

UCLA

UCLA Previously Published Works

Title

Age matters: differential impact of service quality on contraceptive uptake among post-abortion clients in Kenya

Permalink

<https://escholarship.org/uc/item/5rp582hh>

Journal

Culture Health & Sexuality, 14(8)

ISSN

1369-1058

Authors

Tavrow, Paula

Withers, Mellissa

McMullen, Kara

Publication Date

2012-09-01

DOI

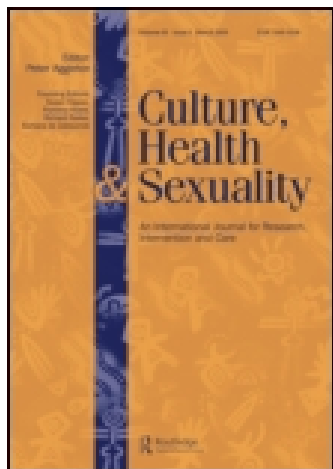
10.1080/13691058.2012.700324

Copyright Information

This work is made available under the terms of a Creative Commons Attribution License, available at

<https://creativecommons.org/licenses/by/4.0/>

Peer reviewed



Culture, Health & Sexuality: An International Journal for Research, Intervention and Care

Publication details, including instructions for authors and subscription information:

<http://www.tandfonline.com/loi/tchs20>

Age matters: differential impact of service quality on contraceptive uptake among post-abortion clients in Kenya

Paula Tavrow^a, Mellissa Withers^b & Kara McMullen^c

^a Department of Community Health Sciences, School of Public Health, University of California, Los Angeles, USA

^b Center for Southeast Asian Studies, University of California, Los Angeles, USA

^c Colorado School of Public Health, University of Colorado, Denver, USA

Published online: 19 Jul 2012.

To cite this article: Paula Tavrow, Mellissa Withers & Kara McMullen (2012) Age matters: differential impact of service quality on contraceptive uptake among post-abortion clients in Kenya, Culture, Health & Sexuality: An International Journal for Research, Intervention and Care, 14:8, 849-862, DOI: [10.1080/13691058.2012.700324](https://doi.org/10.1080/13691058.2012.700324)

To link to this article: <http://dx.doi.org/10.1080/13691058.2012.700324>

PLEASE SCROLL DOWN FOR ARTICLE

Taylor & Francis makes every effort to ensure the accuracy of all the information (the "Content") contained in the publications on our platform. However, Taylor & Francis, our agents, and our licensors make no representations or warranties whatsoever as to the accuracy, completeness, or suitability for any purpose of the Content. Any opinions and views expressed in this publication are the opinions and views of the authors, and are not the views of or endorsed by Taylor & Francis. The accuracy of the Content should not be relied upon and should be independently verified with primary sources of information. Taylor and Francis shall not be liable for any losses, actions, claims, proceedings, demands, costs, expenses, damages, and other liabilities whatsoever or howsoever caused arising directly or indirectly in connection with, in relation to or arising out of the use of the Content.

This article may be used for research, teaching, and private study purposes. Any substantial or systematic reproduction, redistribution, reselling, loan, sub-licensing,

systematic supply, or distribution in any form to anyone is expressly forbidden. Terms & Conditions of access and use can be found at <http://www.tandfonline.com/page/terms-and-conditions>

Age matters: differential impact of service quality on contraceptive uptake among post-abortion clients in Kenya

Paula Tavrow^{a*}, Mellissa Withers^b and Kara McMullen^c

^aDepartment of Community Health Sciences, School of Public Health, University of California, Los Angeles, USA; ^bCenter for Southeast Asian Studies, University of California, Los Angeles, USA; ^cColorado School of Public Health, University of Colorado, Denver, USA

(Received 4 December 2011; final version received 1 June 2012)

This paper analyses the impact of high quality, user-friendly, comprehensive sliding-scale post-abortion services on clients' uptake of contraception in a Kenyan town. Data were drawn from detailed physician records in a private clinic that served 1080 post-abortion clients in 2006. All clients received confidential family planning counselling and were offered a complete range of contraceptives at no additional cost. One quarter of clients were below age 19. Prior to the abortion, no client aged 10–18 years reported having used contraception, as compared to 60% of clients aged 27–46 years. After the abortion and family planning counselling session, only 6% of clients aged 10–18 chose a method, as compared to 96% of clients aged 27–46, even though contraception was free, the provider strongly promoted family planning to everyone and all clients had just experienced an unwanted pregnancy. Significant predictors of contraceptive uptake post-abortion were: having a child, a previous termination, prior contraceptive use and being older than 21. These findings suggest that availability, affordability and youth-friendliness are not sufficient to overcome psycho-social barriers to contraceptive use for sexually-active young people in Kenya. To reduce unwanted pregnancies, more attention may be needed to developing youth-friendly communities that support responsible sexuality among adolescents.

Keywords: abortion; contraception; adolescents; Kenya; rural areas

Introduction

While most regions of the world have achieved dramatic declines in fertility in the past three decades, sub-Saharan Africa has lagged. This can in part be attributed to the ongoing HIV epidemic, which sapped attention and resources from family planning services, information and communication. Currently, sub-Saharan Africa has the world's highest total fertility rate (5.2), the highest estimated level of unmet need (25%) and lowest rate of modern contraceptive use among married women (17%) (Population Reference Bureau 2008; UNICEF 2008; Cleland et al. 2011). About 39% of all pregnancies in the region are unintended, which rises to about 50% for adolescent pregnancies (Singh et al. 2009; Hussain 2012).

