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“Just Wear Dark Underpants Mainly”: Learning from Adolescents’ and Young Adults’ Experiences with Early Discontinuation of the Contraceptive Implant

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Abstract

Study Objective—Long-acting reversible contraception, including the contraceptive implant, is recommended for teens and young women. However, some young women discontinue the implant early, and we seek to better understand their experiences.

Design, Setting, and Participants—We conducted interviews with 16 young women ages 14 to 24 who presented for removal of the contraceptive implant within 6 months after placement at outpatient adolescent, family medicine, and obstetrics and gynecology clinics. We coded and analyzed transcripts to identify themes and develop a thematic framework.

Interventions and Main Outcome Measures—We explored decision-making regarding placement and removal of the implant, differences between anticipated and experienced side effects, and recommendations for counseling.

Results—The participants reported experiencing significant side effects that led to removal, most often frequent or heavy bleeding or mood changes. These healthy young women were unprepared for these symptoms, despite remembering being told about possible side effects. Participants wanted more concrete examples of possible side effects, and personal stories of side effects experienced by others, rather than general terms such as irregular bleeding or mood changes. Few discussed problems with their providers; instead, they relied on the Internet or friends to help decide when to remove the implant. Nearly half of the participants did not start new contraception after removal, although they voiced a continued desire to avoid pregnancy.

Conclusion—We identified a need for more descriptive counseling about side effects experienced by individuals, and guidance on what to do about problems encountered after placement.

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Keywords

Adolescents; Contraceptive implant; Contraceptive discontinuation; Contraceptive counseling

Introduction

Unplanned pregnancy is a major public health problem in the United States. In 2011, 75% of pregnancies among girls 15 to 19 years of age and 59% of pregnancies among young women ages 20 to 24 were unplanned.¹ Highly effective, long-acting methods of contraception such as intrauterine devices and contraceptive implants have the lowest failure rates of reversible methods, and the highest continuation rates.² These methods are recommended for adolescents and young women by the American College of Obstetricians and Gynecologists³ and the American Academy of Pediatrics.⁴

Some studies have shown that adolescents are more likely to discontinue contraceptive methods than adults,^{5,6} whereas others have found similar or even higher continuation rates in younger patients.^{7,8} Providers might be unprepared to counsel young women on use of implants and hesitant to place long-acting devices because of concerns about costs or risks, in patients who they fear might be more likely to request early removal.⁹ Promisingly, however, pediatricians recently reported favorable attitudes toward the implant, acknowledging improved ease of use for young patients compared with pills or injections.¹⁰

Learning from the experiences of women who discontinue a long-acting contraceptive method early can help inform counseling and provision. Among adolescents, bleeding irregularities with hormonal contraception can be a cause of fears and misperceptions. Adolescents have reported believing that irregular bleeding is associated with method failure, is dangerous, and might affect future fertility. These studies suggest that counseling about possible bleeding irregularities might not be sufficient, and should include information that dispels myths and fears in a way patients can understand and remember.^{11,12} Irregular bleeding is also a common reason for discontinuation of intrauterine devices in adolescents.¹³

Dissatisfaction with a long-acting contraceptive method can create conflict between the patient and provider. A study of early discontinuers of the 5-year levonorgestrel implant cited side effects as the main reason for discontinuation, but reported that those who discontinued early were more dissatisfied with other contraceptives and felt pressured by their health care provider to accept the implant initially.¹³ Pressure from health care providers to continue the intrauterine device was also reported by adult women who requested early removal.¹⁴

The objectives of this qualitative study were to learn about adolescents' and young women's reasons for and experiences with early removal of the contraceptive implant, and to elicit their recommendations for counseling others. This information will inform counseling and other interventions for future patients.

Materials and Methods

The team recruited a convenience sample of English-speaking female participants ages 14 to 24 years who discontinued the contraceptive implant within 6 months of placement. Participants were recruited from multiple sites within our medical center: a dedicated adolescent health center, which treats patients through 24 years of age, a general obstetrics and gynecology practice, and a family medicine practice. At the adolescent health center patients generally meet with a health counselor to discuss contraceptive options before the visit for placement, whereas counseling at the other sites is done by the physicians. Resident physicians and fellows provide care at all 3 of the clinical sites under the supervision of attending physicians.

Clinicians gave potential participants information about the study on the day of implant removal; no mention of the study was made until the implant had been removed. Interested patients then met in person with the researcher to learn about the study.

