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Structured contraceptive counseling—A randomized controlled trial

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ABSTRACT

Objective: To evaluate the addition of structured contraceptive counseling to usual care on choice, initiation, and continuation of very effective contraception after uterine aspiration.
Methods: We conducted a RCT of a version of the WHO Decision-Making Tool for Family Planning Clients and Providers with women having a procedure for a spontaneous or induced abortion. Our intervention provided structured, standardized counseling. We randomized women to usual care or usual care with structured counseling. Our outcomes included choosing a very effective contraceptive method and 3 months continuation.
Results: Fifty-four percent of all participants chose a very effective method. Women in the intervention group were no more likely to choose a very effective method (OR 0.74, 95% CI 0.44, 1.26) or to initiate their method compared to the usual care group (OR 0.65, 95% CI 0.31, 1.34). In multivariate models, structured counseling was not associated with using a very effective method at 3 months (AOR 1.06, 95% CI 0.53, 2.14).
Conclusion: In this setting, structured counseling had little impact on contraceptive method choice, initiation, or continuation.
Practice implications: Adding structured counseling did not increase the proportion choosing or initiating very effective contraception in a practice setting where physicians already provide individualized counseling.

1. Introduction

Despite the availability of very effective contraceptive methods, the rate of unintended pregnancy in the United States (US) remained stagnant at 49% from 1995 to 2001 [1]. Most women in the US have not used the most effective methods available [2], and 47% have had a repeat abortion [3]. Women's health professionals have regarded counseling as an important component of improving contraceptive use [4], and access to counseling services has been considered an integral part of informed choice [5]. The World Health Organization (WHO) has supported the practice of contraceptive counseling so that patients can make informed decisions in conjunction with their provider [6].

Accepted practice within contemporary healthcare has been to offer patients information regarding diagnoses and proposed treatment options. Contraceptive counseling, where options are presented with mechanisms of action, efficacy, risks and benefits, has been a challenge due to the limited resources in the clinical setting and the ability of any person to receive and comprehend a large amount of information.

A recent Cochrane Review found that "little evidence from randomized controlled trials supports the hypothesis that counseling improves contraceptive use," and a systematic review of the literature on counseling to prevent unintended pregnancy also [7] found limited evidence regarding its effectiveness [8]. In 1996 the US Preventive Services Task Force (USPSTF) recommended contraceptive counseling, but the 2002 USPSTF withdrew this recommendation due to insufficient evidence [9,10].

Limited data has suggested a possible benefit to using structured counseling—consisting of audio–visual materials with standardized information—for contraceptive counseling. Two randomized controlled trials (RCTs) utilized structured audio–visual educational material with standardized information about contraceptive methods. The results from both studies showed increased contraceptive use or continuation of effective contraceptive methods (pill and injection) 1 year later [11,12].

In a post-abortion population, one RCT of counseling performed by a contraceptive specialist along with advanced provision of contraceptive methods compared to routine counseling found increased uptake of long acting reversible contraceptives and increased continuation at 4 months but no difference in repeat abortion rates at 2 years [13]. The information given by the

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specialist counselor in this study was not standardized or given in a structured audio-visual format.

In an attempt to meet family planning counseling needs, the WHO developed a series of family planning guidelines and tools, including the Decision-Making Tool for Family Planning Clients and Providers (DMT) [14]. A double-sided flipchart with one side for the client to aid in decision-making and the other side for the provider to aid in the counseling process by giving information and guidance, this tool was studied for improving communication with clients in limited resource settings [15,16]. The DMT was found to improve communication, particularly with clients choosing a new contraceptive method [15].

Given the need for resource efficiency in health care, the belief by many providers and organizations that contraceptive counseling is necessary and worthwhile, and the limited literature [7–10,17], we aimed to study this topic using a structured and standardized counseling intervention based on the DMT in a post-abortion setting with most modern methods available for immediate initiation. Our study evaluated structured, standardized contraceptive counseling for its influence on participants choosing a very effective contraceptive method at the time of first trimester vacuum aspiration, method initiation, and 3 months and 6 months method continuation.