Nearly a decade ago, Caldwell and Caldwell (2002) declared that 'the single most serious problem with existing sub-Saharan African family planning programs is their neglect of adolescents' needs' (83). Premarital sexual activity among African young women is estimated at 50%, which is considerably higher than activity among their

*Corresponding author. Email: ptavrow@ucla.edu

counterparts in Asia (12%) and Latin America (25%) (UNFPA 2003; Bearinger et al. 2007; Hindin and Fatusi 2009). However, the use of effective modern contraception among sexually-active young African women is considerably lower than elsewhere (Boyd 2000; Singh, Sedgh, and Hussain 2010). The predominant contraceptive method reported is the condom, which is often used inconsistently and has a higher failure rate than other methods (Blanc et al. 2009). This puts young women at high risk of unwanted pregnancies, which in turn can lead to increased demand for abortions. Because abortion in Africa is generally illegal, except to save a woman's life or to preserve physical or mental health (Brookman-Amissah and Moyo 2004), many girls feel compelled to undergo self-induced or illicit terminations. More than 25% of the estimated 4.2 million annual abortions in Africa occur among girls aged 15 to 19 years (Shah and Aman 2004; Dahlback et al. 2007), most of which would be classified by World Health Organization (WHO) as unsafe (WHO 2011).

Young people's low rate of contraceptive use in sub-Saharan Africa has been attributed to the unique and often overwhelming barriers that they experience in accessing family planning services. Some of these barriers are related to supply-side factors, such as cost, inconvenient locations or hours of operation, lack of privacy or confidentiality at clinics and the dearth of outreach services for youth (Paine, Thorogood, and Wellings 2000; Laughaug et al. 2003; Wood and Jewkes 2006; Bearinger et al. 2007; Tylee et al. 2007; Hindin and Fatusi 2009; Bankole and Malarcher 2010; Mkhwanazi 2010; Singh, Sedgh, and Hussain 2010). Service provider-related factors, such as reluctance or unwillingness of providers to give unmarried adolescents contraceptives, provider's judgemental or insensitive attitudes towards young people seeking family planning services and poor communication between young people and providers, are also significant supply-related barriers to contraceptive use (Laughaug et al. 2003; Wood and Jewkes 2006; Dahlback et al. 2007; Kipp et al. 2007; Otoide, Oronsaye, and Okonofua 2007; Bankole and Malarcher 2010; Tavrow 2010).

To overcome these barriers, efforts have focused on offering 'youth-friendly' services (Boyd 2000; Boonstra 2007; Kipp et al. 2007; Tylee et al. 2007; Shaw 2009; Ringheim and Gribble 2010). Youth-friendly services seek to address administrative barriers and improve the quality of family planning services for adolescents through various strategies, such as increasing privacy and confidentiality, improving provider attitudes and communication skills and using peer educators to encourage young people to seek services. While marginal success has been noted in some studies, whether youth-friendly services are sufficient to meet the reproductive-health needs of young women in the sub-Saharan African context has yet to be confirmed.

Several studies have demonstrated a correlation between better quality of family planning services and improved contraceptive uptake (RamaRao and Mohanam 2003; Sanogo et al. 2003; Hainsworth and Zilhao 2009). However, these studies' findings were not disaggregated by age or parity to determine if quality had a differential impact on potential users. Some analysts have suggested that the emphasis on supply-side barriers may not overcome psychological, cultural and social barriers to contraceptive use still prevalent in many sub-Saharan African countries, particularly among young people (Paine, Thorogood, and Wellings 2000; Laughaug et al. 2003; Mmari and Magnani 2003; Campbell, Sahin-Hodoglugil, and Potts 2006; Bearinger et al. 2007).

In this paper, our aim was to determine whether access to high-quality, comprehensive, affordable, user-friendly services in an African country could, indeed, lead to meaningful contraceptive uptake across all age and parity groups. We chose to use data from a post-abortion private clinic in a Kenyan town, where virtually all clients could be presumed to

have an unmet need for effective contraception since they had just experienced an unwanted pregnancy. We were directed to this clinic by the non-governmental organisation (NGO) that had trained the physician in post-abortion care and supplied him with a register to use for recording data on his clients. According to the NGO, the provider's records were exceptionally legible and complete. This clinic was known locally for offering confidential, private, affordable, accessible and compassionate services. Because of the physician's training and his commitment to family planning, the clinic was well-stocked with a complete range of contraceptive methods, including implants, injectables, pills, condoms and IUCDs, as well as equipment to perform tubal ligations. Under these circumstances – where supply-related barriers such as access and quality of services were mitigated and the women's motivation to avoid childbearing at least in the near future was very high – we would be able to assess the extent to which demand-side barriers (such as psycho-social factors, community norms and so on) might affect contraceptive uptake among sexually-active young women as compared to older women.

Due to the provider's cooperation and the completeness of his clinic records, this case study presents a rare opportunity in an African town to: (1) delineate the characteristics of the clients who sought and obtained a safe abortion at a private post-abortion facility in a Kenyan town, (2) identify determinants of contraceptive uptake post-abortion and (3) quantify the residual effects of demand-side barriers on contraceptive use, once supply-side barriers have been largely addressed.

Methods

Study location

The data from this study was drawn from a private clinic located on a main road in a small Kenyan town of approximately 60,000 people, about 150 miles from the nearest large city. To preserve anonymity of the clinic, its name and exact location will not be provided. A middle-aged male Kenyan physician had been providing basic medical services (including family planning) there for more than two decades. His assistants were one nurse and a receptionist. The clinic, which was open 365 days per year, had two rooms and a main waiting area. A large sign painted on the outside stated that it was a medical clinic, but it did not list which services were offered. Although the physician recorded his abortion-related services as 'incomplete abortion' or 'menstrual regulation' in his register, the vast majority of his clients came for terminations. Because post-abortion care is legal and menstrual regulation has never been outlawed in Kenya, the physician's stated services fell within the bounds of the law and he was rarely harassed by police. He performed abortions using either manual vacuum aspiration (MVA) or misoprostol (brand name: Cytotec). He offered clients a choice of abortion methods, although he encouraged the use of misoprostol for women at higher gestations. Prior to the availability of misoprostol, he had relied on laminaria for these women.

Other services available at the clinic included the treatment of sexually-transmitted infections, pregnancy tests and family planning counselling and services. A nearly complete range of family planning methods were available, including Jadell and Norplant implants, Depo Provera injections, intrauterine contraceptive devices (IUCDs), tubal ligation using laparoscopy, spermicides, condoms, emergency contraception and several types of oral contraceptives. The clinic also had numerous family planning posters on the wall and leaflets available to clients.

