

Quality of delivery of the Standard Days Method as compared with contraceptive pills in Rwanda

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Abstract

Background and methodology Replicating a Peruvian study, this research introduced the Standard Days Method (SDM) into Rwanda Ministry of Health clinics and evaluated client counselling on the new method against that given for contraceptive pills. Providers received technical reinforcement concerning established methods in addition to SDM training. To evaluate their quality of care, simulated clients implemented a service test in visits to 20 clinics.

Results As in Peru, providers exchanged significantly more relevant information with clients who chose SDM than with those who chose pills. Also, a minority of providers posed barriers to SDM access by refusing to give SDM tools to the client until she brought her partner for consultation.

Conclusions The findings of this study confirm that SDM counselling is generally satisfactory, although SDM training needs adjustment, and that the rigour of providers' pill counselling remains below capacity.

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Key message points

- The detailed counselling given to clients on the Standard Days Method (SDM) indicates strong provider training on this new family planning method.
- The requirement that the partner be present during SDM counselling must be removed.
- The less detailed counselling received by pill clients shows that providers perform below capacity when they deliver this contraception method.

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Background

The Standard Days Method (SDM) identifies Days 8 to 19 of the menstrual cycle as the fertile window. The target group is women with 26–32-day menstrual cycles who are willing to avoid unprotected intercourse on fertile days.¹ Users rely on CycleBeads®, a color-coded string of beads representing the menstrual cycle, to identify whether they are on a day when pregnancy is likely.² Probability of pregnancy is 0.0475 with correct use and 0.12 with typical use.³

Research in Peru showed that 2-day SDM training enabled providers to give clients detailed SDM counselling (Leon *et al.*, unpublished observations, 2006). However, providers posed barriers to SDM access (i.e. some refused to give SDM tools to clients until they studied their menstrual cycle and/or brought their partner for consultation) and gave less detailed counselling to clients who chose hormonal methods.

Methods

The study replicated the research at Rwanda Ministry of Health clinics. The site selected was the Rwandan province of Byumba (91% rural) where the prevalence of use of modern methods is 5.3%.⁴ This site was convenient because the Ministry of Health operated 20 clinics that delivered nine established methods, including pills (combined hormones, 28-day pack), and SDM was not yet available. Ethical clearance for the research was obtained from the Institutional Review Board of Georgetown University.

Interventions

A 9-day contraceptive update workshop for providers was conducted in September 2004 as part of the ongoing programme to build capacity. All methods regularly provided by the programme were addressed. At this time, providers' consent to receive visits by simulated clients was requested. Project staff introduced the SDM later (February–March 2005) through a 2-day workshop. The agenda included SDM's scientific basis and management of SDM clients. Providers received an SDM counselling manual² and the clinics were provided with SDM user aids. Finally, providers were given feedback on their method delivery (July 2005), based on the service test Trial 1 described below.

Measurement tool

Routine quality of care was measured by the service test, which consisted of a client script depicting a contraceptive history, conjugal circumstances, and so on; a simulated client who enacted the script as she requested services from a provider who believes s/he is attending a real client; and an observation checklist that the client completed upon leaving the clinic.^{5–8}

Two client scripts were used. One entailed choice of SDM: "... would like having children in the future, afraid of side effects of hormonal methods, afraid of inserting anything into uterus, will choose SDM if given the option, on Day 4 of her menstrual cycle, no contraindications to the use of SDM ...". A second script, referring to a woman with no contraindications to pill use whose husband was using condoms but disliked using them, mandated a pill

Table 1 Means and standard deviations for service test Trial 2 scores, and paired *t*-test and non-paired effect size for the comparison between Standard Days Method and pill clients over three dependent variables in Byumba, Rwanda, 2005 (*n* = 20)

Dependent variable	SDM		Pill		<i>t</i>	Effect size (95% CI)
	Mean	SD	Mean	SD		
Information exchange ^a	69.64	13.07	48.98	15.31	4.50*	1.41 (0.71 to 2.10)
Interpersonal relations	7.60	1.31	7.25	1.33	0.92	0.26 (-0.36 to 0.88)
Session length in minutes (m) and seconds (s)	43m 54s	17m 05s	38m 12s	15m 07s	1.01	0.35 (-0.28 to 0.97)

^aPercentage of number of items in the respective scale. **p* < 0.001, two-tailed test. SD, standard deviation; SDM, Standard Days Method.

choice. The client knew nearly nothing about the pill. Both scripts instructed clients not to volunteer information but just respond to the provider's questions.