A female research assistant trained in qualitative interviewing conducted individual, semistructured interviews to explore the participants' expectations for and experiences with the implants. The interview guide was created to explore the decision-making process for implant placement and removal, what participants recalled from counseling before placement, differences between anticipated and actual symptoms and side effects, and what counseling they would have desired at the time of placement. The team used an iterative process to pilot and revise the interview guide throughout the study to further explore emerging themes. Subjects were interviewed until thematic saturation was reached for 3 main research question areas (decision to get implant, counseling and experiences, and decision to remove implant).

Interviews were audio recorded and transcribed by the research assistant.

The team analyzed and coded transcripts with atlas.ti (ATLAS.ti Scientific Software Development GmbH, version 7.5) using inductive and deductive codes developed using a modified grounded theory approach¹⁵ and open coding techniques. Two researchers independently coded all transcripts and resolved discrepancies through discussion and consensus-building. We then used codes and field notes to identify common themes among the interviews.

The institutional review boards of all participating institutions approved this study.

Results

We approached 22 potential participants; 3 declined, 3 initially agreed to participate but then were unable to schedule the interview, and 16 interviews were completed. The participants ranged in age from 14 to 24 years (mean age, 21 years; Table 1). They were primarily Latina and black. Half were enrolled in Medicaid and half had private insurance. Two had children, and 6 had previous abortions or miscarriages. Fourteen of the participants had the implant removed at the same site where it was placed, and 2 presented for removal at a different clinical site, both because of a change of residence since placement. Most reported having

the implant removed for significant side effects, primarily heavy or persistent bleeding. All but 1 reported a continued desire to avoid pregnancy at the time of removal.

Themes that we identified included: (1) being unprepared for side effects; (2) seeking help for side effects; (3) future contraception decisions.

Unprepared for Side Effects

Most participants reported the side effects they experienced not only unwelcome, but also unexpected. Some had not used any prescription contraceptive before, and did not have any previous experience with contraceptive side effects. Others had negative side effects with other contraception in the past and hoped the implant would be better. A 22-year-old Para (P0010) said “I decided that, well, I’ve tried everything else, this might be the one.”

Most understood that side effects were possible but were “hoping for the best,” that possible side effects would not affect them. A 21-year-old Gravida (G0) said “I had read online ... something about acne, hair falling out, and mood swings. But I didn’t think it would happen to me.”

A 24 year-old G0 said “I think I still would have tried it, ... and, you know, hope that I wasn’t one of those people. You know the side effects are there, but you might be the lucky one who doesn’t get affected by it.”

Participants remembered being told about possible side effects, but wanted more individual, personalized prediction. A 22-year-old P1 stated “They told me everything. I wish I would have just known that it wouldn’t work with me before having to go through the whole incision and that part bothered me.”

Some suggested that better predictions could have been made on the basis of their own characteristics. A 23-year-old P0010 said “...and since I do have a history of depression like maybe like people that have a history of depression like it affects them differently.”

An 18-year-old G0 said “Me? I’m someone who gets their period 7 days, the whole week. So like is there a good chance that I would get my period, like other women that got it, like for 2 months. Like that.”

Many had specific recommendations for counseling others on side effects, especially changes in bleeding patterns. They requested more concrete descriptions of bleeding. One 18-year-old G0 said “I would have wanted more information about that period, what they meant by that.”

A 17-year-old G0 explained “I think I would have wanted to hear, definitely more than irregular bleeding because I think people have different understandings of what irregular bleeding means. ...I wish someone would have said that hey you might have sex and you might bleed, you might be spotting this second but not be spotting for the rest of the day, and then you wake up tomorrow morning and it starts back up again.”

A 14-year-old G0 also described the consequences of this unpredictable irregular bleeding: “You’re gonna get tired of the bleeding. Cuz one minute you think you don’t have your period anymore, and then it just comes down again then, it’s messing up your panties.”

Some gave specific recommendations for how to deal with the irregular bleeding: A 24-year-old G0 said “Just, your period is gonna go whack, ...and you’re not gonna know when it’s gonna come, so always have pads on you,” and a 17-year-old P0010 said “Just get dark-colored underpants mainly.”

They also report being unprepared for how specific side effects would affect their lives. For a 17-year-old G0, an unexpected side effect was the possibility of her mother finding out she was using contraception:

“...she’s obviously the one that buys me my pads. So she’s like, this is the third pack this month that I buy you, and then is like what’s going on? And she was getting really, really worried... It was like a big chaos. She was going to take me to the hospital and stuff, and I was like oh my god, how about she finds out?”

Participants also wanted more detailed descriptions of other side effects. For example, rather than saying mood changes were possible, a 22-year-old G0 would counsel a friend by describing her reaction: “I was a lot more irritable. Like everything pissed me off. Everything. I was like snapping at people a lot over dumb things.”

