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**PATTERNS OF CONTRACEPTIVE ACCEPTANCE AFTER ABORTION:
A STUDY IN FOUR ASIAN HOSPITALS**

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**PATTERNS OF CONTRACEPTIVE ACCEPTANCE AFTER ABORTION:
A STUDY IN FOUR ASIAN HOSPITALS**

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Abstract

PATTERNS OF CONTRACEPTIVE ACCEPTANCE AFTER ABORTION: A STUDY IN FOUR ASIAN HOSPITALS

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Contraceptive acceptance among women undergoing an induced abortion or treatment for an incomplete abortion was evaluated and compared for four hospitals in Asia--two hospitals where abortion was legal (Centers A and B) and two hospitals where it was legally restricted (Centers C and D). About half of the women in Center A used no contraceptive method and an additional 45 percent used conventional methods before abortion. Two weeks after abortion, 83.8 percent reported using some form of contraception, usually condoms. In Centers B and C about three fourths of the women used no contraceptive before the abortion. At Center B, about one fourth accepted tubectomy after abortion, and about one half, IUDs or oral contraceptives. At Center C about 70 percent continued to use no contraceptives after abortion with those accepting contraceptives usually choosing orals. In Center D only 3.1 percent of the 3533 women studied used contraceptives before abortion; those who returned for a follow-up visit usually accepted pills (43.3%) if they intended to use contraception.

Differences in the postabortion contraceptive acceptance rates appeared to be related to whether the abortion was induced or spontaneous and to socio-demographic variables including maternal age, marital status, family size, number of additional children wanted, and the patient's employment status. Neither the patient's nor the husband's educational level appeared to affect whether the couple chose to use contraception after abortion, but they affected the method chosen by couples at Center B, where the distribution of contraceptive method selected after abortion was heterogeneous enough for patient characteristics among those accepting specific methods to be compared.

I. INTRODUCTION

Studies in recent years^{1 2 3 4} have suggested that women are highly motivated to accept contraception after induced abortion. While women tend to be highly receptive to contraceptive counseling immediately after an induced abortion, their acceptance of contraception depends on access to information, availability of contraceptive services, and certain patient characteristics. This study was undertaken to evaluate and compare factors associated with contraceptive acceptance among women undergoing abortion in two centers where abortion is legal and in two centers where it is legally restricted. Two related questions are discussed in this paper: (1) What factors affect contraceptive choice immediately after abortion? and (2) Do women continue to be motivated to practice contraception after abortion?

II. MATERIALS AND METHODS

Since 1971 the International Fertility Research Program (IFRP) in Research Triangle Park, North Carolina has collected information on induced and spontaneous (incomplete, inevitable, or threatened: IIT) abortions in countries where the legal status of abortion varies. The four family planning programs included in this study provided: (1) a choice of contraceptive methods for the patients, (2) information on methods of contraception that the patients used during the month of conception and after the abortion, and (3) records for at least 250 patients. Centers A and B were located in an Asian country where abortion is legal. Centers C and D were located in Asian countries where abortion is legally restricted. At Centers A and B, patients underwent legally induced abortions while at Centers C and D, the patients were treated for spontaneous and illegally induced abortions. The number of subjects included, the rates of follow-up, and the durations of the studies at the institutions are shown in Figure 1:

At Center A, a family planning project located in a rural area, the field staff included female public health nurses who visited the villages from the project center and male agricultural extension workers who resided in the villages. Their basic philosophy was to provide information on all available

	Period of Study				Number of Cases	Rate of Follow-Up
	1972	1973	1974	1975		
Center A	████████████████████				279	98.2
Center B	████████████████████				1159	99.7
Center C	████████████████████				1072	98.9
Center D	████████████████████				3533	69.4

Figure 1. Time Spans of Study, Number of Abortion Patients, and Follow-Up Rates in Four Centers, 1972-1975.