2. Methods

2.1. Setting and participants

From December 2008 to July 2009, we enrolled participants from a family planning referral clinic to a private practice setting serving a predominantly Hispanic (Dominican) population with Medicaid coverage in New York City. Providers at the practice were all physicians: faculty, fellows, and residents at Columbia University Medical Center (CUMC). Vacuum aspiration procedures were offered 1 day per week, and on a given day, 3–4 physicians each cared for 6–8 patients.

The study population consisted of women seeking a first trimester procedure for a spontaneous or induced abortion. Inclusion criteria were (1) age $\geq$ 18 years, (2) no desire to become pregnant right away, (3) fluency in Spanish or English, and (4) access to a telephone. The CUMC Institutional Review Board approved this study.

2.2. Structured contraceptive counseling intervention

In this study we sought to address whether structured, standardized, non-directive counseling (the intervention) in the setting where contraceptive methods are immediately available and the women have confirmed fertility, will result in increased choosing of very effective contraceptive methods, method initiation, and method continuation at 3 months. Structured counseling consisted of the trained research coordinator reading and displaying a contraceptive flipchart in its entirety to the participant in a private office with samples of each method available for patients to see and touch. The counseling was structured in that the format included visual and audio components allowing the participant to both visualize and hear the information. The counseling was standardized in that the same information was presented every time the counseling was performed. Participants were encouraged to ask questions and to write down questions for their physician on supplied note cards. The research assistants were trained to answer questions using only the information from the flipchart. If a question was not able to be answered by the information on the flipchart, the research assistant was instructed to request the participant ask her provider this question during usual care.

The flipchart was a version of the WHO 2005 Decision-Making Tool for Family Planning Clients and Providers (DMT) [14]. We did not intend the intervention to provide tailored counseling, though that is one of the common uses of the DMT. We chose to use the format of the DMT for its ready-made structure, simple language and images to create our structured and standardized intervention. We utilized the portion of the DMT focused on choosing a method and the method tabs (overview and information for choice, medical eligibility criteria, possible side effects, how to use, when to start, and what to remember). We modified this portion of the DMT to add methods available in the US (patch, ring, levonorgestrel IUD, and etonogestrel implant) and to remove information about methods not available in the US (NET-EN injections, monthly injections, and Norplant) or not appropriate for post procedure patients (lactational amenorrhea and fertility awareness). Thus the flipchart administered by a research coordinator gave our intervention a structured format with visual and audio components. The research coordinators gave standardized information using this structured tool. The simple language and images in the flipchart, as well as reading the pages aloud as they were viewed, mitigated any effects of low literacy. Information on contraceptive methods (female sterilization, male sterilization, copper IUD, levonorgestrel IUD, etonogestrel implant, depo provera injection, ring, patch, pill, and condom) was presented on 5–7 double-sided pages per method with patient and counselor focused content on the front and back, respectively. We used flipcharts printed in English for our participants who preferred English and flipcharts translated and printed in Spanish for our participants who preferred Spanish. The flipchart included information on contraceptive effectiveness, how to use each method, possible side effects, and when to seek help.

Usual care consisted of a single physician performing the medical history, physical exam, ultrasound, obtaining informed consent for the suction aspiration procedure, and carrying out this procedure for each patient. This visit required about one hour to complete. Contraceptive counseling was routinely offered by the physician as well and was embedded in the visit. As part of usual care, the content and duration of contraceptive counseling performed by the provider was left to their discretion.

2.3. Study procedures

Two research coordinators fluent in English and Spanish performed enrollment and follow-up. We used training scripts and role play to standardize interactions with participants. Questionnaires were piloted and adjusted based on responses prior to enrollment.

We assessed all women aged 18 or older registered in the clinic for eligibility. To ease anxiety, the coordinator first gave each patient basic information about routine clinic procedures before discussing the study. Interested and eligible women were consented. A baseline questionnaire was administered to collect demographic characteristics as well as partnership, reproductive, and contraceptive histories. Participants were then randomized to usual care with intervention versus usual care alone. Those randomized to the intervention group received structured counseling by a coordinator immediately prior to usual care during the same visit. Attention was paid to minimize delay for women in the intervention group.