A 14-year-old G0 said she would counsel on mood changes similarly: “... and you’re gonna feel sad a lot. And you’re gonna wanna yell at everyone.”

Participants also requested more stories and sharing of others’ experiences. A 22-year-old G0 said “I think I would have wanted to hear more personal stories from people” and an 18-year-old G0 would counsel others by telling their own stories “I would tell her, if she want, I would tell her what happened to me.”

A 20-year-old P0010 explained why her physician could not give a personal story “Because, well, the guy who put it in me, he’s a male. He doesn’t have irregular bleeding or anything like that, so he just knows what he was taught.”

One participant did have a physician who used the implant and described her own symptoms, but this did not end up being helpful. This 22-year-old G0 said:

“At first I asked my doctor about the spotting... And she told me she wasn’t spotting at all and that she thought it would stop for me. And so I waited another month and it was still really bad.”

Seeking Help for Side Effects

Many participants experienced significant side effects that negatively affected their lives; some tried to manage their symptoms on their own, and almost none talked to their doctor about these side effects.

An 18-year-old G0 felt weak from the bleeding “...and I had to buy iron supplements, so I wasn’t feeling good sometimes.”

A 24-year-old G0 tried to manage nausea and dizziness, “I would drink a lot of water, and try to stay as hydrated as possible... But then I would force myself to sleep it off, and rest.”

Another 24-year-old G0 tried to treat her recurrent headaches “...it was just the headaches were starting to get worse and more frequent and just Tylenol wasn’t helping. So I decided it’s about that time, I think I need to get rid of this thing.”

When asked if she discussed her symptoms with her doctor, a 22-year-old P0010 said “No, because I didn’t go to the doctor. Actually I have, but I didn’t speak to them about the irregular bleeding.”

Others who did talk to their doctor reported being told to wait longer for symptoms to resolve. A 22-year-old P0010 said “And I came in again and I told her that I had my period for a long time. And she said, oh you’ve only had it for 6 weeks, just wait a little longer, it takes 3 months for it to really adjust to your body.”

A 22-year-old who was also told to wait sought additional information from the Internet:

“And so I waited another month and it was still really bad. Then I Googled it to see how many other women were dealing with this. One woman said she had been spotting heavy for a year. So that was when I decided I didn’t want to take that risk that I’d have to buy pads and tampons for every day for a year. So after that I just decided to have it removed.”

Many reported not knowing what to do about symptoms they experienced, and some did not know their side effects were caused by the implants. Most turned to the Internet, or less commonly friends or family, but not to providers, for answers. A 17 year-old G0 said:

“So I went out on my own and I did research about it. And I was reading an article, and he said like oh, if you’ve had it (bleeding) for more than 8 days you should contact a doctor. So I was thinking, it had been way more than 8 days, like continuously, like a couple of months. So I was like, maybe I should just go in and get it removed.”

Some participants were hesitant to tell the doctor who placed the implant that they wanted it removed, concerned that they would be judged, even seeking out other doctors to remove it. A 24-year-old P0010, who had the implant placed at a clinic different from where it was removed, said:

“I haven’t talked to the doctor (who placed it), ...I’m sure when I go see him he’s going to tell me ‘I told you, you might have side effects.’ Maybe I should have waited a bit longer, but no, I mean I couldn’t take it anymore.”

Future Contraception Decisions

Other than 1 participant who had the implant removed because she desired a pregnancy, all participants reported not wanting to become pregnant at the time of implant removal. Five restarted a previous method, explaining that things they disliked now seemed tolerable compared with their experience with the implant. Three others started a new method least likely to cause symptoms they disliked about the implant.

A 22-year-old P1001 said, “My mom told me if Paragard doesn’t have hormones, try it without the hormones because hormones probably don’t go good with your body.”

However, 7 women left the removal appointment without starting a new contraceptive method. Some described wanting to take a break or clean their body. A 21-year-old G0 said: “I’ve been on so much hormones, I feel like my body needs a month or two to just detox before starting something new.”

Others were worried about continued symptoms with a new method. A 14-year-old G0 said “they gave me the patch but I haven’t used it. ...I think that I will still have spotting if I try it again.”

Discussion

These themes: (1) being unprepared for side effects; (2) seeking help for side effects; and (3) future contraception decisions, describe the process by which the adolescents were figuring out how, when, and why to interact with the health care system. First, they tried to understand what they had been counseled on and to incorporate this guidance into their lives. Next, they responded to problems with implants by seeking outside information, with very few interacting with their health care provider. Finally, when they decided on removal, they needed to decide if they were willing to re-engage with the health care provider to start a new method. All of this was done in the context of continuing to voice a desire to avoid pregnancy at this point in their lives.