methods of contraception for potential acceptors who can then choose an appropriate method. The more ready availability of the male workers may have influenced condom use. At Center B, a government medical school hospital, contraceptive counseling was offered by the paramedical staff. However, field workers, motivated by the government's incentive system, often directed patients to the hospital and influenced what methods the patients chose. At Center C, the obstetrics and gynecology department of the university teaching hospital, which is supported in part by the country's Planned Parenthood Association, offered contraceptive counseling and services to the IIT abortion patients. Center D is a university teaching hospital where staff members, usually social workers, were assigned to interview each patient about her social background as well as the manner of onset of the abortion. Before the patient was discharged from the hospital, a case worker discussed with her various contraceptive methods to determine the method most advisable for the couple. The rate of follow-up was lowest at this center, but demographic characteristics of the patients who were and who were not located for follow-up did not differ significantly.

Each institution used standard protocols and data collection forms provided by the IFRP. The staffs at each center recorded data on patient characteristics, abortion procedures, and complications, and these data underwent both visual scanning and computer editing at the IFRP before analysis. Each institution used the same guidelines for recording information and the same definitions of terms. Conventional methods of contraception were defined as rhythm, withdrawal, diaphragm, foam, jelly, and condom. Oral contraception, IUDs, and

sterilization were individually coded. "Other methods" included folk preparations, abstinence, aspirin, and Depo Provera. Follow-up visits were usually scheduled between two and four weeks after treatment; 90 days after treatment, patients were considered lost to follow-up.

The study data have two main limitations for interpretation. Spontaneous abortions and abortions that were artificially induced before the patient was admitted to the hospital cannot be differentiated for analysis. It is hypothesized that the spontaneous abortion patient may be less interested in contraception after abortion. For patients who wanted additional children, no information was taken on when the next child was desired.

III. RESULTS

Most patients were married at the time of the study. The median age varied only slightly from center to center (25.7 to 27.5 years) while the median parity varied more markedly (from 1.4 to 2.5 live births). The induced abortion patients were almost twice as likely as the IIT patients to state that they wanted to stop child bearing and were significantly ($p < 0.05$) more likely to have been using contraceptives during the month of conception (Table I).

TABLE I
SELECTED CHARACTERISTICS OF ABORTION PATIENTS
IN FOUR CENTERS, 1972-1975

	Induced Abortion		IIT* Abortion	
	Center A (N = 279)	Center B (N = 1159)	Center C (N = 1072)	Center D (N = 3533)
Currently married (%)	95.0	85.3	98.4	88.6
Median age	27.5	25.7	26.8	26.6
Median parity	2.5	2.1	2.4	1.4
Wanting no more children (%)	71.3	63.7	37.9	37.1
Previously practicing contraception (%)	50.0	29.0	18.4	3.2
Accepting contraception after abortion (%)	83.8	75.5	29.8	50.3
Increase in acceptance (%)	1.7	2.6	1.6	15.7

* IIT = incomplete, inevitable, or threatened abortion.

The distributions of contraceptive use during the month of conception and at follow-up at each center are shown in Figure 2. Patients at Center A more frequently used conventional methods, predominantly condoms, both during the...