Using a random-number table, we determined the sequence for 1:1 allocation constrained by blocks of 10. Randomization assignments were sealed inside numbered, opaque envelopes. The coordinator opened the next sequentially numbered envelope after completing informed consent. No blinding of participants or coordinators was feasible due to the nature of the intervention. Physician-providers did not know the participant's allocation group, did not discuss the study with patients, and were asked not to change their counseling.

Contraceptive methods available to participants immediately following their procedure included intrauterine devices (IUDs), implants, injections, rings, and pills. The IUDs and implants were donated and available at no cost to all clinic patients. All participants had either New York State Medicaid coverage for prescription contraceptives or access to additional free supplies at a safety net clinic so all contraceptives offered were available free of charge. The patch was available by prescription only and sterilization by referral only. Those who chose pill or ring received either a prescription or a 1-month supply and prescription. All participants received condoms with handouts on emergency contraception and condom use.

After each enrollment day, we reviewed charts to confirm that a procedure was performed and to identify the contraceptive method chosen as well as whether initiation was immediate or delayed. Coordinators called participants 3 months after enrollment to assess contraceptive use. A subset of patients received 6 months follow-up phone calls. Initial analysis of the first 101 participants to complete both 3 and 6 months data found no significant differences, so 6 months follow-up was stopped to focus on maximizing 3 months follow-up.

2.4. Outcomes and analysis

The primary outcome of this study was proportion of participants choosing a very effective contraceptive method. Secondary outcomes were method initiation on the day of the procedure and method continuation of very effective and/or effective methods at 3 months, and at 6 months for the sub-group for whom we collected data.

The WHO defined very effective contraceptive methods as those with 1 year typical use pregnancy rates of $<1\%$ (sterilization, IUDs, and implants) [6]. Effective methods have typical use pregnancy rates of 1–9% (pills, rings, patches, and injections). The WHO defined additional categories for methods with $\geq 10\%$ and $>25\%$ typical use pregnancy rates. In this study, we used the WHO definition for very effective and effective methods and defined less effective methods as those with $\geq 10\%$ pregnancy rate (condoms, withdrawal, periodic abstinence, and no method).

We defined initiation of effective and very effective methods as leaving the clinic with a method requiring no healthcare provider contact to begin use. If a participant requested pills and left clinic with a pill pack and a prescription, this was coded as immediate initiation. If she left with a prescription only, this was considered delayed initiation because she needed to go to a pharmacy to begin using the method. Less effective contraceptive methods (condoms, withdrawal, and periodic abstinence) were coitally dependent and, therefore, were not able to be initiated in the clinic.

We defined continuation as using a contraceptive method at 3 or 6 months that was in the same effectiveness group as the method requested at enrollment. For example, two patients requested sterilization and were using an IUD at the 3 months follow-up interview. Both these participants were counted as 'continuers' for the very effective group.

In this clinic in 2003–2004, 29% of patients chose the most effective available methods (injection, copper IUD, or sterilization) following a first trimester aspiration procedure [18]. We designed our study to identify an increase from 30% to 50% of women requesting a very effective method in the intervention arm. With up to 20% loss due to exclusion after randomization, a two-sided alpha of .05, and power of .80, we needed 125 women in each arm.

We used SAS, version 9.2 (SAS Institute, Cary, NC) for statistical analyses to compare the intervention and control groups. We performed Chi-square analyses to assess differences between allocation groups. We calculated two-sided p-values and 95% confidence intervals. We performed logistic regression analyses with two dependent outcomes: very effective method use at 3 months; or very effective or effective method use at 3 months. The 8 participants who reported sexual abstinence since enrollment due to no partner were excluded from these analyses. We performed univariate logistic regression with (1) intervention, (2) immediate initiation, (3) age, (4) education, (5) ethnicity, (6)

