive Research from 2019 to 2021

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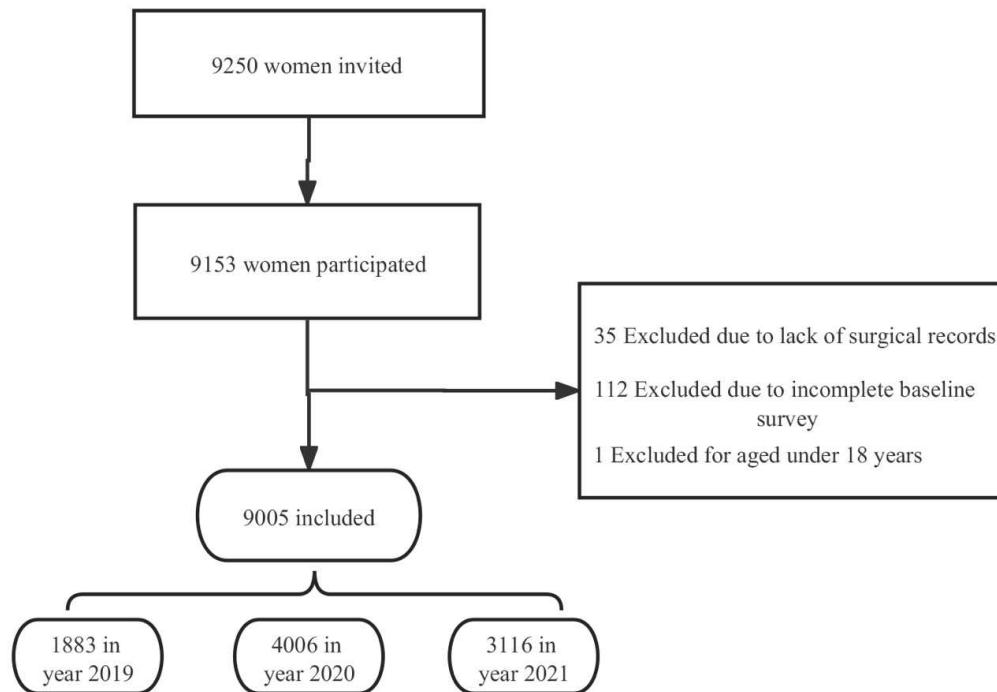


Figure S1 Process of participants' inclusion

Table S1 List of research centres

Centres	Location	PAC services
Taiyuan Maternal and Child Health Hospital	Shanxi	Exemplary unit
Zhangjiakou Maternal and Child Health Hospital	Hebei	Exemplary unit
Daqing People's Hospital	Heilongjiang	Exemplary unit
Zaozhuang Maternal and Child Health Hospital	Shandong	Exemplary unit
Zhongshan Boai Hospital	Guangdong	Exemplary unit
Changzhou Maternal and Child Health Hospital	Jiangsu	Regular unit
Yangzhou Maternal and Child Health Hospital	Jiangsu	Regular unit
Qingdao Maternal and Child Health Hospital	Shandong	Regular unit
Tanggu Maternal and Child Health Hospital	Tianjin	Regular unit
People's Hospital of Inner Mongolia Autonomous Region	Mongolia Autonomous	No PAC
Huangdao and Child Health Hospital	Shandong	No PAC
Jimo Maternal and Child Health Hospital	Shandong	No PAC
Laixi Maternal and Child Health Hospital	Shandong	No PAC

Abbreviations: PAC, Post-abortion Care

Table S2 Healthcare and lifestyle characteristics of participants between 2019 and 2021. N (%)