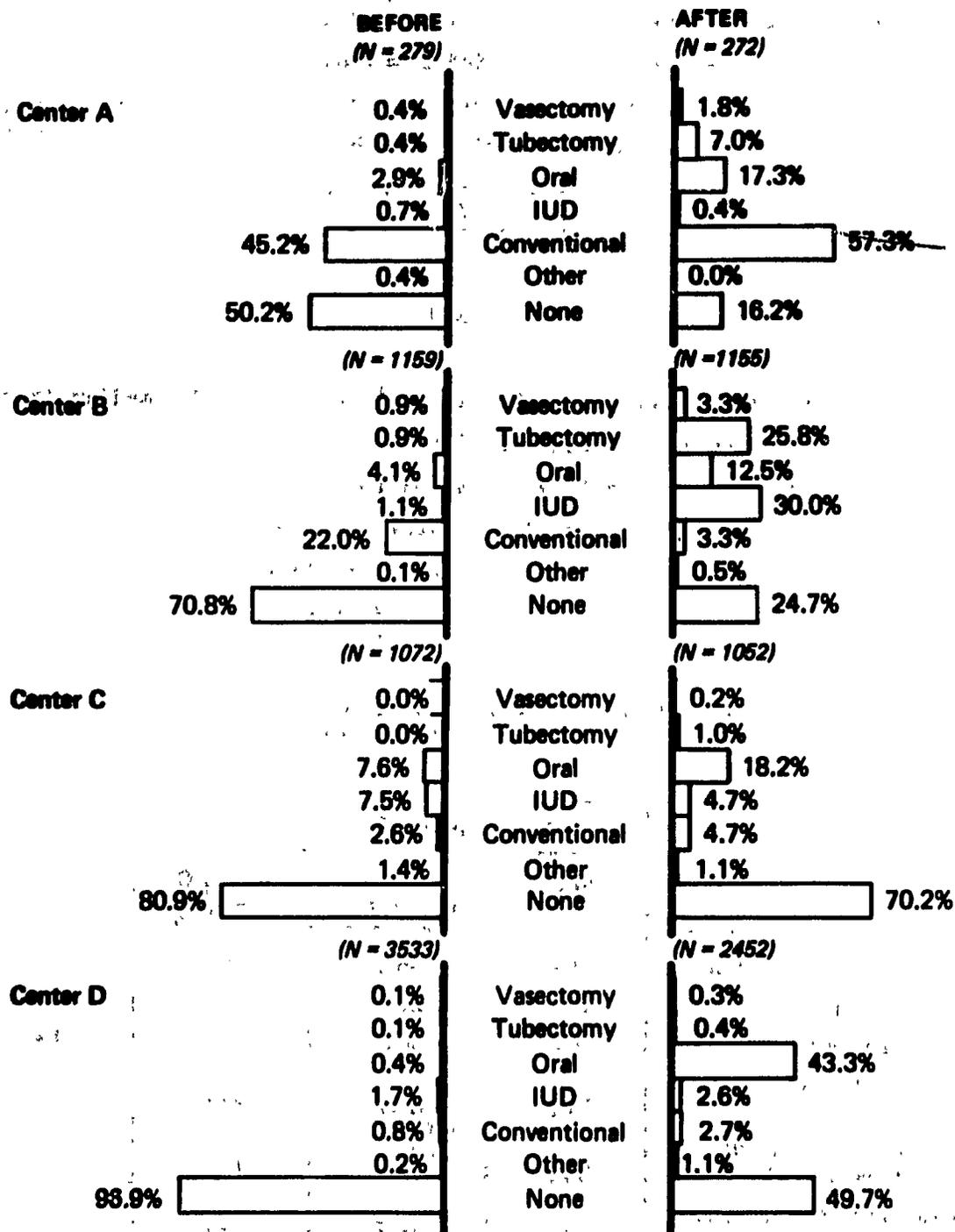


Figure 2. Contraceptive Behavior Before and After the Procedure in Four Centers, 1972-1975.

month of conception and at follow-up, than patients at the other centers. Patients at Center B had the most heterogeneous pattern of contraceptive methods chosen after abortion: they tended to use more effective methods, and their use of conventional methods declined. Patients at Centers C and D chose orals most frequently. Use of IUDs after abortion declined slightly at Center C. The induced abortion patients were significantly more likely to use contraceptive methods before as well as after the abortion.

The contraceptive methods chosen after abortion were compared for patients at each center who were and who were not using some method of contraception during the month of conception. Although these distributions emphasize a center-specific effect, many consistencies were observed. Among the patients using no method of contraception during the month of conception, tubectomy was more frequently chosen after abortion while vasectomy, orals, IUDs, and conventional methods were less frequently chosen. Induced and IIT abortion patients who had used no method of contraception during the month of conception were more likely to use no method after abortion (Figure 3).

