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Birth spacing and primary health priorities

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1. INTRODUCTION

A too short interval between birth rates implicates health problems in traditional rural families. In an urban environment where families have to live from the monetary income of one or several family supports, a too high number of children may cause serious health problems.

When a problem is experienced and acknowledged, the concerned people will make an effort to solve the problem (to find a solution).
In this paper we would like to demonstrate that there is enough evidence that the problem is recognized, that the people are trying to avoid uncontrolled family growth, as well in traditional- as in monetary societies, and that they both look for help to solve the problem.

A frequent problem which is a felt need for the people concerned becomes a priority in the organization of health services if the services can offer, in an acceptable way, a solution with a better cost-effectiveness relation than already existing solutions.

For the solution of health problems resulting from successive births, or a too high number of children, this is often the case. The problem as well as the solutions interfere with the value system of the concerned people and with their aspirations for development. On the other hand as primary health care wishes to stimulate the self-confidence and the responsibility of individuals, the offer has to be made keeping in mind a realistic approach to the problem.
The meaning of this approach for organization is explained in the second part of this paper.
Inevitably, we touch here another dimension of uncontrolled growth : the demographical and possibly macro-economical consequences, and the measures to be taken by the local and central authorities, or by the concerned people themselves, to face the consequences.

The measures taken by the authorities may provoke a demand of a medical or biological nature.
Eventually, the medical services will be asked by these same authorities to offer this care. It might even become a priority for the medical services. The other sectors have to take their own responsibility in their own field.

We want to stress the fact that it is not up to the medical services to define the standards for birth interval or the family size. This has to be the result of a global analysis, multi-sectorial, by the concerned groups and/or the people who represent them.

2. THE POPULATION'S PERCEPTION OF THE PROBLEM AND ITS REACTION

Traditional and rural environment

Health problems resulting from uncontrolled growth.

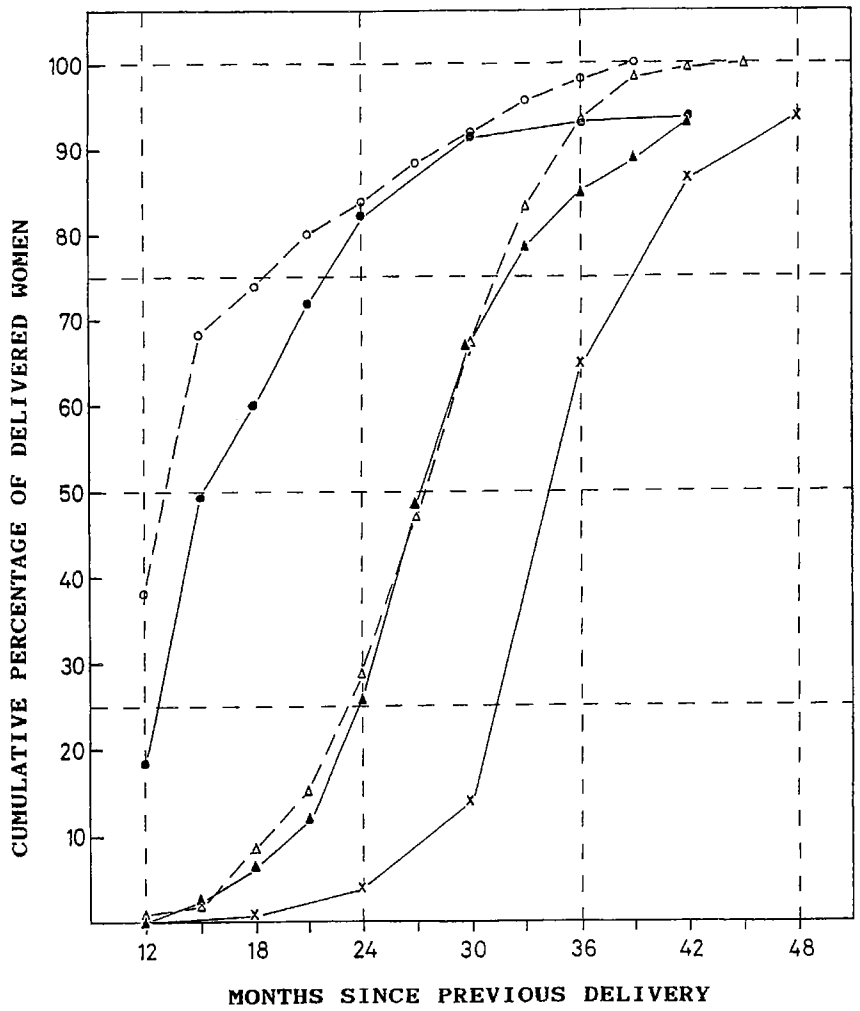
A traditional agricultural family is a unit of production. As long as there is enough cultivable land, each additional child means another helping hand.
When the mother who already has a large work-load, gets overburdened by procreation and the care of her children, health problems (distress) occur in the family. This mother is in fact pregnant, breast-feeding, and also responsible for the regular preparation and serving of food to the other family members. A pregnancy or delivery with complications, followed by intensive breast-feeding and then again by a pregnancy, although the previous child still has to live symbiotically with the mother, is capable of provoking signs of exhaustion (anaemia, malnutrition) in the mother and/or decreasing the health potential of the first of the two successive children.