In calculating the fee for abortion services, the physician used a sliding scale based on his assessment of the client's ability to pay, whether the client had been a victim of incest

or rape and the amount returning clients had paid in the past. His 'target' fee for an abortion was 2500 Kenya shillings (about US\$35), although he usually charged considerably less (US\$10–20) because of clients' poverty. He informed all clients that the fee included any family planning method she chose, including sterilisation, and strongly encouraged all of them to avoid another abortion by using contraception. The physician did not charge less if the client opted not to take a contraceptive method post-abortion.

Data description and analysis

We chose to use this clinic's data for the study because of the physician's meticulous and very legible hand-written records in a post-abortion register, his willingness to be a key informant and the high number of clients he saw per year. In addition, the physician took family planning counselling very seriously and discussed at length the available methods which each client who had received an abortion. The data recorded in the register included client age, parity, marital status, prior terminations, gestational age, diagnosis (menstrual regulation or incomplete abortion), type of abortion procedure (MVA or Cytotec), fee charged, prior contraceptive use and contraceptive method accepted (if any). The physician did not keep detailed records of patients who came for other reproductive health services.

Our data collection methods consisted of two in-depth interviews with the physician and a six-month retrospective review of all post-abortion care clinical records from January to June 2006. During this period, the doctor recorded 1080 visits of girls and women who came for abortion-related services, of which he labeled 98% as MR (for 'menstrual regulation') and 2% as IA (for 'incomplete abortion') in the registers because of the legal restrictions on abortion in Kenya. He provided abortion-related services seven days per week, with seven clients per day on average (range: 0 to 16 clients). He also saw clients for other medical issues, but did not keep detailed records on them. He stated that he did not have many clients coming for incomplete abortion, because most went to a nearby government hospital, which offered post-abortion services free of charge.

To quantify the predictors of whether a woman would choose to use contraception post-abortion, we decided to dichotomise both the dependent and independent variables, although we also examined the data using continuous independent variables to ensure that our findings were robust. For the dependent variable, we assigned it a value of 1 if the client accepted a form of contraception and a 0 if she left the clinic without taking any contraceptive method. For the independent variables, we decided to dichotomise the continuous variables in order to test constructs rather than actual variables. For instance, for age, we believed that women considered 'mature' would experience less stigma in acquiring contraception than those considered 'young.' Hence, we dichotomised age using the median of the sample, with 22 or older assigned a value of 1 and under 22 assigned a 0. We dichotomised marital status as currently married (1) or not (0), presuming that married women are more likely to be sexually active and require future contraception, as well as less stigmatised for using contraception. We dichotomised parity because we felt that having at least one child already marked a girl or woman as sexually active, hence she could be expected to need contraception. Also, having at least one child might reduce fears about the possible effects of contraception on fertility. Therefore, we assigned a value of 0 for having no children and a 1 for having at least one child. Similarly, we assigned a 0 for no prior contraceptive use and a 1 for having previously used a form of modern contraception because women who had previously been contraceptors would have already surmounted fears about contraception. For prior pregnancy terminations, we again decided

to dichotomous this continuous variable. We hypothesised that those who had at least one prior termination would be more disposed to using contraception, but that the absolute number of prior terminations would not be decisive. Therefore, we assigned a 0 for no prior terminations and a 1 for at least one previous termination. We dichotomised gestational age according to the median of the sample: pregnancies 15 weeks or less were assigned 0 and pregnancies 16 weeks or more were given 1, hypothesizing that those with higher gestational ages had more difficulties accessing the clinic and, hence, would be more inclined to use contraception subsequently, but that there was not a linear relationship which would justify the use of a continuous variable. The type of abortion procedure was dichotomised as either manual vacuum aspiration (0) or Cytotec (1), to determine if those using misoprostol were more inclined to adopt contraception. Lastly, we dichotomised the abortion fee by the median, with a value of 0 for lower fee (100–1500 Kenyan shillings) and 1 for higher fee (greater than 1500 Kenya shillings), to test whether the physician was more encouraging of contraceptive use for those who paid more or gave a discounted rate to those who declined contraceptives.

All data were entered into SPSS version 20 and analysed using chi-square and logistic regression. This study received institutional review board approval from the University of California at Los Angeles.

Results

The demographic and service-related characteristics of the total sample ($n = 1080$) are shown in Table 1. To assess differences by age, we analysed the data by age quartile. For the total sample, the mean age was 23 years, with a range of 10 to 46 years. Half of the clients were 21 or younger. About 73% of the women stated that they were single, 20% were married and 7% were separated, divorced or widowed. It is possible that some older women declared they were 'single' because they feared being asked to get their husband's approval if they stated they were married. About 61% of the women had never had a child, while about 14% had one child and 25% had two or more children. About 8% reported having had a prior pregnancy termination. The mean estimated gestational age of the pregnancy was nearly 11 weeks, with a range from 2 to 30 weeks. The physician performed almost three-quarters of the abortions using manual vacuum aspiration and the remaining 27% using misoprostol. The mean fee, including the abortion and a contraceptive method of choice, was 1261 Kenya shillings, which was the equivalent of US\$17.26. The range in sliding scale fees was 100 to 5000 Kenya shillings (US\$1.36–68.49), which is considerably lower than what has been reported elsewhere in Kenya (such as US\$2–146 by the Kenya Human Rights Commission [2010]). This might partly explain the high volume of clients.

We found significant differences by age category for all characteristics except fee charged for service. Less than 5% of the women aged 21 years or below were married, compared to about 20% among women aged 22 to 26 and about 58% among women aged 27 and above. As expected, the vast majority of younger women did not have any children: about 94% of women 21 and younger were childless, as compared to only 29% of women 22 or older. Of women aged 27 or older, more than half had four or more children. Regarding abortion services, younger women were much more likely to come for services at later gestational ages: about 45% of adolescents came in after the first trimester, compared to 30% or less of women in the other age categories. The delay in coming to the clinic may have been due to a number of factors, such as slower recognition of the pregnancy and of the decision to obtain an abortion, less knowledge of how to access

Table 1. Characteristics of clients and services received, by age.