Patients' decisions to contracept after abortion were affected by maternal age (Figure 4). At all centers teenage patients were the least likely to accept contraceptives after abortion, and women more than 30 years of age were slightly less likely than women in their 20's to accept contraceptives.

The more living children (Figure 5) and the fewer additional children wanted* (Figure 6), the more likely a patient was to contracept after abortion. These relationships were strongest for Centers C and D, where IIT patients were treated.

Except at Center D, married women were most likely to accept contraception (Figure 7). Women who were gainfully employed (Figure 8) tended to accept contraception after abortion slightly more frequently than patients who were not employed. Neither the patient's nor the husband's level of formal education affected whether the couple chose to contracept after abortion (not shown).

*The number of additional children wanted was not a good discriminator at Center A.

Since the most heterogeneous distribution of postabortal contraceptive methods accepted occurred at Center B, characteristics of patients at that

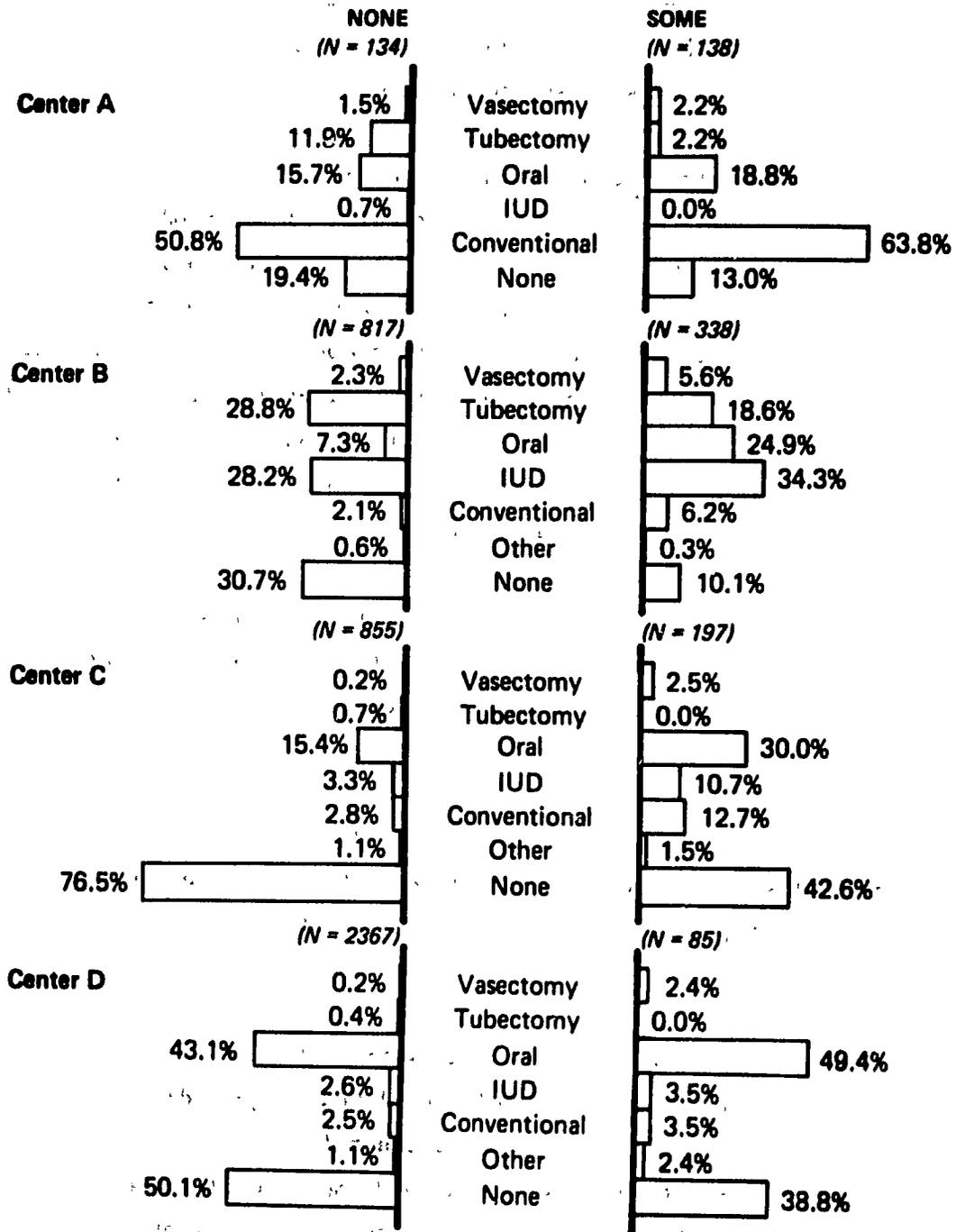


Figure 3. Contraceptive Method Chosen After Abortion by Women Using Some or No Method of Contraception During the Month of Conception in Four Centers, 1972-1975.

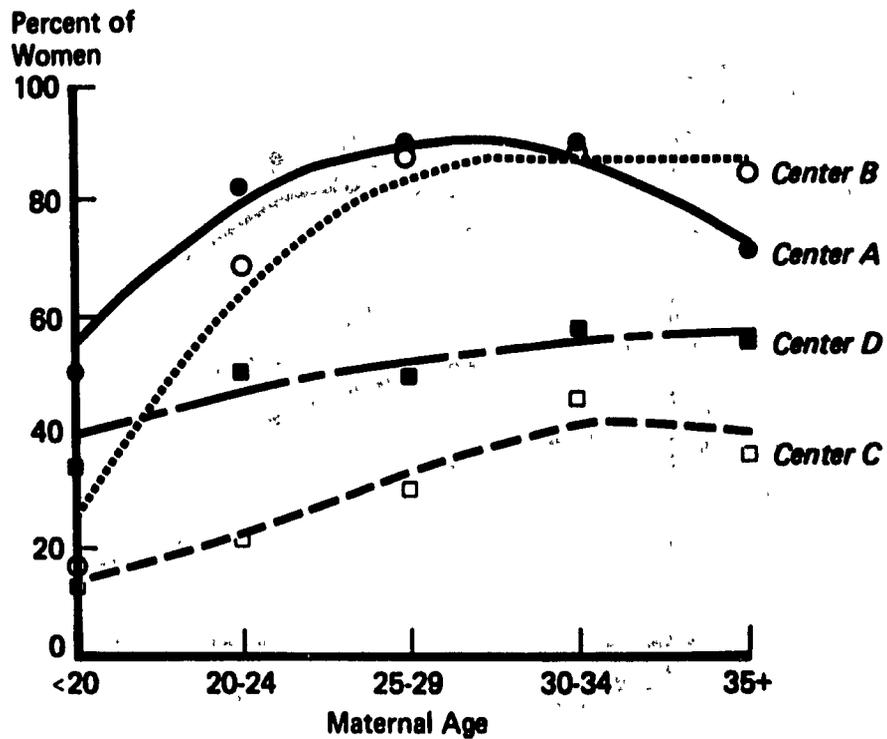


Figure 4. Percent Women Accepting Contraceptives After Abortion by Maternal Age.