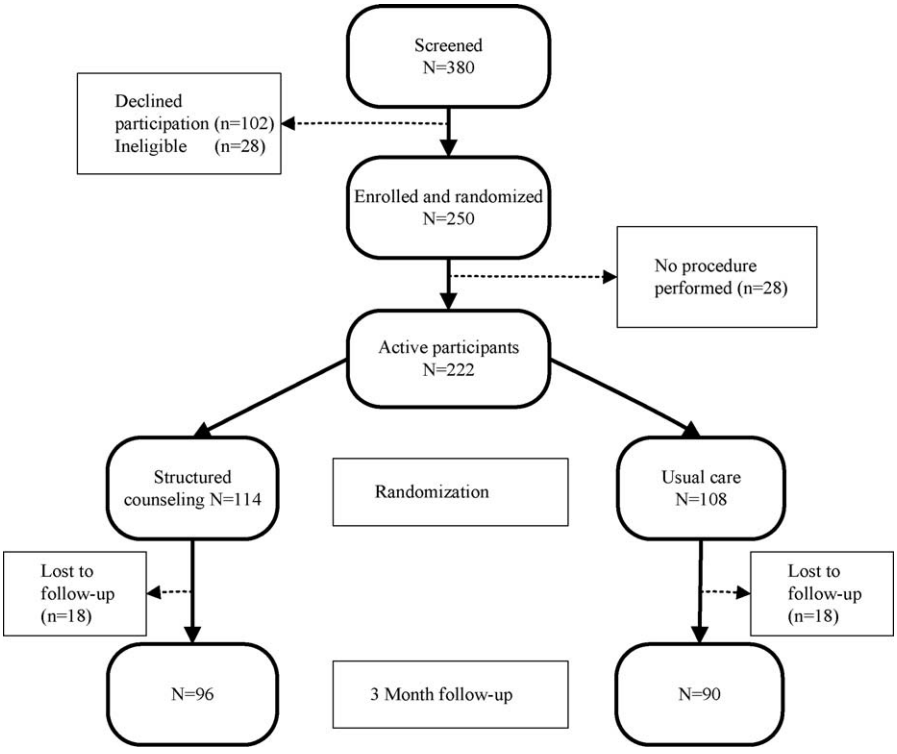

Fig. 1. Participant enrollment and follow-up in a randomized controlled trial of structured contraceptive counseling, NY 2009.

parity, (7) prior abortion, (8) stable relationship status, (9) provider and (10) current smoking. Variables were chosen for multivariate logistic regression based upon univariate results and overall importance to the clinical outcome. We constructed the final model using the likelihood ratio test as variables were added sequentially to determine the most parsimonious model. The Hosmer–Lemeshow statistic was calculated to test the goodness-of-fit of the final model.

3. Results

3.1. Enrollment

We screened 380 women and enrolled 250 women (Fig. 1). We excluded 28 women after randomization because they did not have a procedure that day primarily due to pregnancies in the second trimester, completed spontaneous abortions, and ectopic pregnancies. The remaining 222 women were eligible for analysis and follow-up.

The groups were well balanced with regard to baseline characteristics (Table 1). They were mainly Hispanic and in stable relationships, defined as a relationship the participant reported will continue for >1 year. Participants' ages ranged from 18 to 45 years with a mean age of 26.2 years. Participants were seeking induced abortion (94%) or spontaneous abortion management (6%). The time used to conduct the structured counseling intervention was, on average, 20 min (standard deviation ±8 min).

3.2. Methods requested

The intervention and control groups were similar in the methods requested (Table 2). Participants in the intervention group were similar to the usual care group in often choosing a very effective method (OR 0.74, 95% CI 0.44, 1.26). Most women requested very effective methods (levonorgestrel IUD (27%), copper IUD (15%), implant (9%) and sterilization (2%)). Many women requested effective methods (oral contraceptive pills (18%), vaginal ring (9%), injection (7%), and patch (5%)). Fewer women requested less effective methods (undecided/declined ($n = 7$), condoms ($n = 7$), abstinence ($n = 2$), withdrawal ($n = 1$) and periodic abstinence ($n = 1$)).

Comparing the demographics of participants who chose very effective methods to those who did not, parous women and women in a stable relationship were more likely to choose a very effective method (OR 2.51, 95% CI 1.35, 4.67 and OR 1.98, 95% CI 1.11, 3.54, respectively). Six providers saw the majority (91%) of the participants. No differences were seen in the methods requested ($p = 0.44$) or the proportion of methods initiated immediately ($p = 0.83$) among these providers. There was no difference between the intervention and control groups in the physician-providers from whom they received usual care ($p = .59$).

