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Provider-controlled or user-dependent contraceptive methods: Levels and pattern among married women of reproductive age in China, 1988–2006

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ABSTRACT

Objectives: To explore levels and patterns in contraceptive use since the introduction of informed choice in reproductive health services in China since 1994, and to assess the implications of reproductive health service needs among married women of reproductive age in China.
Material and methods: Data from Chinese nationwide surveys of family planning and reproductive health undertaken in 1988, 1997, 2001, and 2006 were analyzed to assess levels and trends in patterns of contraceptive use among married women by age, residence, and number of children. Contraceptive methods were classified into two categories: provider-controlled and user-dependent methods.
Results: The provider-controlled pattern for contraceptive use was predominant regardless of whether women were free to choose their own contraceptives. Older, rural women, and those with more than one child preferred provider-controlled contraceptive methods; this trend has changed little after 1997. In contrast, the user-controlled methods were preferred by young, urban women, strikingly with no or only one child, and geographically in more affluent areas in north or southwest China.
Conclusion: A preference for user-dependent methods is noted in the urban areas but inclination towards provider-controlled contraceptive methods is still prevalent in rural areas in China.

Introduction

In 1979, the Chinese government introduced the one-child family policy to regulate population growth [1]. Under this policy it became mandatory for married couples of reproductive age to use an intrauterine device after the first birth and undergo sterilization after the second, a network of family planning technical service centers served as the contact point between couples and service providers.[2]

In 1994, the United Nations International Conference on Population and Development (ICPD) in Cairo declared that people have the freedom to decide whether, when, and how often to reproduce. This implies that men and women have the right to be informed and to have access to safe, effective, affordable, and acceptable methods of family planning of their choices through local service centers. In response, the Chinese government began to promote actively reproductive health plans [2] and informed choice in family planning programs [3,4]. More services were provided to increase knowledge and access to contraception services [5].

Now two decades after the ICPD, it is important to take stock of the fundamental changes in contraceptive method preference in China after the introduction of informed choice, and the factors that influence women's choice of contraceptive methods.

Contraceptive methods can be classified into two categories: provider-controlled and user-dependent methods. Women using the former tend to use long-term contraceptive methods implemented by doctors, because women have no choice; women using the latter are free to choose their own contraception and mainly use short-term, over-the-counter methods. Given the diversity of China's fertility policies carried out at local areas and at the national level [6], most of reproductive age women could have

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Table 1
Changes in patterns of contraceptive use among Chinese married women of reproductive age, 1988–2006 (%).

Pattern	1988, (95%CI)	1997, (95%CI)	2001, (95%CI)	2006, (95%CI)	P_{trend}[a]
Provider controlled	87.39 (87.02–87.76)	92.62 (90.78–94.46)	90.59 (89.52–91.66)	87.65 (86.47–88.83)	<0.001
User dependent	12.61 (12.47–12.75)	7.38 (6.86–7.90)	9.41 (9.07–9.75)	12.35 (11.91–12.79)	<0.001

[a] P_{trend} was tested by Cochran-Armitage trend analysis.

Table 2
Changes in patterns of contraceptive use among Chinese married women of reproductive age by education level, 1988–2006 (%).

		1988	1997	2001	2006
Provider controlled	Illiterate	94.63	97.93	97.79	78.68
	primary	90.79	96.28	95.29	80.13
	junior high school	81.27	92.21	90.26	74.74
	senior high school+	70.97	79.72	75.15	61.34
User dependent	Illiterate	5.37	2.07	2.21	21.32
	primary	9.21	3.72	4.71	19.87
	junior high school	18.73	7.79	9.74	25.26
	senior high school+	29.03	20.28	24.85	38.66

their own choices of contraceptive behaviors after the informed choice was promoted by the government.

Thus, we presume two patterns of contraceptive use in family planning programs: In the *provider-controlled pattern*, contraceptive methods are guided by family planning policies, advocated by the government, popularized by family planning services, and used passively by users; in the *user-dependent pattern*, users themselves choose the contraceptive methods according to their own health conditions and life interests.

Users may still choose long-term contraceptive methods at their own free will. But in the early stages of family planning programs, people lacked the initiative in selecting and using long-term contraceptive methods. For example, Sterilization and the IUD constitute 93 percent of all methods being used [7]. The IUD is the predominant reversible method, constituting 88 percent of all reversible methods [8].