Characteristics	2019 (N=1883)	2020 (N=4006)	2021 (N=3116)	Total (N=9005)	<i>P</i> _{trend}
Parity					< 0.01
0	934 (49.6)	1706 (42.6%)	1342 (43.1)	3982 (44.2)	
1	888 (47.2)	1870 (46.7%)	1465 (47.0)	4223 (46.9)	
≥ 2	61 (3.2)	430 (10.7%)	309 (9.9)	800 (8.9)	
Reason for unintended pregnancy					0.36
Non-contraception	1017 (54.0)	1616 (40.3)	1633 (52.4)	4266 (47.4)	
Contraceptive failure	866 (46.0)	2390 (59.7)	1483 (47.6)	4739 (52.6)	
Reason for induced abortion					< 0.01
Social concerns	1199 (63.7)	3100 (77.4)	2376 (76.3)	6675 (74.1)	
Medical concerns	667 (35.4)	889 (22.2)	729 (23.4)	2285 (25.4)	
Policy concerns	17 (0.9)	17 (0.4)	11 (0.3)	45 (0.5)	
Method for abortion					< 0.01
Surgical method	1637 (86.9)	3580 (89.4)	2826 (90.7)	8043 (89.3)	
Medical method	246 (13.1)	426 (10.6)	290 (9.3)	962 (10.7)	

Note: *P*_{trend} values were determined by liner-by-liner association tests (Mantel-Haenszel χ^2)

Table S3 Characteristics of first abortion and abortion more than once. N (%)

Characteristics	Participants				<i>P</i> -value
	First abortion	Proportions	Abortion more than once	Proportion	
Total	5095 (56.6)	100	3910 (43.4)	100	-
Year group					0.52
2019	1082 (57.5)	21.2	801 (42.5)	20.5	
2020	2242 (56.0)	44.0	1764 (44.0)	45.1	
2021	1771 (56.8)	34.8	1345 (43.2)	34.4	
Region					< 0.01
High GDP area	1525 (54.9)	29.9	1253 (45.1)	32.0	
Median GDP area	1513 (52.8)	29.7	1354 (47.2)	34.6	
Low GDP area	2057 (61.2)	40.4	1303 (38.8)	33.3	
Age group					< 0.01
≤ 24	632 (74.4)	12.4	217 (25.6)	5.5	
25-29	1684 (66.1)	33.1	864 (33.9)	22.1	
30-34	1860 (56.8)	36.5	1414 (43.2)	36.2	
≥ 35	919 (39.4)	18.0	1415 (60.6)	36.2	
Marital status					< 0.01
Unmarried	1676 (67.1)	32.9	820 (32.9)	21.0	

Married	3386 (53.1)	66.5	2996 (46.9)	76.6	
Divorced or widowed	33 (26.0)	0.6	94 (74.0)	2.4	
Educational status					< 0.01
Middle school or below	384 (38.9)	7.5	603 (61.1)	15.4	
High school	805 (47.7)	15.8	884 (52.3)	22.6	
Vocational college	1588 (56.4)	31.2	1229 (43.6)	31.5	
Undergraduate or above	2318 (66.0)	45.5	1194 (34.0)	30.5	
Household income group, CNY					< 0.01
< 5000	2312 (58.6)	45.4	1631 (41.4)	41.7	
5000 – 9999	1738 (55.2)	34.1	1408 (44.8)	36.0	
10000 – 15000	688 (55.8)	13.5	546 (44.2)	14.0	
> 15000	357 (52.7)	7.0	325 (47.7)	8.3	
Parity					< 0.01
0	2693 (67.6)	52.9	1289 (32.4)	33.0	
1	2090 (49.5)	41.0	2133 (50.5)	54.6	
≥2	312 (39.0)	6.1	488 (61.0)	12.4	
Frequency of smoking, times					< 0.01
No smoking	4987 (57.0)	97.9	3768 (43.0)	96.4	
1-4 per month	67 (47.5)	1.3	74 (52.5)	1.9	
> 4 per month	41 (37.6)	0.8	68 (62.4)	1.7	
Frequency of drinking, times					< 0.01
No drinking	4869 (57.1)	95.6	3662 (42.9)	93.7	
1-3 per month	168 (50.9)	3.3	162 (49.1)	4.1	
> 3 per month	58 (43.0)	1.1	86 (59.7)	2.2	
Frequency of sexual activities, times					0.60
< 1 per week	2516 (57.0)	49.4	1898 (43.0)	48.5	
2-4 per week	2561 (56.1)	50.3	2001 (43.9)	51.2	
≥ 5 per week	18 (62.1)	0.4	11 (37.9)	0.3	
Reasons for unintended pregnancy					< 0.01
Non-contraception	2477 (58.1)	48.6	1789 (41.9)	45.8	
Contraceptive failure	2618 (55.2)	51.4	2121 (44.8)	54.2	

Abbreviations: GDP, Gross Domestic Product, CNY, Chinese Yuan; *P*-value were based on chi-square tests.