Habits and behaviour show that these problems are recognized and that the people react to these problems.

A first question we have to ask ourselves is : what is, in the given situation, a normal or average interval ? Studies in different countries where a long period of sexual abstinence is not practised (for example Cocos Islands and Rwanda) show us that breast-feeding[1] implies an interval of more or less 27 months between two births (figure 1). Amongst women, living under the same circumstances, but who do not breast-feed (because they had a stillborn or whose child died shortly after the delivery), the median value of this interval is more or less 15 months (Van Balen, 1976).
Breast-feeding maintains a high amount of prolactin up to 12 to 15 months after the delivery, which is the period when the child &starts to walk (Delvoye, 1977). When the breast-feeding continues for an exceptionally long period and is very intensive, the high amount of prolactin leading to the inhibition of the ovarian function may continue for much longer (M. Konner, 1980). At the ! King San (hunters who live North-West of Botswana), where contraception and abstinence are excluded, the studies showed an interval of 44 months. Here the child is fed very frequently for several seconds or minutes. Less than 25 % of the observation periods of 15 minutes passed without suckling. Amongst 17 nursing-mothers, the oestradiol and progesterone levels were decreased. There was a significant correlation between the frequency of breast-feeding and the decreased amount of oestradiol and progesterone (Konner M., 1981).

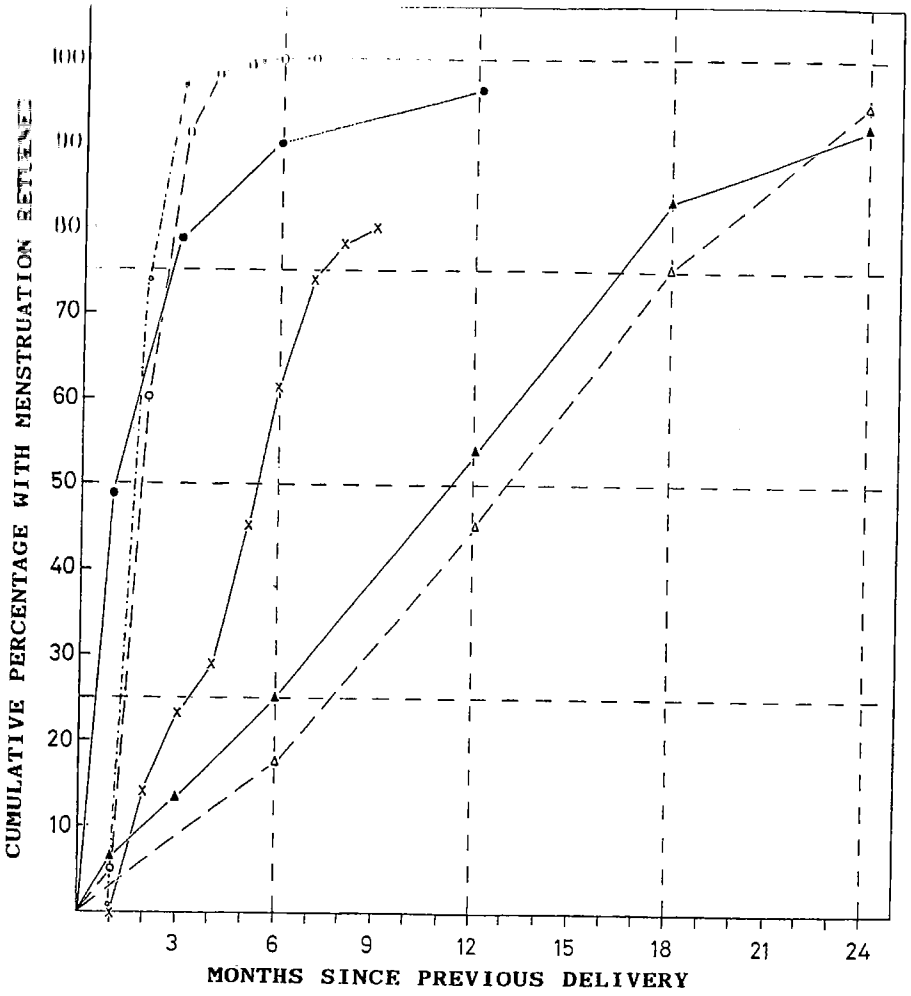
[1] breast-feeding is the spontaneous nursing by a mother who is not working professionally. This means that during the first months, the child is continuously with its mother, and suckled on demand.