Three scores were generated as follows. (1) *Session length*. The simulated clients were asked to use a watch to register the time at which the consultation started and the time at which it ended. (2) *Interpersonal relationships*. Nine items were employed to measure providers' interpersonal relations with clients (e.g. the provider asked me if I had any questions). The items were scored 1 (observed) or 0 (not observed) and the sum of item scores yielded a summary score. (3) *Information exchange*. This variable was measured in a similar manner, although the expected provider behaviours varied according to client type. Fifty-six items derived from the SDM protocol² tapped needs assessment, method options, contraindications, use instructions, mechanisms/advantages/disadvantages and follow-up indications. Sixty-four items selected for the pill client checklist were formulated taking into account World Health Organization guidelines;^{9,10} these items encompassed side effects/warning signs in addition to the other topics. To control for checklist length, the summary scores were converted into percentages of the total number of items in each scale.

Fieldwork

The simulated clients, all nurses, were recruited in the capital city of Kigali. Their training lasted 5 days and consisted of introductory presentations and role-playing exercises. Each trainee was trained on only one script/checklist. The exercises specified various levels of quality of care. Each trainee conducted role-plays at each level, as well as practice trials at urban and rural clinics, and received feedback.

Two two-person teams (one client per script) visited Byumba clinics. One of the teams targeted half the 20 clinics while the other 10 clinics were targeted by the parallel team. Each clinic received the visit of the two types of clients in random order. A first round of visits (Trial 1) took place after the contraceptive update (January 2005). New client cohorts were recruited and trained after provider feedback for Trial 2 (August–September 2005).

Statistical design

The model was a repeated measurements experiment. Two treatments are given to the provider (SDM client visit, pill client visit) and a measurement (e.g. session length) is obtained for each case. Scores for the two client types were compared by means of two-tailed paired samples *t*-tests. Effect sizes are needed in experiments in addition to conventional statistical tests.¹¹ To maintain the scale of the original scores, we used the *g* for independent samples. Consequently, to calculate the 95% confidence interval for *g* we used $s_g(1.96)$, where $s_g = [g^2/2 df_W + N/(n_1 \times n_2)]^{1/2}$.

Results

SDM was not yet offered at the time of Trial 1. Table 1 presents the scores that providers attained at Trial 2. The SDM percentage on information exchange was significantly greater than the pill percentage, and the contrast was associated with a substantial effect size. The average raw scores were 39.0 and 31.3, respectively (*t* = 2.8, *p* < 0.01, effect size = 0.88 ± 0.65). The lower pill score cannot be attributed to the SDM intervention since it did not negatively change from Trial 1 (28.7) to Trial 2. Table 1 also indicates that the differences in interpersonal relations and session length were non-significant. Session length was twice as long as in Peru and the counselling was more detailed.

Table 2 Information exchange items that achieved means of at least 0.95 at service test Trial 2 per client type in Byumba, Rwanda, 2005 (*n* = 20)