Table 1
Demographics and reproductive history—structured contraceptive counseling versus usual care ($N = 222$).

	Intervention ($N = 114$) N (%)	Usual care ($N = 108$) N (%)
Age (SD)	25.6 (5.7)	26.8 (6.7)
Age < 25 years	59 (52%)	49 (45%)
Hispanic[a]	98 (87%)	97 (90%)
Education ≥ 12th grade	74 (65%)	77 (71%)
Birthplace		
United States	47 (41%)	43 (40%)
Dominican Republic	50 (44%)	53 (49%)
Other	17 (15%)	12 (11%)
Current smokers[b]	20 (18%)	20 (19%)
Gravida > 1	98 (86%)	96 (89%)
Parous	84 (74%)	81 (75%)
Ever had a prior abortion	57 (50%)	58 (54%)
Ever used contraception	109 (96%)	104 (96%)
Current stable relationship	78 (68%)	77 (71%)

[a] One missing value from intervention group.
[b] One missing value from intervention group.

Table 2
Structured contraceptive counseling versus usual care: contraceptive method chosen and 3 months continuation.

	Intervention ($N = 114$)	Usual care ($N = 108$)	Total ($N = 222$)	p-Value[*]
Contraceptive method chosen				
Very effective methods[a]	57 (50%)	62 (58%)	119 (54%)	0.27
Effective methods[a]	48 (42%)	37 (34%)	85 (38%)	0.27
Less effective methods[a]	9 (8%) ($N = 89$)	9 (8%) ($N = 83$)	18 (8%) ($N = 172$[b])	1.0
3 months continuation				
Very effective methods[c]	41/48 (85%)	40/52 (77%)	81/100 (81%)	0.28
Effective methods[c]	28/41 (68%)	21/31 (68%)	49/72 (68%)	0.96

[*] Chi-square p-value.
[a] Very effective methods—copper IUD, levonorgestrel IUD, etonogestrel implant, sterilization. Effective methods—DMPA, ring, patch, pill. Less effective methods—intervention group: 1 undecided, 2 abstinence, 2 declined contraception, 4 condoms. Control group: 3 undecided, 1 natural family planning, 1 coitus interruptus, 1 declined contraception, 3 condoms.
[b] Less effective methods are not represented in this total.
[c] Numerators are continuers and denominators are those who chose this method group and completed 3 months follow-up.

3.3. Immediate versus delayed initiation

Participants in the intervention group were not more likely to initiate the requested method immediately compared to those in the usual care group (OR 0.65, 95% CI 0.31, 1.34) (Table 2). Only 15 percent of participants chose a method that could not be initiated the same day (18 less effective methods, 10 patches, and 5 sterilizations). The other 189 participants selected a method that could be initiated the same day; 80% of these women initiated their method the same day (80 IUDs, 28 pills, 19 implants, 15 injections, and 10 rings). The remaining 20% of participants had delayed initiation of their method (14 IUDs, 11 pills, 10 rings, 1 injection, and 1 implant). Of these, 3 women preferred to delay IUD insertion, and 1 woman wanted to obtain her pill prescription from her personal physician. The physician-providers delayed 9 initiations due to infection, 2 due to bleeding, and 1 due to lack of confirmatory products of conception at the time of the procedure. Twenty-one women were given prescriptions only (10 rings, and 11 pills).

3.4. Follow-up and continuation

Of 222 participants, 186 (84%) completed 3 months follow-up (Fig. 1). Loss to follow-up was equal between the intervention and control group. The baseline characteristics and requested methods of the women who completed 3 months follow-up and those who did not were similar (data not shown). Those in the intervention group who completed 3 months follow-up had chosen similar methods compared to those in the control group ($p = 0.51$). No participants reported a repeat pregnancy at 3 months.