Age in years	10–18 (n = 290)	19–21 (n = 251)	22–26 (n = 294)	27–46 (n = 245)	Total (n = 1080)
	(%)	(%)	(%)	(%)	(%)
Age in years (mean)	16.9	19.9	23.7	32.4	23.0
Marital status*					
Single	99.3	94.8	74.8	18.0	73.1
Married	0.7	4.4	20.1	57.6	19.7
Separated/divorced	0.0	0.8	2.7	13.9	4.1
Widowed	0.0	0.0	2.4	10.6	3.1
Parity*					
None	97.6	89.2	50.3	3.3	61.4
1	1.7	7.2	32.0	11.8	13.5
2–3	0.3	1.6	14.6	33.5	12.0
4 or more	0.3	2.0	3.1	51.4	13.1
Prior terminations*					
None	99.0	94.8	88.8	85.3	92.1
1–4	1.0	5.2	11.2	14.7	7.9
Gestation (in weeks) *					
3–9 (mean: 6.7)	37.6	53.2	57.5	57.8	51.2
10–12 (mean: 10.9)	17.9	18.8	19.4	21.3	19.3
13–17 (mean: 14.9)	20.7	15.2	16.0	9.4	15.6
18–30 (mean: 20.8)	23.8	12.8	7.1	11.5	13.9
Procedure*					
Manual vacuum aspiration	55.9	74.5	81.0	84.5	73.5
Misoprostol (Cytotec)	44.1	25.5	19.0	15.5	26.5
Fee charged (in Ksh)					
0–500	16.9	24.7	22.1	23.3	21.6
501–1000	35.9	35.1	34.0	37.6	35.6
1001–1500	18.6	15.5	19.4	18.0	18.0
1501–2000	14.8	11.2	12.2	13.1	12.9
2001–5000	13.8	13.5	12.2	8.2	12.0

Notes: * $p < .001$; \$1US = 73 Ksh. in 2006; overall mean gestation = 10.7 weeks.

services and fewer resources. Younger women were disproportionately more likely to receive misoprostol than manual vacuum aspiration, largely because they arrived at the clinic at a higher gestation.

Table 2 shows contraceptive use prior to and after the abortion. Only about one in five women overall reported previously using a modern contraceptive method. No young woman aged 10 to 18 reported ever using a method and only 4% of young women aged 19 to 21 said they had used a method before. This contrasts with about 22% of women aged 22 to 26 and 60% of women older than 26 reporting that they had ever used a contraceptive method. After the abortion, about 45% of the total sample chose a contraceptive method, more than double the proportion of clients who had used a method previously. The three most popular methods post-abortion were: injectables (21% of all women), oral contraceptives (13%) and sterilisation (6%). Nearly 40% of women in the older age category chose a permanent or long-term method of contraception, which is unusually high for African women. Despite being offered any method they desired in a private and confidential setting, less than 7% of adolescents opted for a contraceptive method post-abortion. This contrasts dramatically with contraceptive uptake in the other age quartiles, which were 21% (for women aged 19 to 21), 63% (for women aged 22 to 26) and 96% (for women aged 27 to 46).

Table 2. Contraceptive use before and after abortion, by age.

Age in years	10–18 (<i>n</i> = 290)	19–21 (<i>n</i> = 251)	22–26 (<i>n</i> = 294)	27–46 (<i>n</i> = 245)	Total (<i>n</i> = 1080)
	(%)	(%)	(%)	(%)	(%)
Previous contraceptive method used*					
None	100.0	96.4	77.9	40.2	79.6
Depo Provera injections	0.0	1.2	11.6	36.1	11.6
Pills	0.0	0.8	8.2	19.3	6.8
Condoms	0.0	1.6	1.0	1.2	0.9
Implant	0.0	0.0	0.7	2.0	0.6
IUCD	0.0	0.0	0.0	0.8	0.2
Emergency pills	0.0	0.0	0.7	0.4	0.3
Tubal ligation	0.0	0.0	0.0	0.0	0.0
Contraceptive method taken*					
None	93.8	78.9	36.4	4.5	54.4
Depo Provera injections	1.7	9.6	33.7	39.2	20.7
Pills	3.4	9.2	23.5	15.5	13.0
Condoms	0.3	1.2	1.7	1.2	1.1
Implant	0.3	1.2	3.4	7.3	3.0
IUCD	0.3	0.0	0.3	6.5	1.7
Emergency pills	0.0	0.0	1.0	0.0	0.3
Tubal ligation	0.0	0.0	0.0	25.7	5.8

Note: **p* < .001.

To estimate predictors of contraceptive uptake post-abortion, we first developed odds ratios for each independent variable. We then entered them simultaneously into a logistic regression model, in order to determine their odds ratios after controlling for all other variables. As shown in Table 3, all variables (except fee charged) had significant unadjusted odds ratios. After controlling for the other variables, four variables remained significant. Having at least one child was the most significant positive predictor of contraceptive uptake among these abortion clients. The odds of contraceptive uptake were nearly 19 times greater among women with at least one child as compared to those with no children. Having had at least one previous termination was also significantly positively associated with contraceptive uptake: the odds of accepting a contraceptive method were 11 times greater among women who had a previous termination. In addition, women who

Table 3. Odds ratios (OR) and adjusted odds ratios (AOR) of predictors of contraceptive uptake post-abortion from logistic regression (*n* = 1076).

	OR (95% CI)	AOR (95% CI)
Variable		
Had at least one child	59.80* (39.65–90.19)	18.62* (10.81–32.07)
Had at least one previous termination	8.36* (4.48–15.60)	11.33* (5.17–24.87)
Used contraception before	55.00* (26.76–113.01)	10.26* (4.11–25.62)
Older than 21 years	23.62* (17.11–32.60)	4.19* (2.73–6.41)
MVA procedure (not Cytotec)	2.19* (1.64–2.91)	1.72 (0.79–3.74)
Higher gestation (> 15 weeks)	0.57* (0.42–0.78)	1.66 (0.74–3.77)
Married	27.84* (15.91–48.75)	1.45 (0.68–3.13)
Paid higher fee (> 1000 Ksh)	0.87 (0.69–1.11)	1.19 (0.78–1.79)

Notes: Four cases were removed for lack of data on all variables; the AOR was adjusted by all variables on Table;

**p* < .01.

had previously used a contraceptive method were 10 times more likely to adopt a method post-abortion.

