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**ATTITUDES TOWARD AND ACCEPTANCE OF
DMPA IN RURAL HAITI**

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ABSTRACT

This paper first presents results of a study of women's attitudes towards menstruation conducted in 1982 in rural and urban areas of Haiti in preparation for the introduction of DMPA into the National Family Planning Program. The results of 479 structured and 33 in-depth, qualitative interviews, revealed considerable misunderstanding concerning the physiological basis of fertility and reproduction. Over 60 percent of the rural women interviewed said they would be reluctant to use a contraceptive method that would lead to amenorrhea, as did close to 90 percent of urban women. More than half of both rural and urban women said they did not want to use a contraceptive method that would increase menstrual bleeding.

Part two of the paper provides results of a rural, dispensary-based distribution of DMPA by auxiliary health workers that began in August 1982. Data collected during two years of program activities are presented. They concern 1164 acceptors who received 3779 injections, totaling 11,337 months of exposure and 945 women-years of coverage. The DMPA continuation rate for 6 months is 84.8 percent; for 9 months, 70.5 percent; for one year, 58.5 percent; and for 18 months 40.7 percent. The major side-effects, reasons for dropping-out, hypotheses concerning the long-term acceptability of DMPA and the implications for the Haitian national family planning program are discussed.

INTRODUCTION

Depoprovera (Depo Mediacy Progesterone Acetate) is an injectable long-acting contraceptive. Injections are given every three months and offer contraceptive protection that is around 99.5 per one hundred women-years. DMPA use has been controversial because it has not been approved by the American Food and Drug Administration because of the suspicion of possible carcinogenicity (not been proven in human use). Despite this, DMPA is approved by WHO and IPPF and is used in many countries. Developing countries are especially interested in this method because of the convenience of use.

DMPA has been used in Haiti since at least the mid-1970s, in private health institutions (notably Miragoane), by special programs (in Petit Goave), and in a few public institutions (Les Cayes). The method has not been promoted by the national family planning program, which got under way officially only in 1973. Lack of interest in DMPA in the Haitian national program, as in many other countries, was related to the fact that the drug has not been approved for use in the United States by the Food and Drug Administration. In addition, when a paper highly critical of DMPA, by Stephen Minkin and his associates¹ was sent to Haiti in 1980, public health authorities were naturally alarmed and temporarily banned the method.

In order to better understand the pros and cons of DMPA use in the context of a developing country, and to reach an objective judgement on its safety and possible use in Haiti, a Haitian public health group visited Chiang-Mai, Thailand, in July 1981. They discussed DMPA use there with Dr. Edwin MacDaniel, whose program had been using DMPA since the early 1960's. After field visits and a review of published and unpublished scientific studies, the Division of Family Hygiene (DHF) decided to authorize use of DMPA for contraception in Haiti.

Several steps were taken before DMPA was reintroduced into the Haitian family planning program. First, in early 1982 the DHF commissioned a study of Haitian women's attitudes towards menstruation which included qualitative and survey research designed to assess whether DMPA's common side effects (amenorrhea and spotting) would be seen as especially undesirable by Haitian women. Second, Dr. McDaniel was invited to visit Haiti in July 1982 to present the results of over 20 years experience with DMPA use in Thailand to interested Haitian health personnel.

A workshop presenting the preliminary results of the ethnolinguistic research on women's attitudes towards menstruation was held during Dr. McDaniel's visit so he could offer comments and suggestions for the Haitian program. In addition, there was a field trip to the Albert Schweitzer Hospital, where Dr. Tafforeau, then head of the hospital's community health program, was interested in beginning dispensary-based distribution of DMPA. Discussions among Drs. E. McDaniel, A. Verly and J.

Tafforeau set the stage for a prospective field study of DMPA, which has been running since August 1982.

Part 1 of this paper summarizes the results of the ethnolinguistic studies of Haitian women's attitudes and beliefs concerning menstruation, particularly as relevant to acceptance of DMPA. Part 2 presents the results of the dispensary based distribution of DMPA around the A.Schweitzer Hospital for the August 1982 - August 1984 period. The concluding section discusses possible future directions for DMPA use in Haiti.