For those who chose a very effective or effective method, 3 months continuation of the requested method and 3 months continuation of immediately initiated methods were not significantly different comparing the intervention group to the usual care group (OR 1.24, 95% CI 0.62, 2.50 and OR 1.43, 95% CI 0.58, 3.52, respectively) (Table 2). Fourteen (78%) participants who chose a less effective method completed 3 months follow-up; 13 reported being sexually active; and only 2 reported adopting an effective

method (pills). In a sub-group analysis of those who initiated a very effective method on the day of enrollment ($n = 83$), the intervention group trended towards increased 3 months continuation compared to the usual care group (98% versus 83%; $p = .06$).

With the initial participants at the start of the study, we took the opportunity to conduct 6 months follow-up interviews. We completed 6 months follow-up with 131 (59%) participants. For these participants, 6 months continuation between the intervention group (67%) and the usual care group (68%) was similar (OR 0.95, 95% CI 0.45, 2.02). Two participants reported a repeat pregnancy at 6 months, one from each randomization group.

3.5. Predictors of using a very effective and/or effective method at 3 months

When limiting our outcome to using a very effective method at 3 months, the counseling intervention did not have a strong effect in univariate or multivariate models (Tables 3A and 3B). In univariate analyses, completing at least the 12th grade in school and immediate initiation of a requested contraceptive method had the strongest associations with using a very effective or effective method at 3 months (Table 3A). In a multivariate model, the counseling intervention did not have a strong association with using a very effective or effective method at 3 months (AOR 1.59, 95% CI 0.77, 3.28).

4. Discussion and conclusion

4.1. Discussion

We sought to address whether structured, standardized, non-directive counseling (the intervention) in the setting where contraceptive methods are immediately available and the women have confirmed fertility, will result in increased choosing of very effective contraceptive methods. We specifically chose a counseling format that would not be performed by a physician to reflect the reality of limited health resources and the common practice of family planning clinics in the US to utilize non-physicians to perform counseling. We chose standardized counseling in contrast to tailored counseling to ensure that participants in the intervention group received the same information to minimize bias from the counselor. Minority women have been shown to be more likely to receive contraceptive and sterilization counseling compared to white women [19], and our clinic serves a predominantly minority population.

We performed a RCT of an intervention utilizing a modified version of a readily reproducible counseling intervention (DMT) that is available online and developed by experts. Our structured and standardized counseling intervention did not result in more women choosing a very effective contraceptive method, immediately initiating more methods, or significantly increasing 3 months continuation of their chosen method in our setting. In our clinic, physicians who specialize in family planning are providing contraceptive counseling with the patients as an integrated part of their visit for a first trimester uterine aspiration. Additional counseling may have been unnecessary in this setting.

Our study had several limitations. Our clinic setting had specialized providers as well as a specific ethnic demographic that limited the generalizability of our study's findings. We utilized the DMT for structured, standardized counseling, and it was designed for tailored counseling. This approach may have affected the effectiveness of the intervention. Our 3 months contraceptive data was self-reported and vulnerable to social desirability bias. We made an effort to reduce patients' anxiety but could not eliminate it before the intervention. This anxiety could have lessened the effects of the structured counseling intervention. A further limitation was that the providers in our setting were aware of the study and could have altered their counseling during the study, minimizing the effect of the intervention, though they were asked not to do so. We also did not collect data on participant satisfaction specifically with the contraceptive counseling or detailed data on participants' desires for future pregnancy beyond whether they desired contraception.

One further limitation of our study was that it was powered for the outcome of choosing a very effective contraceptive method; however, it was not powered for the other outcomes collected—initiation and continuation. The initiation outcome for very effective methods was so similar between the intervention and control groups (84% versus 82%, respectively) that, though underpowered, the trend showed no difference. The continuation outcome for very effective methods was less similar between the two groups (85% versus 77%, respectively). A larger sample size could have benefited this outcome in our study.