Finally, being older than 21 years was significantly positively associated with the outcome variable. The odds of leaving the clinic with a contraceptive method were four times greater among women who were older than 21 years, which indicated that age was an important predictor. Marital status, gestational age, abortion procedure and fee were not found to be significant in the adjusted model. This analysis confirmed the physician's contention that neither clients' advanced gestational age (which made the abortion more complex) nor the fee they paid influenced whether he promoted contraception to them. Further analysis of a reduced model (age, marital status and parity) showed that marital status was no longer a significant predictor of contraceptive uptake once parity was added. Parity and marital status were highly correlated. The same independent variables were significant when continuous variables were used, but the adjusted odds ratios were considerably lower (not shown).

Discussion

Our intent was to provide evidence about the relative influence of supply-side versus demand-side barriers on the post-abortion contraceptive choices of young and adult Kenyan women who had access to confidential, comprehensive and high-quality family planning information and services. This case study examined women's contraceptive uptake following an abortion in a setting in which many of the commonly cited supply-side barriers to contraceptive use were addressed. The physician was a kindly and competent provider, who spent considerable time counselling each client on her family planning options in a confidential and caring manner. He offered all girls and women a complete range of free contraceptive methods and strongly encouraged every client to take a contraceptive method before leaving the facility. He also had well-written family planning brochures and posters to aid clients in decision-making. Given these nearly ideal circumstances, we could test the relative influence of the supply-side factors on contraceptive uptake among women of different age groups, all of whom had clearly been motivated to avoid a birth.

One of the major findings of this study was that contraceptive uptake post-abortion differed dramatically by age group. After the abortion and private family planning counselling, only about 6% of adolescent clients left the facility with a method, as compared to 95% of clients aged 27 to 46. These results suggest that addressing key supply-side factors, such as availability, affordability and youth-friendliness of services were not sufficient to overcome the barriers that young women faced. Only the few adolescents who already had a child were likely to leave the facility with a contraceptive method, presumably because they already were marginalised in society. It is possible that the experience of having a relatively inexpensive, rapid and safe abortion may have emboldened girls to eschew future contraception (Otoide, Oronsaye, and Okonofua 2007), but this seems unlikely in a country where safe abortion services are legally restricted and access is unreliable. Moreover, having already had at least one termination was a highly significant predictor of contraceptive uptake post-abortion.

In contrast with young women, demand-side barriers seemed to be negligible for women older than 26. Their contraceptive use became nearly universal when supply-side barriers were removed. These abortion clients' use of contraception increased dramatically from 60 to 96%. All but three women in this cohort who had used a method previously chose to use a method subsequently. Remarkably, more than one-quarter of women over

26 chose to be sterilised, which attests to the skill of the physician in presenting effectively the array of contraceptive options. These findings suggest that high-quality post-abortion counselling and services on site can largely eliminate unmet need for this age group, at least in the immediate post-abortion period. Two studies from hospital-based interventions in Zimbabwe and Kenya had similar results (Johnson et al. 2002; Solo et al. 1999). Johnson et al. (2002) found that offering family planning counselling and providing free contraceptive methods to post-abortion clients led to significantly increased rates of contraceptive use among adult women, of whom three-fourths were married and about 39% had used contraception in the past. In their sample, the average age was 28 years and average number of previous pregnancies was 3.7. Among the 1355 women who received the intervention, 97% left the hospital with a contraceptive method, compared to only 5% at the control site, which did not receive family planning counselling following their treatment. Likewise, Solo et al. (1999) found that 70% of hospital-based post-abortion clients who received family planning counselling left with a method, as compared to only 3% of those who did not receive the intervention.

While access to high quality family planning services did seem to diminish the likelihood that older abortion clients will again have an unwanted pregnancy, this study's findings call into question whether youth-friendly services alone can effect a major reduction in the unmet need of sexually-active non-urban African young women, even among those girls who just experienced the scare of an undesired pregnancy. To date, various reviewers have found little evidence of the ability of youth-friendly services to directly impact adolescent sexual behaviour in Africa (Paine, Thorogood, and Wellings 2000; RamRao and Mohanam 2003; Speizer, Magnani, and Colvin 2003; Plummer et al. 2007; Ross et al. 2007). This study's findings underscore the need to shift our focus to other factors that may override clinical or service-related issues in young women's use of family planning. Results from two recent studies have similarly suggested that social and community-level factors may be more influential than clinic factors in determining family planning service use among young people in non-urban Africa (Mmari and Magnani 2003; Tylee et al. 2007).

During our interviews with the physician, he provided insights into why so many adolescents were reluctant to accept a contraceptive method. He identified three major psychosocial factors, based on his numerous discussions with young women. He believed that the principal reason for adolescents' reluctance to use contraceptive methods was their often-expressed opinion, clearly derived from their society's norms, that girls who 'planned for' sexual activity by using contraception were promiscuous, unvirtuous or morally reprehensible. Their own self-concept would suffer if they chose to use a contraceptive method, unless they were already in a stigmatised minority by having a child. Many girls told him that they now intended to be abstinent until marriage, which he believed was unlikely. In some cases, girls' pregnancies had arisen from rape or incest, so they would not be considered 'sexually active' and in need of contraception in the near term. However, the physician considered these situations to be quite rare (1–3%).

The second major barrier the physician identified was the girls' fears that contraceptive use would impair their future fertility. Fears that early contraceptive use could lead to infertility have been widely noted in the literature from various African countries (Paine, Thorogood, and Wellings 2000; Otoide, Oronsaye, and Okonofua 2007; Singh, Sedgh, and Hussain 2010; Bell 2012). It is noteworthy that the physician was unable to overcome these fears through dialogue with young women, which shows how deeply-rooted they are.

Lastly, the physician told us that young women's concern of being discovered with contraception, which would indicate their sexual activity, was another major factor in

many girls' decision not to take pills or condoms from the clinic. Being found with contraception could lead to school expulsion or severe parental discipline in this area of Kenya. According to the physician, adolescents who came to the clinic with their mother or sister (which he estimated occurred about 15% of the time) rarely left with a method, possibly due to familial disapproval.