Table S4 Results of logistic regression model for recurrent abortions

Characteristics	Recurrent abortion	
	OR	95% CI
Region		
High GDP	Ref.	Ref.
Medium GDP	1.33	1.16 - 1.54 ***
Low GDP	1.00	0.83 – 1.21
PAC services		

NO PAC	Ref.	Ref.
Exemplary unit	0.65	0.56 – 0.75 ***
Regular unit	0.96	0.80 – 1.17
Frequency of smoking, times		
No smoking	Ref.	Ref.
1-4 per month	1.74	1.21 – 2.48 **
> 4 per month	2.51	1.64 – 3.83 ***
Frequency of drinking, times		
No drinking	Ref.	Ref.
1-3 per month	1.31	1.04 – 1.67 *
> 3 per month	1.68	1.16 – 2.42 **
Reasons for unintended pregnancy		
Non-contraception	Ref.	Ref.
Contraceptive failure	1.20	1.09 – 1.31 ***
Age group		
≥ 35	Ref.	Ref.
≤ 24	0.23	0.18 – 0.28 ***
25-29	0.39	0.34 – 0.45 ***
30-34	0.52	0.46 – 0.58 ***
Marital status		
Married	Ref.	Ref.
Unmarried/Widowed/divorced	0.87	0.76 – 0.99 *
Educational levels		
Middle school or below	Ref.	Ref.
High school	0.79	0.67 – 0.94 **
Vocational college	0.60	0.51 – 0.70 ***
Undergraduate or above	0.35	0.30 – 0.41 ***
Household income group, CNY		
< 5000	Ref.	Ref.
5000 – 9999	1.07	0.96 – 1.19
10000 – 15000	0.93	0.80 – 1.08
> 15000	0.99	0.83 – 1.19
Parity		
≥ 2	Ref.	Ref.
0	0.60	0.49 – 0.72 ***
1	0.85	0.73 – 1.01

Abbreviations: GDP, Gross Domestic Product, OR, Odds ratio, CI, Confidence interval, Ref, Reference, CNY, Chinese Yuan; * $P < 0.05$, ** $P < 0.01$, *** $P < 0.001$

Table S5 Specific contraceptive methods for women before and after abortion by region and PAC services. N (%)

	Total	IUDs	Contraceptive implants	CCI	COC pills	Condom	EC	FAB	CI	ECP	Non
Prior to abortion											
Total	9005 (100.0)	47 (0.5)	0 (0.0)	8 (0.1)	119 (1.3)	2868 (31.8)	17 (0.2)	811 (9.0)	446 (5.0)	423 (4.7)	4266 (47.4)
High GDP	2778 (100.0)	13 (0.5)	0 (0.0)	2 (0.1)	44 (1.6)	554 (19.9)	11 (0.4)	331 (11.9)	189 (6.8)	110 (4.0)	1524 (54.8)
Medium GDP	2867 (100.0)	13 (0.4)	0 (0.0)	1 (< 0.1)	35 (1.2)	1217 (42.4)	2 (0.1)	193 (6.7)	111 (3.9)	106 (3.7)	1189 (41.5)
Low GDP	3360 (100.0)	21 (0.6)	0 (0.0)	5 (0.1)	40 (1.2)	1097 (32.7)	4 (0.1)	287 (8.6)	146 (4.3)	207 (6.2)	1553 (46.2)
Post abortion											
Total	7796 (100.0)	314 (4.0)	1 (< 0.1)	0 (0.0)	3879 (49.8)	3463 (44.4)	3 (< 0.1)	4 (0.1)	3 (< 0.1)	-	129 (1.7)
Exemplary PAC	3208 (100.0)	300 (9.4)	1 (< 0.1)	0 (0.0)	2544 (79.3)	301 (9.4)	2 (0.1)	2 (0.1)	1 (< 0.1)	-	57 (1.8)
Regular PAC	2524 (100.0)	6 (0.2)	0 (0.0)	0 (0.0)	1274 (50.5)	1179 (46.7)	1 (< 0.1)	2 (0.1)	2 (0.1)	-	60 (2.4)
No PAC	2064 (100.0)	8 (0.4)	0 (0.0)	0 (0.0)	61 (3.0)	1983 (96.1)	0 (0.0)	0 (0.0)	0 (0.0)	-	12 (0.6)