WOMEN'S ATTITUDES TOWARD MENSTRUATION AND USE OF INJECTABLE CONTRACEPTIVES

It is well known that menstruation is a biological process dependent on complex physiological and hormonal changes and that dysfunction or pathology may occur. However, until recently there was insufficient attention given to the social significance of menstruation, which "is learned and interacts with the physiological processes to produce behaviours which are heavily affected by culturally determined factors."² There is renewed interest in the study of the socio-cultural aspects of menstruation because of the effects of changes in bleeding patterns on the continued use of family planning methods. Many studies have shown that "the most common reasons given for discontinuation of the use of the intrauterine device, oral contraceptives and injectable (hormonal) methods involve descriptions of unacceptable disturbance to the menstrual cycle."² The research in Haiti, conducted by a multidisciplinary team of anthropologists, linguists, medical and public health specialists, was designed with these ideas in mind.

A team from the Center for Applied Linguistics and Social Sciences, University of Haiti, worked closely with the DHF to explore the socio-cultural dimensions of women's attitudes toward menstruation in Haiti. Some of the findings relevant to DMPA are presented below. (A detailed report is available.)

Methods

Much of the methodology for the menstruation study in Haiti drew on the approaches of the WHO-sponsored research reported in detail by Snowden and Christian.³ This included:

1. A survey of knowledgeable sources in Haiti to ascertain their views concerning women's attitudes toward menstruation,
2. In-depth, qualitative interviews with 33 rural and poor urban women. These tape recorded interviews were transcribed and analyzed. They generated a rich source of ethnolinguistic data and greatly aided in the preparation of the questionnaire,

3. A survey of 479 rural and urban women, randomly chosen, using a standardized survey questionnaire.

Results

Table 1 provides data on the acceptability of contraceptive methods as related to their impact on menstruation. The results suggest that women were more reluctant to accept a contraceptive method that would cause amenorrhea than one that would increase bleeding. Rural women appeared more willing than urban women to support changes in menstrual patterns.

TABLE 1

Percentage of women reported unwilling to accept a contraceptive method that would lead to changes in menstrual pattern, 1982 Haiti Menstruation Study

	Rural Sample (n=380)	Urban Sample (n=99)
% unwilling to use a contraceptive leading to:		
amenorrhea	61.3	86.9
less bleeding	28.2	64.6
more bleeding	57.1	52.5

Source: Centre de Linguistique Appliquee. Universite d'Etat d'Haiti, "Attitudes des femmes haitiennes a l'egard de la menstruation," Port-au-Prince, 1983, p.52.

In general, the study found that menstruation is seen by women in Haiti as a normal process. There are no special taboos and only minor associated behavioral changes. Women do not greatly interrupt their usual daily activities and the few dietary restrictions have to do with not eating citrus fruits.

THE FIELD STUDY: DISTRIBUTION OF DMPA IN THE ALBERT SCHWEITZER HOSPITAL COMMUNITY HEALTH DISPENSARIES

The Albert Schweitzer Hospital, a private institution located in the Artibonite Valley of central Haiti, was established in 1956. It now serves a population of about 165,000 people. The hospital's community health program has been very successful in decentralizing low-cost, community-based primary health care.^{4,5} The DMPA study was undertaken as part of community health efforts to solve two problems: high demand for contraceptive methods and low acceptance of IUD's.

Distribution of DMPA was at the village level, using nine specially trained auxiliaries in seven dispensaries. Their basic primary health care training took place over the course of six months, part-time in the hospital and part-time in the dispensaries. After receiving this training the auxiliaries were able to recognize and treat common diseases, and to recognize and refer to the hospital cases of tuberculosis, typhoid fever, meningitis, pneumonia, etc. As part of the community health program the auxiliaries are supervised regularly (weekly or at least bimonthly) by a physician and they attend a monthly meeting in the hospital where referrals are discussed.

The auxiliaries received special training for DMPA distribution from a physician during the supervision visits and at the monthly meetings. They were then able to detect contraindications to DMPA use, educate the women concerning DMPA use, follow-up the acceptors and treat common side-effects. Only women with persistent vaginal bleeding were referred to the hospital. We estimate that the training the auxiliaries received is equal to no more than one full day.

In training dispensary staff to administer DMPA, we stressed the importance of making women clearly aware of the possible side-effects (bleeding, amenorrhea and delay in return of fecundity). We believe that informed consent is critical in assuring long-term continuation of DMPA. If a woman felt that any of the side-effects would not be acceptable, the auxiliary proposed another contraceptive method.

Recruiting DMPA Acceptors

Several months before DMPA was made available, community health workers (CHW's) told the people they serve that a new contraceptive method would be given out at the dispensaries beginning in August 1982. Interested women were invited to visit the dispensaries for information and to receive free injections if they decided to accept the method, after screening for contraindications.