Although there were some researches on contraceptive methods in China, there was very limited research to classify the contraceptive methods into provider-controlled methods and user-dependent methods and analyzed these two controlled methods transition from 1988 to 2006. In the study here, we explored and analyzed the transition of these two controlled methods by using multiple national surveys.

Materials and methods

The data for this study came from four nationwide surveys conducted by the National Population and Family Planning Committee in 1988, 1997, 2001, and 2006.[3] The 1988 survey used a stratified, systematic, clustered, unequal-proportional sampling method to sample 30 provinces, municipalities, and autonomous regions of China. The later three surveys used stratified, three-stage, clustered, probability proportional to size (PPS) to sample 31 provinces, municipalities, and autonomous regions of China. The questionnaires on reproductive health for all four surveys contained questions about contraception. Studies have indicated that the standard of data were of good quality [9–14].

This article focuses on married women aged 15–49 years. The analyzed samples were 249,990 in 1988, 10,494 in 1997, 30,551 in 2001, and 24,176 in 2006, accounting for 54%, 69%, 77%, and 73% of the total samples, respectively (Appendix A).[4]

To examine women's motivations and initiatives in contraception, for the purpose of this paper, we classified contraceptive methods into two categories: provider-controlled methods (male sterilization, female sterilization, intrauterine devices, and implants) and user-dependent methods[5] (oral pills, condoms, and other methods[6]). If most of women adopted provider-controlled methods, we called this pattern of contraceptive use as the *provider-controlled contraceptive use pattern* (hereafter, *provider-controlled pattern*); if most women adopted user-dependent methods, we called this pattern as the *user-dependent contraceptive use pattern* (hereafter, *user-dependent pattern*).

An exploratory analysis was conducted by SPSS to examine the prevalence of contraceptive use and spatiotemporal changes in patterns of contraceptive use among women by age, area of residence, and number of children.

Results

The predominant contraceptive methods used by women were provider-controlled methods, the proportion of which held steady above 87% from 1988 to 2006. Since 1997, the proportion of women

[3] The four surveys are as follows: the National Population and Fertility Survey (1988), the National Population and Reproductive Health Survey (1997), and the National Family Planning and Reproductive Health Survey (2001 and 2006).

[4] Most respondents were women aged 20–49. The proportion of women aged 30–39 held steady at more than 40% in the four surveys. From 1988 to 2006, the proportion of women aged 20–29 decreased more than 10%, whereas the proportion of women aged 40–49 increased more than 13%. This correlates with the baby boomers of the 1950s and 1960s entering their reproductive years, gradually influencing the age structure of Chinese population with the passage of time. The educational level of the women varied considerably across the four surveys. The proportion of illiterate and semiliterate women dropped considerably; the proportion with a middle school, high school, or college education or more increased markedly; and the proportion with a primary school education increased from 1988 to 2001 and then dropped for 2006. This reflects improvements in education in China in the past 20 years. The level of urbanization revealed in the 1988 data (39.5%) was markedly higher than the national average of 25.8%, whereas of the levels in 1997, 2001, and 2006 were below the national averages at the time (22% compared with 29.9% in 1997, 24.4% compared with 37.7% in 2001, and 32.6% compared with 43.9% in 2006). This may be attributable to the use of a different sampling design in the 1988 survey. However, the trend for urbanization found in the later three surveys was in accordance with the national average. The geographic distribution of the sample across the six main regions of China reflected the general distribution of the Chinese population at the time. The proportion of respondents in the north, east, and southwest showed little change, whereas those in the northeast and northwest decreased considerably and that in south-central China increased considerably. The average number of children among the respondents changed greatly from 1988 to 2006. The proportion of single-child families increased considerably, whereas the proportion of families with three or more children dropped by at least 50% in 2001 and more than 70% in 2006. The proportion of families with two children held steady at about one third.

[5] Oral pills and injections were classified in the same category in the 1997 survey, but the number of respondents using these methods was very small. In addition, although injections can only be given by medical personnel, their use depends greatly on the user's initiative (i.e., the user must go to the medical service post to request the service). Thus, we regarded this method as a user-dependent method.

[6] Other methods include the rhythm method, withdrawal, etc.