We found that participants experienced significant and prolonged negative side effects, which they were often unprepared for despite acknowledging that they had been counseled on possible side effects. They reported knowing side effects were possible, but they hoped they would not be affected. This finding corresponds to studies of adolescent decision-making, which indicated that adolescents are often more optimistic and engage in more wishful thinking than adults.¹⁶ The participants would have wanted to hear more specific examples of side effects rather than general descriptions, and they also offered some clear examples of how to counsel about dealing with side effects, most often irregular bleeding: wear dark underwear, buy pads, think about how irregular bleeding will affect your relationship with your parents or others.

Many participants voiced a desire for individual prediction of side effects, not to be told what could happen for some people, but what would happen to them. Future research for better personalized prediction of side effects, for example, on the basis of biomarkers, which are being investigated for drugs such as depot medroxyprogesterone¹⁷ or tamoxifen,¹⁸ could decrease the number of patients who require early removal for side effects. Until then, however, counseling should stress that there is no way to predict who will develop intolerable side effects, but that patients are welcome to return for implant removal if this happens to them.

Our study also identifies a need for additional counseling at the time of placement about what to do if side effects develop and the patient is not happy with the method. Clear written instructions should include management of possible side effects, ways to contact the

physician if there are concerns, and reasons to return to the provider's office. The patients need to know and believe that the person who inserted the device is available for follow-up, including removal if needed, without judgement.

Unlike several previous studies,^{11,12} we did not find that the participants had misconceptions or fears about health effects that could be addressed by better or more counseling. Nor did we have any participants describe being pressured to choose the implant by providers, as reported in another study.¹⁹ Rather, we confirmed the findings of Hoggart et al that the young women discontinued the method because of intolerable side effects, and were disappointed that the method did not work for them.²⁰

Many participants did not start a new method of contraception after the implant removal, despite continuing to express that they did not want to become pregnant. Counseling to encourage returning if problems are experienced, being supportive of the decision for removal, and offering timely follow-up might help to improve the implant experience. Future studies are needed to explore the relationship between an unsuccessful experience with an implant and future contraceptive choices. This is particularly important in this group of young healthy women who have many years of need for contraception ahead of them.

There are several limitations of our study. Social desirability bias might have led to participants describing only reasons for removal that they thought would be acceptable to their providers and the researchers. Other limitations include a small sample size, and lack of longitudinal follow-up that could capture starting a new contraceptive after thinking over options. Additionally, the participants might have been using condoms but did not mention their use, and we did not directly ask about condoms in the interview. In this study we only interviewed women who were able to discontinue the implant, and not those unable to access care to discontinue the implant or those who changed their minds after talking with providers. We did not interview young women who were happy with their implant to be able to compare counseling experiences that led to continuation. Our group of urban participants might have had different exposure to, knowledge of, and availability of contraception than other groups, and their experiences might not be generalizable. Many of our participants were older adolescents, and their experiences might be different than that of younger teenagers.

In conclusion, we found that adolescents and young adults might be unprepared for problems with contraception. We suggest ways to improve anticipatory counseling at the time of implant placement, and encourage follow-up for patients who experience problems with the implant. We hope that by better understanding the removal experience, providers and counselors will be better able to validate patients' concerns and empower them to make the decision for removal when indicated.

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Table 1

Characteristics of Study Participants

Characteristic	n (%)
Age	
14–19 years old	5 (31)
20–24 years old	11 (69)
Race/ethnicity	
White	2 (12)
Black	3 (19)
Hispanic	10 (63)
Asian	1 (6)
Mixed	2 (12)
School level	
Enrolled in high school or GED	4 (25)
Completed high school or GED	3 (19)
Enrolled in college	4 (25)
Completed college	4 (25)
Enrolled in master's	1 (6)
Insurance	
Medicaid	9 (56)
Private	7 (44)
Site of implant placement	
Adolescent health center	6 (38)
Family medicine office	5 (31)
Obstetrician/gynecologist office	3 (19)
Midwife office	1 (6)
School health center	1 (6)
Parity *	
Living child(ren)	2 (12)
Previous miscarriage	2 (12)
Previous abortion	4 (25)
None	9 (56)
Primary reason for discontinuation	
Bleeding	12 (75)
Mood changes	2 (12)
Nausea	1 (6)
Desires pregnancy	1 (6)
New contraceptive method started	
IUD	1 (6)
Injection	2 (12)
Combined oral contraceptives	3 (19)
Contraceptive ring	1 (6)

Characteristic	n (%)
Condoms	1 (6)
None	8 (50)

GED, general equivalency diploma; IUD, intrauterine device

* Parity total greater than 16 because 1 participant had a living child as well as previous abortions.

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