The women who came to the dispensaries were screened for contraindications through questioning and a physical exam. Contraindications included:

1. age over 45 years
2. breast tumor
3. abnormal vaginal bleeding
4. irregular menstruation
5. only one or no children
6. pregnancy
7. desire to become pregnant within the next 6 months
8. high blood pressure
9. risk of thrombo-embolic problems (varicose veins)
10. overweight
11. hepatic troubles
12. chronic headache
13. lack of tolerance to side-effects (bleeding, amenorrhea or delay in return of fecundity).

Women with contraindications 2 or 3 above could receive a DMPA injection if a hospital exam showed that these problems were not serious.

Clients were instructed to return after three months for their next injection and to feel free to come at any time if they had even a minor problem they felt was related to using DMPA. After screening and explanations about possible side-effects, only 74 women of the 1238 (5.9 percent) who visited the dispensaries decided not to accept the first injection. Reasons for this included:

Condition	Cases	Percent
chronic headache	35	47
high blood pressure	14	19
low parity	7	9
intolerance of possible side-effects	7	9
abnormal vaginal bleeding	5	7
breast tumor	3	4
other	3	4
TOTAL	74	100

Injections

The first DMPA injection was given no more than six weeks after delivery for post-partum women. Other women received the first injection during the first week of their menstrual cycle. These precautions were taken in order to avoid giving DMPA injections during an early stage of pregnancy. Except for one study in Thailand, which showed no problems for the newborns exposed in utero ⁶ there is little research on this question. We therefore wished to avoid any potential risk.

Lactating women posed an additional problem. Breast-feeding often continues up to 24 months and amenorrhea last 12 to 18 months in rural Haiti. We decided to give DMPA injections to lactating women even if they were not menstruating, and were assumed to be partially protected against an unwanted pregnancy by breastfeeding. Several studies suggest that DMPA is not harmful for the breastfed children, and its use appears to increase the quantity of milk produced by the mother.⁶⁻¹⁰

DMPA injections were given every three months to women who returned to the dispensary after the first injection. Up to seven days delay was tolerated between the due date and the injection date. Beyond this period, women did not receive an injection but were given condoms for contraception until their next menstruation, when they could return to the dispensary for DMPA. The acceptors who did not come back for their appointment were visited at home by community health workers and were encouraged to go to the dispensary. Reasons for dropping-out were registered.

Characteristics of the Study Group

The average age of the 1,238 women who visited the dispensaries to inquire about DMPA was 30.6 years (range 16 to 58). They had on average 4.2 children (range 0 to 12). Fourteen percent of the women came from areas in the mountains, where 35 percent of the target population live; 35 percent lived over one hour away from the dispensary visited for the DMPA's injections.

Data have been collected on 1,164 acceptors. They received 3779 injections in two years (August 1982 - August 1984), totaling 11,337 months of exposure and 945 women-years of coverage. About 38 percent of the acceptors had recently delivered and 49 percent were still breastfeeding their last child.

Results

The 7 dispensaries selected for DMPA distribution serve a sub-population of 102,729 people, according to the March 1983 Hospital census. There were 23,412 women 15 to 45 years old (22.8 percent) in this area. As shown below, women in union and not pregnant make up 51.6 percent of this population or 12,080 women. The 1,164 acceptors represent 9.6 percent of this target population.

Total population covered:	102,729	(1)
Women 15-49 years [22.8% of (1)]	23,412	(2)
Women 15-49 in union [60% of (2)]	14,047	(3)
Women 15-49 in union, non-pregnant [84% of (3)]	12,080	(4)
Acceptors	1,164	(5)

% acceptors of target population (5)/(4): 9.6%

Continuation

For this study, a drop-out is defined as an acceptor who failed to come back for an injection. Continuers are defined as acceptors coming back regularly for their following injections or after a delay not exceeding one month after the due date. Continuation rates presented in this study correspond to the 1st method continuation rates.¹¹

Acceptors receiving one DMPA injection are considered to have used the method for three months, those receiving two injections are considered to have used the method for six months, those receiving three injection for nine months, etc. The continuation rate for 12 months, for example, is defined as the total number of acceptors who received a fourth injection, compared to the number of women who received the first one. Thus, if 100 women accepted DMPA and 60 came for a fourth injection nine months after the first injection, the first method continuation rate is calculated at 60 percent for one year. However, corrections were made for women who could not come for their appointments because of the cut-off date of the study at the end of August 1984. Women in the program for only a short period (ie. less than three months) were not counted in the calculation on continuation.