Although unmarried girls in Kenyan towns who are sexually-active, but not contracepting, risk unwanted pregnancies with their attendant serious social consequences, this study suggests that using contraception would require surmounting psycho-social hurdles that could be equally deleterious in their communities – and also self-stigmatising. Prevalent sexual norms in sub-Saharan Africa, which are influenced by strong religious beliefs and cultural values, prohibit premarital sex, especially among girls (Marston and King 2006; Warenus et al. 2006; Bearinger et al. 2007; Adaji et al. 2010; Bankole and Malarcher 2010; Mkhwanazi 2010). Because of these social strictures, young people need to be secretive in their premarital sexual activity, which in turn poses a critical barrier to their use of contraceptives (Marston and King 2006; Bearinger et al. 2007; Adaji et al. 2010; Bankole and Malarcher 2010; Singh, Sedgh, and Hussain 2010; Izugbara, Ochako, and Izugbara 2011). The value of this study was that it showed just how daunting these psychosocial barriers could be, even when services were extremely youth-friendly and the girls had already had a pregnancy scare.

For those young people who do overcome the hurdles to contraceptive use, research suggests that psycho-social barriers may contribute to lower efficacy. Worldwide, studies have shown that, compared with adult contraceptive use, contraceptive use among young people is characterised by shorter periods of consistent use, higher levels of discontinuation and more contraceptive failure. In developing countries, not only do young people face ongoing stigma and discrimination from providers in clinics, which could curtail access, but their own shame and embarrassment may impede them from getting the information they need to use methods effectively. Young women's constant worry about how sexual activity may negatively affect their reputation, and their own desires to be considered morally upright, could make sexual activity more unpredictable and contraceptive use more erratic.

Lastly, this study has provided insights into abortion clients in African towns. Very little literature exists about girls and women who obtain safe abortion services in sub-Saharan Africa, outside of South Africa. Because abortion is legally-restricted on most of the continent, almost all studies of African abortion clients and contraceptive uptake post-abortion have been conducted among women with abortion-related complications who are being treated in a hospital setting (e.g. Johnson et al. 2002). It is possible that those with complications differ in some ways from those who do not, or that they are more likely to use contraception afterwards because they suffered a life-threatening condition. In this study, we found that those seeking safe abortions are likely to be unmarried, nulliparous women with an average age of 23. For abortion clients over the age of 26, or for those over 21 who already had a child, their contraceptive uptake was extremely high if they were given high quality services.

Limitations

This study had several limitations. First, the data were drawn from records taken from one provider working in a clinic in rural Kenya during a six-month period. Therefore, the findings may not be generalised to other settings or to a larger population. However, our intention in this study was to test how much influence supply-side factors had on

contraceptive uptake of abortion clients by choosing a clinic that was a very friendly, competent facility with comprehensive, full-stocked methods in a non-urban area. We also wanted to help fill gaps in the literature by examining contraceptive uptake at an abortion facility rather than among African women who presented at a hospital with complications. Another limitation was the use of secondary data for our analysis. It was not possible to collect data directly from the clients to help clarify the barriers to contraceptive use. However, we were able to triangulate the secondary data through two in-depth interviews with the physician, who provided insights into why young people's contraceptive uptake remained low after the abortion and counselling. Finally, conducting a retrospective review of the physician's records meant that we had no way to verify their accuracy. While we could not cross-check his data, the meticulous nature of his registers, his pride in his record-keeping and the fact that we had been directed to this physician by an NGO who could vouch for him gave us confidence that his records were complete and trustworthy.

Conclusion

The failure to meet the sexual and reproductive health needs of women in sub-Saharan Africa has resulted in a high level of unintended pregnancies, many of which result in unsafe abortions that threaten the health and survival of women in this region. This study emphasised that the problem of unmet need for family planning among young people should be viewed within the broader socio-cultural environment. In sub-Saharan Africa, adolescents seem to be particularly vulnerable to the numerous cultural and social barriers to contraceptive use (Marston and King 2006; Jewkes, Morrell, and Christofides 2009; Renju et al. 2010). Even if high-quality access to family planning is readily available to young people, the demand for services may be primarily influenced by other barriers, such as stigma of being sexually active, fear of side-effects and community norms around young people's sexuality. Until national and community-level activities are undertaken to address psychosocial norms directly, it is unlikely that adolescents in many African towns will be able to enjoy reproductive health and effectively avoid unwanted pregnancies.

Acknowledgements

The authors are grateful to Vidalyné Omollo for her assistance in data collection and to Adam Carl Cohen for data entry. This research was sponsored by a grant from the UCLA Globalization Research Center-Africa.

References

- Adaji, S.E., L.U. Warenius, A.A. Ong'any, and E.A. Faxelid. 2010. The attitudes of Kenyan in-school adolescents toward sexual autonomy. *African Journal of Reproductive Health* 14, no. 1: 33–41.
- Bankole, A., and S. Malarcher. 2010. Removing barriers to adolescents' access to contraceptive information and services. *Studies in Family Planning* 41, no. 2: 117–24.
- Bearinger, L.H., R.E. Sieving, J. Ferguson, and V. Sharma. 2007. Global perspectives on the sexual and reproductive health of adolescents: Patterns, prevention and potential. *Lancet* 369: 1220–31.
- Bell, S.A. 2012. Young people and sexual agency in rural Uganda. *Culture, Health & Sexuality* 14, no. 3: 283–96.
- Blanc, A.K., A.O. Tsui, T.N. Croft, and J.L. Trevitt. 2009. Patterns and trends in adolescents' contraceptive use and discontinuation in developing countries and comparisons with adult women. *International Sexual and Reproductive Health* 35, no. 2: 63–71.