Figure 1



BIRTH INTERVAL and NATURAL LACTATION

Figure 2



Non lactating

- 156 Indian
- 1812 North American
- 200 European

Naturally lactating

- 1301 Indian
- 2000 Ethiopian

"Non-naturally" lactating

- 111 North American

POSTPARTUM AMENORRHEA and LACTATION

Scheduled breast-feeding, as sometimes advised by doctors, inhibits the ovarian function less adequately. See studies on the mean-duration of post-partum amenorrhoea by American breast-feeding mothers versus Ethiopian and Indian (figure 2).

A short interval between births is experienced as negative. In addition, women may become pregnant again during the six months after delivery (less than 5 % in the study presented in figure 1). This is generally not a source of joy.
In Rwandais, having children in quick succession with a short interval, is called "indahekana". The significance of this expression is as follows : the foetus for which there is no place on the mothers back (the only way she can carry it on her back is if she chases away her previous child precociously).
In Rwanda (and in many other regions in Africa) an infant who can not be fed long enough (in reality because it is pushed aside by its successor) is considered as premature. Moreover, traditionally the mother-child symbiosis is composed of an interior pregnancy, followed by an "exterior" pregnancy. This is clearly expressed in the Rwandesian language : The placenta carries the same name as the skin of a goat or a sheep in which the infant is carried on the back of the mother : ingobyi. When a pregnant woman in Rwanda feels the fetus moving, she says : "inda ironka", literally translated as : the foetus takes the breast. According to the mother, the child is seated on the placenta during the pregnancy and suckles the "internal"-breast. At the moment of the delivery, the child moves from the "internal"-belly to the outer-belly of the mother. The mother now has to strap on another "ingobyi". Luckily, the mother has also external breasts, which permit her to breast-feed the child. When the breast-feeding has to be interrupted before the age of two years, the symbiosis is prematurely interrupted. The child is "born" premature...

In Benin, a child which has to be weaned away prematurely because its mother is pregnant, is called "kpedovu" (kpe= premature pregnancy and dovu= little child), an expression indicating that the child is at risk.

Reactions

It is understood by the people that the risks are being too important to be ignored.
In many traditional African societies, severe rules have been in force in relation to the sexual contacts of the mother during the nursing-period.
"Traditional" polygamy advocates a sexual abstinence of 2 years for the nursing mother. Thus, the interval between two successive live-births is more or less 3 years (Cfr. observations of Martin and Morley, see figure 1). Certain African tribes, as the Nyakusus in Tanzania, the Meru in Kenya, originally respected a period of abstinence of 4 or 5 years (Molnos A. 1972). The same has been practised by the Papou's in Western Irian (Becroft 1967). In Bas-Zaire a severe diarrhoea of the infant (sanga) is ascribed to the non-respect of the sexual taboo : "the sperm of the man has harmed the infant via the milk of the mother". In certain East African

countries Kwashiorkor was considered as a proof that the parents did not respect the principle of abstinence. The motivation to follow this taboo is thus obviously the preoccupation with the child's health.

Another behaviour which reduced the procreation was the late age at marriage : In rural Rwanda a woman got married at about the age of 21 years.