We had a very high proportion of patients in both the intervention and control group who chose IUDs (42%) compared to the 2% of contracepting women using IUDs in the US in 2002 [20]. Hispanic women in the US have been found to have higher ever-use of IUDs (10.0%) and implants (4.0%) compared to non-Hispanic White (4.7% and 1.4%) and non-Hispanic Black (5.5% and 3.2%) women [20]. The community served by our practice is predominantly Hispanic, and greater baseline usage of these long-acting methods among Hispanic women could partially explain the high proportion of women choosing an IUD. In one study of post-abortion contraception, 53% chose the pill, 11% chose the IUD, 8% chose DMPA and 17% declined or were undecided on the day of

Table 3A
Predictors of method use at 3 months, univariate analyses ($N = 186$).

	Very effective method use		Very effective or effective method use	
	OR	95% CI	OR	95% CI
Structured counseling	0.97	(0.53, 1.74)	1.35	(0.68, 2.68)
Immediate initiation	14.02	(5.58, 35.22)	3.87	(1.90, 7.89)
Age	1.05	(0.58, 1.89)	1.44	(0.73, 2.86)
Education	1.65	(0.87, 3.14)	2.11	(1.04, 4.25)
Prior abortion	0.91	(0.50, 1.64)	1.62	(0.82, 3.22)
Parous	2.43	(1.19, 4.95)	1.37	(0.65, 2.89)
Hispanic	0.86	(0.33, 2.24)	1.46	(0.52, 4.10)
Relationship	1.38	(0.72, 2.65)	1.10	(0.53, 2.29)
Smoking	0.77	(0.35, 1.69)	1.12	(0.46, 2.74)

*Excluded participants abstinent since enrollment from the analysis ($N = 8$). **The reference group is 'no' and the comparison group is 'yes' except for age where reference group is <25 years and comparison group is ≥25 years.

Table 3B
Predictors of contraceptive method use at 3 months, multivariate model ($N = 186$).

	Very effective method use		Very effective or effective method use	
	AOR	95% CI	AOR	95% CI
Structured counseling	1.06	(0.53, 2.14)	1.59	(0.77, 3.28)
Immediate initiation	15.5	(6.02, 39.7)	4.26	(2.05, 8.87)
Age	0.91	(0.43, 1.89)	1.67	(0.81, 3.47)
Education	–	–	–	–
Prior abortion	–	–	–	–
Parous	3.17	(1.37, 7.32)	–	–
Hispanic	–	–	–	–
Relationship	–	–	–	–
Smoking	–	–	–	–

*Excluded participants abstinent since enrollment from the analysis ($N = 8$). **The reference group is 'no' and the comparison group is 'yes' except for age where reference group is <25 years and comparison group is ≥25 years.

their procedure so our findings were not typical though the literature is limited on post-abortion contraceptive use [21]. The proportion of our participants selecting very effective methods was also higher than found in the same population and setting in 2003–2004—54% compared to 29% [18]. The larger than expected proportion of women in the control group who chose a very effective method was an unexpected outcome and decreased the power for our sample size.

The physicians and patients participating in this study may have been further motivated by the fact that these very effective contraceptive methods were available for insertion on the same day as the procedure. Previously in this same clinic, patients who chose a very effective method had to make an additional visit on a different day to have the method initiated. Immediate access to very effective contraceptives following an abortion has been shown to decrease repeat abortion [22,23]. The intervention to increase uptake of very effective post-abortion contraception may be to provide increased access to contraceptives while the specific counseling methods may be less significant as long as contraceptive counseling is provided. Interventions to improve contraceptive uptake and use to better meet family planning needs deserve continued study.

4.2. Conclusion

Contraceptive counseling is valuable. The exact amount and extent of counseling appropriate for each patient likely varies though a common minimum should be standard to give patients the opportunity to make an informed choice. All our patients received contraceptive counseling by the physician doing their procedure with the structured counseling done in addition if they were part of the intervention group. Due to a higher than expected proportion choosing a very effective method in the control group, our power was less than planned and needs to be considered in the interpretation of our outcomes. Structured contraceptive counseling in our setting did not have a significant impact on method choice, method initiation, or 3 months continuation. Interventions to improve contraceptive use deserve continued study.

4.3. Practice implications

Adding structured contraceptive counseling did not increase the proportion choosing or initiating a very effective contraceptive method in a practice setting where specially trained physicians already provide informal individualized counseling.

Conflict of interest

None.

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