- Boonstra, H.D. 2007. Learning from adolescents to prevent HIV and unintended pregnancy. Alan Guttmacher Institute. http://www.guttmacher.org/pubs/2007/09/19/IB_PNG2007.pdf
- Boyd, A. 2000. The World's Youth 2000. Population Reference Bureau, Washington DC. <http://www.prb.org/Reports/2000/WorldsYouth2000.aspx>
- Brookman-Amissah, E., and J.B. Moyo. 2004. Abortion law reform in sub-Saharan Africa: No turning back. *Reproductive Health Matters* 12, no. 24 supplement: 227–34.
- Caldwell, J.C., and P. Caldwell. 2002. Africa: The new family planning frontier. *Studies in Family Planning* 33, no. 1: 76–86.
- Campbell, M., N.N. Sahin-Hodoglugil, and M. Potts. 2006. Barriers to fertility regulation: A review of the literature. *Studies in Family Planning* 37, no. 2: 87–98.
- Cleland, J.G., R.P. Ndugwa, and E.M. Zulu. 2011. Family planning in sub-Saharan Africa: Progress or stagnation? *Bulletin of World Health Organization* 89, no. 2: 137–43.
- Dahlback, E., M. Maimbolwa, L. Kasonka, S. Bergström, and A.B. Ransjö-Arvidson. 2007. Unsafe induced abortions among adolescent girls in Lusaka. *Health Care for Women International* 28, no. 7: 654–76.
- Hainsworth, G., and I. Zilhao. 2009. From inception to large scale: The Geracao Biz Programme in Mozambique. Pathfinder International/World Health Organization. http://whqlibdoc.who.int/publications/2009/9789241598347_eng.pdf
- Hindin, M., and A.O. Fatusi, A.O.. 2009. Adolescent sexual and reproductive health in developing countries: An overview of trends and interventions. *International Perspectives on Sexual and Reproductive Health* 35, no. 2: 58–62.
- Hussain, R. 2012. *Abortion and unintended pregnancy in Kenya*. New York: Guttmacher Institute. http://www.guttmacher.org/pubs/IB_UnsafeAbortionKenya.pdf
- Izugbara, C.O., R. Ochako, and C. Izugbara. 2011. Gender scripts and unwanted pregnancy among urban Kenyan women. *Culture, Health & Sexuality* 13, no. 9: 1031–45.
- Jewkes, R., R. Morrell, and N. Christofides. 2009. Empowering teenagers to prevent pregnancy: Lessons from South Africa. *Culture, Health & Sexuality* 11, no. 7: 675–88.
- Johnson, B.R., S. Ndhlovu, S.L. Farr, and T. Chipato. 2002. Reducing unplanned pregnancy and abortion in Zimbabwe through post-abortion contraception. *Studies in Family Planning* 33, no. 2: 195–202.
- Kenya Human Rights Commission. 2010. *Teenage pregnancy and unsafe abortion: the case of Korogocho slums*. Nairobi: Author.
- Kipp, W., S. Chacko, L. Laing, and G. Kabagambe. 2007. Adolescent reproductive health in Uganda: Issues related to access and quality of care. *International Journal of Adolescent Medicine and Health* 19, no. 4: 383–93.
- Laughaug, L.F., F.M. Cowan, T. Nyamurera, and R. Power. 2003. Improving young people's access to reproductive health care in rural Zimbabwe. *AIDS Care* 15, no. 2: 147–57.
- Marston, C., and E. King. 2006. Factors that shape young people's sexual behaviour: A systematic review. *Lancet* 368: 1581–6.
- Mkhwanazi, N. 2010. Understanding teenage pregnancy in a post-apartheid South African township. *Culture, Health & Sexuality* 12, no. 4: 347–58.
- Mmari, K.N., and R.J. Magnani. 2003. Does making clinic-based reproductive health services more youth-friendly increase service use by adolescents? Evidence from Lusaka, Zambia. *Journal of Adolescent Health* 33: 259–70.
- Otoide, V.O., F. Oronsaye, and F.E. Okonofua. 2007. Why Nigerian adolescents seek abortion rather than contraception: Evidence from focus-group discussions. *International Family Planning Perspectives* 27, no. 2: 77–81.
- Paine, K., M. Thorogood, and K. Wellings. 2000. The impact of the quality of FP services on safe and effective contraceptive use: A systematic literature review. *Human Fertility* 3, no. 3: 186–93.
- Plummer, M.L., D. Wight, A.I.N. Obasi, J. Wamoyi, G. Mshana, J. Todd, B.C. Mazige, M. Makokha, R.J. Hayes, and D.A. Ross. 2007. A process evaluation of a school-based adolescent sexual health intervention in rural Tanzania: The MEMA kwa Vijana programme. *Health Education Research* 22, no. 4: 500–12.
- Population Reference Bureau. 2008. Family planning data sheet. Population Reference Bureau. <http://www.prb.org/pdf08/fpds08.pdf>
- RamaRao, S., and R. Mohanam. 2003. The quality of family planning programs: Concepts, measurements, intervention and effects. *Studies in Family Planning* 34, no. 4: 227–48.