Drop-outs

Table 2 provides data on continuation of DMPA use and on the women dropping out of the program according to the number of the injections received.

Table 2 indicates a continuation rate of 84.8 percent for six months; 70.5 percent for 9 months; 58.5 percent for one year; 49.8 percent for 15 months; and 40.7 percent for 18 months. The 6 to 12 - month continuation rates are comparable to those found in other studies; the 18 month rate is slightly lower.¹²⁻¹⁵ A 24-month continuation rate was not calculated because of the few people involved. The data from the third year of the program are currently being analysed and will give 24- and 30- month continuation rates.

TABLE 2

Continuation rates for DMPA acceptors, Albert Schweitzer
Hospital, August 1982 to August 1984.

	Number of Injections					
	1 3 months	2 6 mos.	3 9 mos.	4 12 mos.	5 15 mos.	6 18 mos.
(1) START	1164	883	646	452	305	191
(2) LOST (to follow-up) ^a	123	106	101	94	71	70
(3) NEW-START (1)-(2)	1041	777	545	358	234	121
(4) DROP-OUT ^b	156	131	93	53	43	22
(5) TERMINATION RATE (4)/(3)	15.2	16.8	17.0	14.8	18.3	18.2
(6) CONTINUATION RATE 100- (5)	84.8	83.2	83.0	85.2	81.7	81.8
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(7) CUMULATIVE CON- TINUATION RATE ^c (6) X (7)	84.8	70.5	58.5	49.8	40.7	33.3

(a) Lost to follow-up are the women who did not have time to return to the dispensary for a subsequent injection because of the cut-off of the study at the end of August 1984.

(b) Drop-outs are defined as the acceptors who do not return for a resupply visit. They do not include those acceptors who were not in the program long enough to return for a resupply visit.

(c) The cumulative continuation rate = continuation rate for an injection X cumulative continuation rate of the previous injection. For example, the cumulative continuation rate for the third injection is $83.0 \times 70.5 = 58.5$.

Of 3,076 injections studied, we had 511 discontinuations (16.2 percent). For 214 drop-outs (42 percent), the reason for discontinuation was identified. Table 3 provides reasons why these women discontinued.

TABLE 3

Reasons for discontinuing among DMPA acceptors, Albert Schweitzer Hospital, August 1982 to August 1984.

Reasons for discontinuing -----	Number -----	Percent -----
Medical reasons	102	48
Spotting and/or vaginal bleeding	40	19
Amenorrhea	33	15
Pregnancy	12	6
Other	17	8
Change of method	52	24
Social reasons	47	22
Supplies not available	13	6
Total number of drop-outs	214	100

Because of the lack of information about nearly two-thirds of the drop-outs, we must be careful in interpreting the above results. Half of the reported terminations are due to medical problems, mainly vaginal bleeding (19 percent) and amenorrhea (15 percent).

Of the 12 pregnancies identified, 8 of them were known by the woman before receiving the first injection. These women expected the DMPA injection to cause abortion. The other four pregnancies appear to be due to method failure. Therefore, the DMPA failure rate can be estimated at 0.42 per 100 women years of use (compared with 0.14 in Thailand 16).

Other medical reasons for discontinuing use of DMPA include headache, abdominal pain, high blood pressure, anaphylactic shock, ophthalmic troubles, uterine fibroma and two cases of appendicitis for which bilateral tubal ligation was performed during the operation.

The reasons for discontinuation given by the other drop-outs were not drug related: 24 percent preferred to use another family planning method (95 percent OCs and 5 percent IUDs), 22 percent discontinued because of social reasons (they moved to another area, their husband left or died, they decided that they wanted

an other child, etc.). We lost some acceptors (6 percent) in September 1983 because of a lack of DMPA supplies.

Side-effects

Table 4 provides data on reported side-effects of DMPA according to the number of the injection.

TABLE 4

Side-effects due to DMPA according to the number of the injection, A.Schweitzer Hospital, August 1982 to August 1984 (Percentages in parentheses).