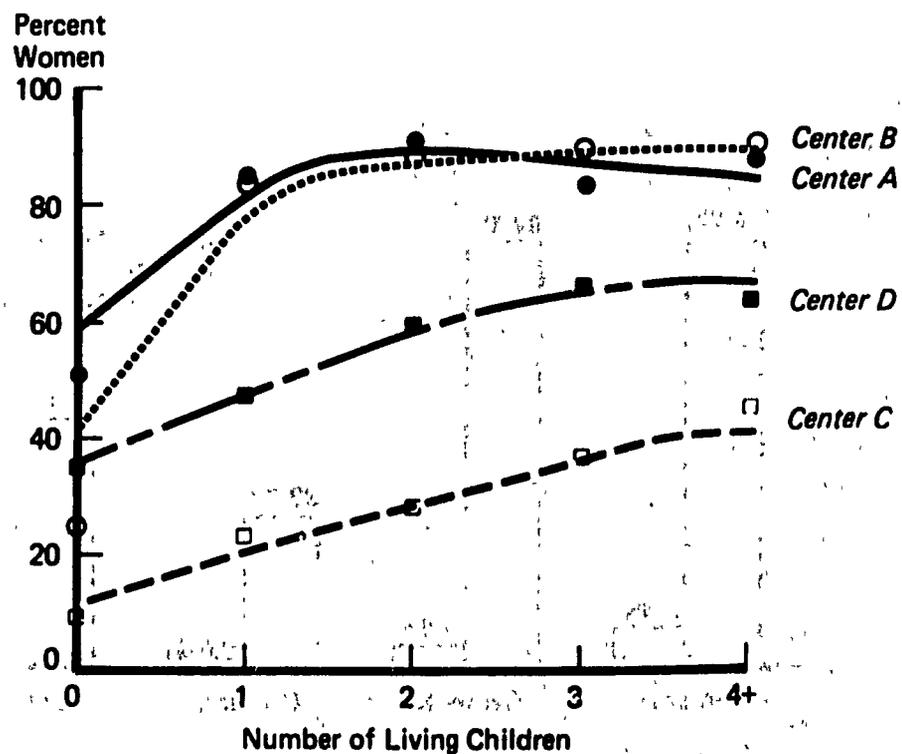


Figure 5. Percent Women Accepting Contraceptives After Abortion by Number of Living Children.

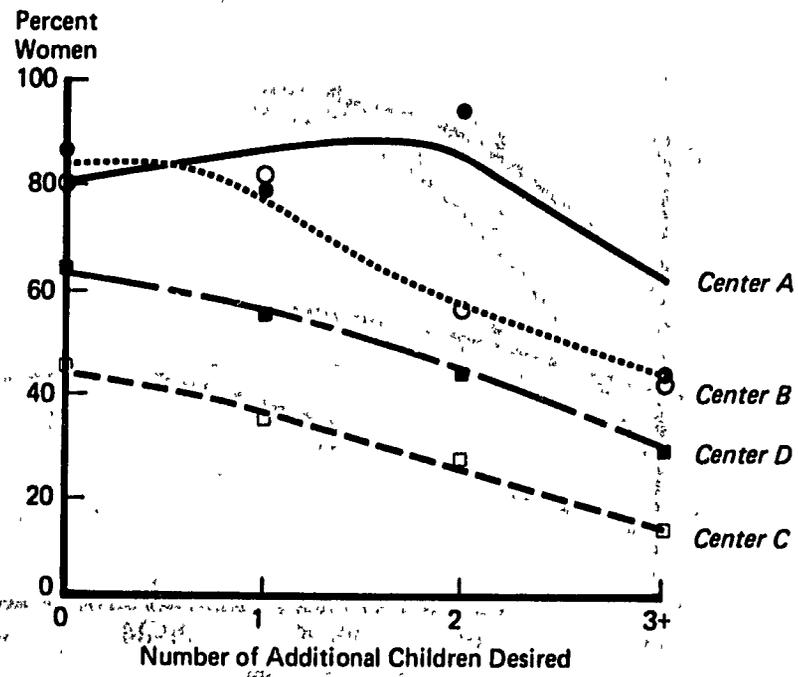


Figure 6. Percent Women Accepting Contraceptives After Abortion by Number of Additional Children Desired.