- Renju, J., B. Andrew, K. Nyalali, C. Kishamawe, C. Kato, J. Chantalucha, and A. Obasi. 2010. A process evaluation of a scale-up of a youth-friendly health services initiative in northern Tanzania. *Journal of the International AIDS Society* 13, no. 32: 1–12.
- Ringheim, K., and J. Gribble. 2010. *Improving the reproductive health of sub-Saharan Africa's youth*. Washington, DC: Population Reference Bureau. <http://www.prb.org/Reports/2010/youthchartbook.aspx>
- Ross, D.A., J. Chantalucha, A.I. Obasi, J. Todd, M.L. Plummer, B. Cleophas-Mazige, A. Anemona, et al., 2007. Biological and behavioural impact of an adolescent sexual health intervention in Tanzania. *AIDS* 21: 1943–55.
- Sanogo, D., S. RamaRao, H. Jones, P. N'diaye, B. M'bow, and C.B. Diop. 2003. Improving quality of care and use of contraceptives in Senegal. *African Journal of Reproductive Health* 7, no. 2: 57–73.
- Shah, I., and E. Åhman. 2004. Age patterns of unsafe abortion in developing country regions. *Reproductive Health Matters* 12, no. 24: 9–17.
- Shaw, D. 2009. Access to sexual and reproductive health for young people: Bridging the disconnect between rights and reality. *International Journal of Obstetrics and Gynecology* 106: 132–6.
- Singh, S., J.E. Darroch, L.S. Ashford, and M. Vlassoff. 2009. *Adding it up: The costs and benefits of investing in family planning and maternal and newborn health*. New York: Guttmacher Institute and United Nations Population Fund. <http://www.guttmacher.org/pubs/AddingItUp2009.pdf>.
- Singh, S., G. Sedgh, and R. Hussain. 2010. Unintended pregnancy: Worldwide levels, trends and outcomes. *Studies in Family Planning* 41, no. 4: 241–50.
- Solo, J., D.L. Billings, C. Aloo-Obunga, A. Ominde, and M. Makumi. 1999. Creating linkages between incomplete abortion treatment and family planning services in Kenya. *Studies in Family Planning* 30, no. 1: 17–27.
- Speizer, I.S., R.J. Magnani, and C.E. Colvin. 2003. The effectiveness of adolescent reproductive health interviews in developing countries: A review of the evidence. *Journal of Adolescent Health* 33: 324–48.
- Tavrow, P. 2010. Promote or discourage: How providers can influence service use. In *Social determinants of sexual and reproductive health: Informing future research and programme implementation*, ed. S. Malarcher, 5–36. Geneva: World Health Organization.
- Tylee, A., D.M. Haller, T. Graham, R. Churchill, and L.A. Sanci. 2007. Youth-friendly primary-care services: How are we doing and what more needs to be done? *Lancet* 369: 1565–73.
- UNFPA. 2003. State of the world population 2003: Gender inequality and reproductive health. UN. <http://www.unfpa.org/swp/2003/english/ch2/page2.htm>
- UNICEF. 2008. State of the world's children: Special edition on children's rights. UN. <http://data.un.org/Data.aspx?d=SOWC&f=inID%3A34>
- Warenus, L.U., E.A. Faxelid, P.N. Chishimba, J.O. Musandu, A.A. Ong'any, and E.B. Nissen. 2006. Nurse-midwives attitudes towards adolescents' sexual and reproductive health needs in Kenya and Zambia. *Reproductive Health Matters* 14, no. 27: 119–28.
- Wood, K., and R. Jewkes. 2006. Bold blockages and scolding nurses: Barriers to adolescent contraceptive use in South Africa. *Reproductive Health Matters* 14, no. 27: 109–18.
- World Health Organization. 2011. *Unsafe abortion: Global and regional estimates of the incidence of unsafe abortion and associated mortality in 2008*. 6th ed. Geneva: World Health Organization.

Résumé

Cet article analyse l'impact des services après avortement, exhaustifs, à échelle variable, conviviaux et de grande qualité, sur l'utilisation des méthodes de contraception par les usagères, dans une ville du Kenya. Les données ont été extraites des dossiers détaillés remplis par des médecins exerçant dans un centre de soins privé qui a accueilli 1080 femmes dans ces services en 2006. Toutes ces femmes ont reçu des conseils de planning familial et une gamme complète de méthodes contraceptives sans payer de frais supplémentaires. 25% d'entre elles avaient moins de 19 ans. Contrairement aux femmes âgées de 27 à 46 ans, aucune des femmes âgées de 10 à 18 ans n'a déclaré avoir eu recours à des méthodes de contraception avant l'avortement. Suite à l'avortement et à l'entretien de conseils en planning familial, seules 6% des femmes âgées de 10 à 18 ans ont opté pour une méthode de contraception (vs. 96% parmi les femmes âgées de 27 à 46 ans) bien que les méthodes proposées aient été gratuites, que les prestataires de soins aient fortement encouragé

chacune des femmes à avoir recours au planning familial, et que toutes les usagères aient tout juste expérimenté une grossesse non désirée. Ont émergé de l'étude des facteurs significativement prédictifs de l'utilisation de méthodes contraceptives après avortement: être mère d'un enfant, avoir déjà subi un avortement, avoir utilisé des méthodes contraceptives et être âgée de plus de 21 ans avant l'avortement. Ces résultats suggèrent que la disponibilité, l'accessibilité financière et la convivialité des méthodes contraceptives ne suffisent pas pour permettre aux jeunes sexuellement actifs au Kenya de dépasser les obstacles psychosociaux à leur utilisation. Pour réduire le nombre de grossesses non désirées, il faut être plus attentif au développement de communautés favorables aux jeunes et à la sexualité responsable.

Resumen

En este artículo analizamos cómo influyen los servicios de alta calidad, accesibles y con amplias tarifas flexibles en la aceptación de anticonceptivos tras un aborto por parte de mujeres en una ciudad de Kenia. Se recabaron datos de los historiales médicos detallados en una clínica privada en la que se trató a 1080 mujeres tras un aborto en 2006. Todas las clientas recibieron asesoramiento confidencial de planificación familiar y se les ofreció toda una serie de anticonceptivos sin coste adicional. El veinticinco por ciento de estas mujeres tenían menos de 19 años. Antes del aborto, ninguna de estas clientas entre 10 y 18 años informó haber usado anticonceptivos, en comparación con el 60% de las mujeres entre 27 y 46 años. Tras el aborto y la sesión de asesoramiento de planificación familiar, solamente el 6% de las clientas entre 10 y 18 años eligieron un método anticonceptivo, en comparación con el 96% de las clientas entre 27 y 46 años, aunque la contracepción era gratuita, el proveedor fomentaba encarecidamente la planificación familiar a todas las mujeres, y todas acababan de tener un embarazo no deseado. Los indicadores principales a la hora de aceptar anticonceptivos tras un aborto fueron: tener un hijo, un aborto previo, el uso previo de anticonceptivos y ser mayor de 21 años. Estos resultados indican que factores como la disponibilidad, la asequibilidad y la facilidad para los jóvenes no son suficientes para superar las barreras psicosociales del uso de anticonceptivos en gente joven sexualmente activa en Kenia. Para reducir los embarazos no deseados, se debe prestar más atención a desarrollar comunidades más accesibles para los jóvenes que apoyen una sexualidad responsable.