Abbreviations: GDP, Gross Domestic Product, PAC, Post-abortion Care, IUD, Intrauterine devices, CCI, Combination contraceptive injections, COC, Combination oral contraceptive, EC, Eternal contraceptive, FAB, Fertility awareness-based, CI, Coitus interruptus, ECP, emergency contraceptive pills.

Table S6 Use of different effective contraception before and after abortion by PAC units.

	Before abortion	Post abortion				No contraception
		Most effective	Effective	Less effective	Least effective	
Exemplary PAC	Most effective	5	3	1	0	0
	Effective	0	36	4	0	0
	Less effective	208	1302	142	2	18
	Least effective	32	351	20	0	1
	No contraception	56	852	136	1	38
Regular PAC	Most effective	0	5	4	0	1
	Effective	0	16	11	0	1
	Less effective	2	215	214	1	15
	Least effective	2	318	252	1	6
	No contraception	2	720	699	2	37
No PAC	Most effective	2	1	21	0	0
	Effective	0	2	28	0	1
	Less effective	4	19	507	0	5
	Least effective	0	8	387	0	1
	No contraception	2	31	1040	0	5
Total		315	3879	3466	7	129

Table S7 Results of logistic regression model for contraception before abortion

Characteristics	Contraception prior to abortion	
	OR	95% CI
Region		
Low GDP	Ref.	Ref.
High GDP	0.60	0.54 – 0.67 ***
Medium GDP	1.09	0.98 – 1.21
Age group		
≥ 35	Ref.	Ref.
≤ 24	1.20	0.99 – 1.45
25-29	1.09	0.95 – 1.24
30-34	1.01	0.90 – 1.13
Marital status		
Married	Ref.	Ref.
Unmarried/Widowed/divorced	0.89	0.79 – 1.01
Educational levels		
Middle school or below	Ref.	Ref.
High school	1.35	1.15 – 1.59 ***
Vocational college	1.37	1.17 – 1.59 ***
Undergraduate or above	1.47	1.27 – 1.71 ***
Household income group, CNY		
< 5000	Ref.	Ref.
5000 – 9999	0.82	0.74 – 0.91 ***
10000 – 15000	0.93	0.81 – 1.08
> 15000	0.70	0.58 – 0.83 ***
Parity		
≥ 2	Ref.	Ref.
0	0.46	0.38 – 0.55 ***
1	0.64	0.54 – 0.76 ***
Frequency of sexual activities, times		
< 1 per week	Ref.	Ref.
2-4 per week	0.69	0.63 – 0.75 ***
≥ 5 per week	0.33	0.15 – 0.73 **
Frequency of smoking, times		
No smoking	Ref.	Ref.
1-4 per month	0.89	0.63 – 1.27
> 4 per month	0.71	0.47 – 1.06
Frequency of drinking, times		
No drinking	Ref.	Ref.
1-3 per month	1.26	1.01 – 1.59 *
> 3 per month	0.86	0.61 – 1.22

Abbreviations: GDP, Gross Domestic Product, CNY, Chinese Yuan, OR, Odds ratio, CI, Confidence interval, Ref, Reference; * $P < 0.05$, ** $P < 0.01$, *** $P < 0.001$