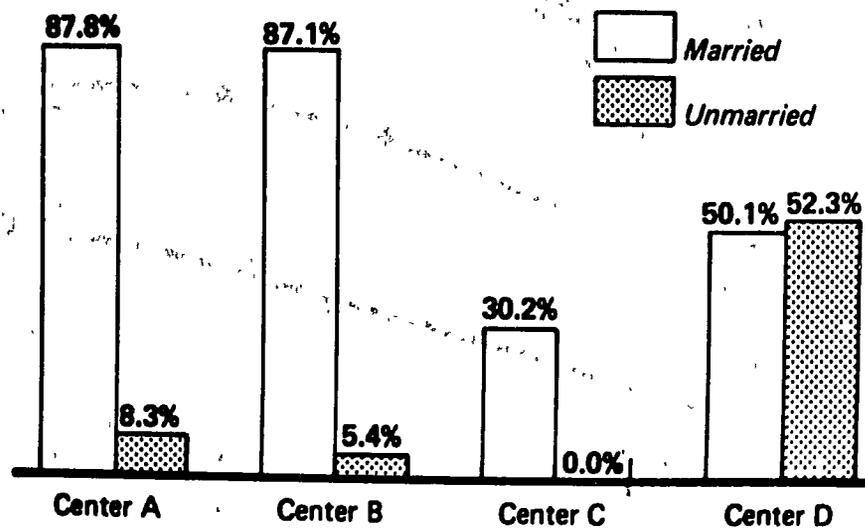


Figure 7. Percent Women Accepting Contraceptives After Abortion By Marital Status.

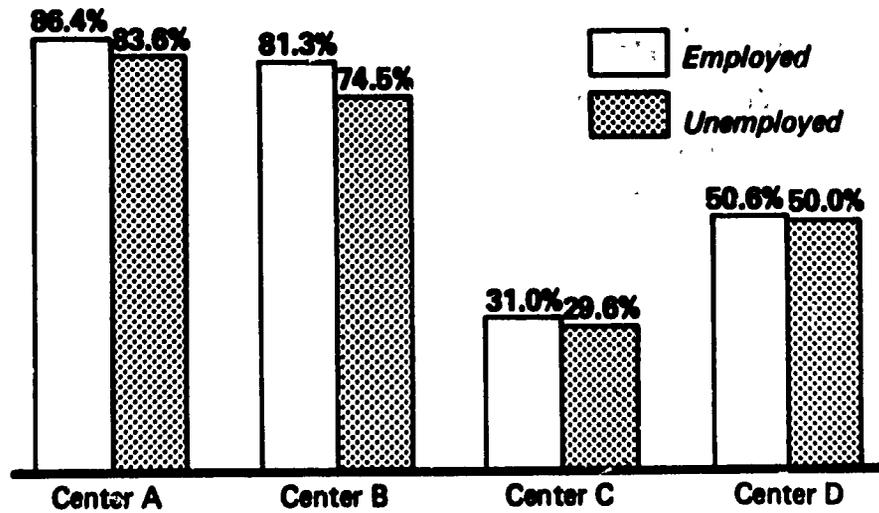


Figure 8. Percent Women Accepting Contraceptives After Abortion by Employment Status.

center were analyzed by method chosen (Table II). Patients who chose not to contracept after abortion were the youngest, wanted the most additional children, and had the fewest living children. As expected, patients who chose sterilization were significantly older ($p < 0.05$), had larger families, and had a significantly lower mean number of years of education. The mean years of education was significantly higher ($p < 0.05$) among women accepting orals.