SDM	Pill
<ul style="list-style-type: none"> ● Provider asked whether I could be pregnant (menstruation, others) ● Told me that the injectable is effective if injected every 3 months ● Asked me to choose a method ● Whether my periods come more or less when I expect them ● Explained how the Standard Days Method (SDM) functions ● Told me what to do if my cycle is too long ● What to do if my cycle is too short ● That the white beads represent days on which I should abstain or have protected sex ● That pregnancy is likely if you have unprotected sex on a fertile day ● To move the black band to the red bead the day my menstruation starts ● To mark the first day of menstruation on my card ● That SDM users must move the black band every day ● That the brown beads represent days on which I can have sex ● Emphasised that if I have unprotected sex on the white bead days I am likely to get pregnant ● Told me to return if my period does not return the day after the band passes through the last bead ● Told me to return if my period returns before the day in which the band should reach the dark brown bead 	<ul style="list-style-type: none"> ● Provider asked whether I had children ● The age of the last child ● Whether I could be pregnant (menstruation, others) ● About my blood pressure or measured it (or someone else did it) ● Told me that I would need to take the pill every day ● Gave me pills or told me that the clinic was out of pills and told me where to get them

Table 2 presents the information exchange behaviours observed in the consultations with 95% or more of the providers. This overwhelming majority exchanged with SDM clients 16 specific items that covered the essentials of SDM counselling. Additionally, 90% of providers asked whether the client's husband would be able to abstain or use condoms on her fertile days. Conversely, 20% of providers posed barriers to access by refusing to supply the client with SDM tools unless her partner participated in the consultation. The requirement to study the menstrual cycle only occurred in one case.

Only six items from the pill checklist qualified for inclusion into Table 2. This is not because pill delivery is less complex but because providers did not address some important facts. For example, only 55% of providers asked the pill client if she had any heart problems, 20% told her that she should start a new pill packet the day after finishing the previous one, 55% to take one active pill as soon as she remembered having forgotten to take one, 65% that she could experience headaches, and 20% to return to the clinic right away if her skin or eyes turn yellow. These and other provider behaviours of the checklist were essential considering the client characteristics.

Discussion and conclusions

The findings of this study confer international validity to three conclusions: SDM counselling is generally satisfactory, SDM training needs adjustment, and the rigor of providers' pill counselling remains below capacity.

Providers showed a satisfactory management of SDM cases in terms of the amount and nature of information exchanged with clients. The 70% of the provider behaviours expected in the consultations that were observed included the essential topics. This speaks well of the training system. However, the system needs adjustment to reduce the barrier to access that was posed by a minority of providers. The demand for the husband's presence probably responded to providers' concern regarding the SDM's effectiveness: pregnancy is likely if the partner does not co-operate in family planning. Yet the husband's presence at the consultation is not mandatory. If the client says that the husband will co-operate, she must be believed.

Providers exchanged a smaller amount of information with pill clients than with SDM clients even though most providers had delivered pills for years and all had recently participated in a 9-day contraceptive update. The consistency of the finding was evaluated through an unusual application of the *t*-test that required an effort of abstraction, since the SDM and pill checklists had different contents. This approach, however, is not new in the literature.¹² Confirming that SDM counselling was more rigorous than pill counselling, the number of items that were observed in 95% or more of the consultations with SDM clients was more than double those observed with pill clients. Another methodological comment is that novelty factors do not seem to explain the SDM advantage, for the new method had been introduced 6 months earlier.

Hawthorne effects (i.e. exhibition of proficiency due to awareness of an evaluation) were unlikely since providers were blind to the simulated clients' presence in the clinics. Thus this study contributed evidence that the same providers that underperform in pill delivery can excel in the management of SDM cases (i.e. providers do not perform to their full capacity when they counsel clients on the pill). The solution to this problem will demand insightful analysis. To get providers to perform at their full capacity, SDM training centred on detailed job aids and set specific task goals (i.e. told providers exactly what to do with SDM clients). Job performance depends on the specificity of the worker's task goals¹³ and research has shown that the use of adequate job aids improves counselling.^{6,7}

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Statements on funding and competing interests

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Competing interests. None identified.

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ERRATUM

Complex inflammatory abdominal mass: a late complication of tubal clip sterilisation?,

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The Journal wishes to apologise for any inconvenience or embarrassment caused to Mr Arabinda Saha that might have resulted from his name appearing in print as Arabinda Sahu on the front cover of the July 2006 issue of the Journal.