	Number of injection						Total
	1st	2nd	3nd	4th	5th	6th	
N	1164	883	646	452	305	191	3641

Bleeding	125 (10.7)	48 (5.4)	16 (2.4)	16 (3.5)	6 (1.9)	4 (2.1)	215 (5.9)
Amenorrhea	22 (1.8)	20 (2.2)	15 (2.3)	11 (2.4)	2 (0.6)	2 (0.6)	72 (1.9)
Headache	9 (0.7)	17 (1.9)	14 (2.2)	11 (2.4)	9 (2.9)	2 (1.0)	62 (1.7)
Other	21 (1.8)	21 (2.8)	14 (2.2)	8 (1.7)	7 (2.3)	4 (2.1)	75 (2.0)

Total	177 (15.2)	106 (12.0)	59 (9.1)	46 (10.1)	24 (7.8)	12 (6.3)	424 (11.6)

The main reported side-effect was bleeding following DMPA injection. Approximately 6 percent of the DMPA injections caused spotting or real vaginal bleeding; this problem was more frequent after the first (11 percent) or the second injection (5 percent) than later (3 percent or less). Spotting represented 28 percent of the bleeding problems and did not require any treatment. Menorrhagia and continuous bleeding (66 percent of the bleeding troubles) were treated in the dispensaries with estrogens and/or progestatives. Only 6 percent of the bleeding problems required

referral to the hospital. Compared to other studies,¹⁷ bleeding problems seemed to be less common in Haiti but required medical treatment more often. Only 18 percent (40/215) of the cases of vaginal bleeding following DMPA injections caused women to discontinue the method.

Approximately 2 percent of all DMPA injections caused amenorrhea; the percentage does not appear to increase with the number of injections. This is quite different from the findings of other international studies, where 30 percent of the women report amenorrhea after one year of use, and 40-60 percent after the second year.^{17,18}

Cases of amenorrhea may be seriously underreported in this study and may represent an important part of the drop-outs for which reasons for discontinuing were not ascertained. We know that 44 percent (33/73) of the cases where amenorrhea followed DMPA injections, discontinued the method. Amenorrhea may well be a problem for long-term acceptance of DMPA in Haiti. In the third year of the study we will try to analyse this problem more carefully and put more emphasis on home visits to discontinuers in order to determine their reasons for dropping-out.

CONCLUSION

The ethnolinguistic study and the field test of dispensary-based distribution indicated that DMPA is an acceptable, popular and cost-effective contraceptive method in rural Haiti for a significant number of women in the reproductive ages. We believe that DMPA could become a major family planning method throughout Haiti. DMPA continuation rates are very high, particularly compared with the rates for oral contraceptives.¹⁹ The effectiveness of DMPA is probably better than OCs because many women often do not take the pills correctly.²⁰ DMPA is also more acceptable than the IUD, which does not have a good reputation in Haiti.²¹

Side-effects reported by women in the program appear to be usually minor and most of them were very satisfied with the method. The only potential important problem for long-term acceptability of DMPA may be amenorrhea; this will be carefully investigated during the third year of the field study.

A key factor in the positive results of the field project has been the careful training of those dispensing the method. This included screening for contraindications, education of the potential clients about the method and its possible side-effects, and follow-up of the acceptors. DMPA was supplied by small, community dispensaries staffed by auxiliaries who provide basic primary health care services and referral to the hospital. These community workers were specially trained to provide advice, counselling and moral support to acceptors if they had any problem they thought might be related to using DMPA. Since they

were based in the community, and had built up rapport with the local population, women were apparently comfortable in accepting an innovative method of contraception from them.

Another important factor in the program's success was probably the supervision and back-up support the Albert Schweitzer Hospital offered. When there were serious bleeding problems women could be treated at a hospital in which they have gained confidence over the years.

In the immediate future, it may be best to think about expanding DMPA provision to health institutions in the private sector, since they have the resources to offer higher quality services than public institutions, which are still plagued with many administrative and logistic problems.²²

At this point, in addition to continuing operations research on dispensary-based distribution of DMPA as part of the Albert Schweitzer Hospital community program in a rural setting, and in Cite Soleil, an urban slum where a distribution program has been underway since September 1983,²³ it might be useful to experiment with other non-clinic-based approaches to DMPA distribution. For example, rally posts and mobile clinics are increasingly being used for primary health care outreach throughout rural Haiti. Those regular meetings bring together between 25 to 100 mothers with their children under five. They could serve as DMPA distribution posts if adequate follow-up can be done and if there is a health facility available for reference.

The Haitian experience with DMPA may have implications for other very poor developing countries where women of reproductive ages are largely illiterate but interested in an effective contraceptive method that is simple to use. In Rwanda, for example, DMPA accounts for close to half the new contraceptive acceptors in the newly established family planning program.²⁴ While the implementation of a DMPA program in a developing country requires a great deal of effort, particularly if a community-based approach using paramedical personnel is used, the contribution to preventing unwanted pregnancies and improving child spacing can be great.

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