For patients for whom follow-up information was available, the contraceptive method they had chosen on the day of the procedure and the method they were using at follow-up (usually within two to four weeks of the procedure) were compared

TABLE II
SELECTED PATIENT CHARACTERISTICS BY CONTRACEPTIVE METHOD
CHOSEN AFTER ABORTION FOR PATIENTS* FOLLOWED UP AT CENTER B

Contraceptive Method Chosen After Abortion	N	Mean Age	Mean Education	Mean Additional Children Wanted	Mean Number of Living Children
None	285	22.9	7.9	0.93	0.9
Conventionals	38	26.0	8.8	0.58	2.0
IUDs	346	25.6	9.9	0.68	1.8
Orals	144	25.5	11.2	0.88	1.5
Sterilization	336	30.4	5.5	NA	3.5

* Others (N = 6) were not included.

(Table III). The correlation between what patients planned to use and what they actually used after abortion was highest at Center B. Table III also shows the percent of patients using no method of contraception after abortion categorized by the method they planned to use. At each center some patients (13.8%, 6.6%, 16.9%, and 25.7% for Centers A, B, C, and D, respectively) who planned not to use contraceptives reported at follow-up that they were using contraceptives. On the other hand, patients who planned to be sterilized were the least likely to have accepted sterilization by the time they came for their follow-up visit. Again, a center-specific effect was observed: Center C had the highest rate of women who planned to use contraceptives after abortion and were not doing so at follow-up, and Center B, the lowest.

TABLE III
 PATIENTS USING NO CONTRACEPTIVE METHOD AT FOLLOW-UP
 BY METHOD THEY PLANNED TO USE AFTER ABORTION
 IN FOUR CENTERS, 1972-1975

Method Planned After Abortion	Patients Using No Contraceptives at Follow-Up							
	Center A (N = 279)		Center B (N = 1159)		Center C (N = 1072)		Center D (N = 3533)	
	No.	%	No.	%	No.	%	No.	%
None	25	86.2	326	93.4	671	83.1	1033	74.3
IUDs	0	0.0	9	2.4	30	38.0	33	27.7
Orals	25	13.8	11	6.9	32	27.6	66	9.2
Tubectomy	9	11.4	12	3.4	2	22.2	86	52.8
Vasectomy	12	13.0	7	12.3	0	0.0	5	45.5
Conventionals	9	7.3	4	6.6	9	20.9	0	0.0
Total	55	11.3	43	4.2	73	29.3	191	17.8
r*	0.51		0.88		0.57		0.61	

* Pearson-Product Moment Correlation between the contraceptive the patient was planning to use after the abortion and the method she was actually using when she came for follow-up.

IV. DISCUSSION

The center-specific effect on which contraceptive method the patient chooses was marked at three of the four centers studied. Whether the center-specific effect is related to the availability of supplies and services or to staff biases in imparting information cannot be determined from the data. Previous

contraceptive practice was lowest and contraceptive acceptance after abortion highest at Center D. The almost 16-fold increase in acceptance among the IIT patients at this center emphasizes how important the center can be in effecting contraceptive acceptance.

IIT patients who were using some method of contraception during the month of conception (which may indicate that their abortions were illegally induced) were more likely than other patients treated at the same center to practice contraception after the abortion, but less likely than women for whom induced abortion was legally available. Again, IIT patients who did not want additional children were more likely to accept contraception after abortion than other women treated at the same center but less likely than patients obtaining induced abortions who did not want additional children. This study shows that the number of living children and the number of additional children wanted are particularly good indicators among IIT patients of the acceptability of contraception after abortion. These variables may also be good discriminators for spontaneous and illegally induced abortion patient populations.

At all centers, whether abortion was legal or not, teenagers had the lowest rates of contraceptive acceptance. Those teenage patients were usually married but did not want this pregnancy.

While many women who have just undergone an abortion procedure are highly motivated to accept contraception, it appears that a significant proportion of these women do not sustain this motivation. In this study, among women who accepted contraception immediately after abortion, 3.1 to 10.7 percent were not practicing contraception two to four weeks later. Perhaps even fewer would continue to contracept one year later. There is, therefore, a need to provide information through follow-up services to these "high-risk" women.

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