Not only was the proper behaviour adopted, but one appealed also to the traditional healers to obtain a protection against successive pregnancies. Amulets which have to confer this protection are highly paid for.

We may thus assume that the problem is recognized. And even if only few rural African women demand family planning spontaneously at the health services, the demand for preventing uncontrolled birth, does exist.

THE PROBLEM IN AN URBAN ENVIRONMENT, PERCEPTION AND REACTION

Urbanization implies the breaking up of traditional norms. The abstinence period of those practising polygamy is reduced and unfortunately coincides with the infertility period during breast-feeding. The severity of the problem increases when breast-feeding decreases because the mother is not carrying her child day and night any more, or when bottle-feeding is propagated, or because modern clothes cause more cracked nipples, or because the mothers' occupation prevents her from breast-feeding her child, or because the health personnel say the child may only be fed every 3 or 4 hours, or even worse, that the health personnel advise against breast-feeding ...
Another problem in an urban environment is that sexual contacts start at a younger age.

We have known these health problems in Western Europe as a result of the sudden growth of cities at the end of the 19 Century.

In Utrecht, the infant mortality increased from 600 to 1000 for children of mothers working in factories (Bosschaert).
The typical mother in this situation worked more or less 12 hours a day : she was therefore not able to nurse her child and did not earn enough money to buy milk of the same quality as the maternal milk. Moreover, she did not have the time to feed her child quite often. Even if the problem was not that severe in all the levels of the population, the misery because of the uncontrolled births became almost intolerable.

The family became a unit of consumption. The problems associated with an increasing number of children became alarming and there was a corresponding reaction. In the big West-European cities, children were abandoned. Some estimated that the number of abandoned children in Paris at the end of the 19 Century was half the birth rate. In London, more or less 90 % of the abandoned

children died shortly after they arrived at a children's home.

As provoked abortion became more "practicable", the number of abandoned children decreased and the number of illegal abortions increased.

Similar situations occurred in developing countries : abandoned children in Bogota; highly prevalent abortions in South-American cities, in spite of a lethality of 5 per thousand
In Ankara, a study showed that illegal abortion was responsible for a maternal mortality of 9 per 1000 (Armijo, 1967 - Mehlan, 1967).

Illegal as well as legal abortions become more and more frequent in African cities. There is no doubt that in a residential population it is a pressing problem, it only has to be recognized ... except perhaps amongst very rich people who can permit themselves a nurse and other domestics.

Once the problem is recognized, people themselves, without doubt, will take precautions like coitus interruptus, condoms or periodical abstinence, depending on the way of living.
Nevertheless, an intensive demand for help to reduce the number of children, exists.
It is justifiable to suppose that these demanders prefer to appeal to professional assistance rather than to illegal un-professional "aid".

3. OFFER OF PROFESSIONAL ASSISTANCE ON FAMILY PLANNING

Rural environment

If an existing demand is not directed at the official health service even though it can provide a more efficient solution than the traditional healer, it means that the health service is not aware of the correct response or that the proposed solution or the way it is proposed, is unacceptable.

The way in which the offer of contraceptive methods was made was in fact unacceptable in many rural regions. If the initial message of the offer was : "too many children mean poverty and misery" we should not be surprised that in regions where children are seen as a force of production for future social assurance, the message is not very convincing and appears to be a lie. This does not mean that a message on decreasing the fertility will not be heard.
Probably, those women who have had a pregnancy or a delivery with serious complications, or those women who have had an "indahekana" or a "kpedovu", or the few "marginal" women who do not wish to have children, will hear the message. However, even those who would like to hear, the message do not follow it, if it is offered by a specialized service (of family planning). To address oneself openly to such a service means that they are acting differently from the people of their village; acting as women whose behaviour does not

correspond to the traditional behaviour. Seeing the importance accorded to living in a group or in a rural environment, it requires a lot of courage to use the service and the risk of being spurned is real.
Those who go more easily to separated identifiable services for family planning are the few marginals (public women, or others who do not care about the traditional rules), are those who all the same do not form part of the group any more.
For the "normal" motivated woman, it becomes even more difficult to visit the family planning consultation : not only do they have to take distance from their own original group, but they also have to act as "marginals" and this too in front of everybody. Do we therefore have to be surprised that the family planning consultations in rural environments do not have much success, that they are almost not accepted ?

A first condition to make the offer more acceptable is that the dialogue has to take place in an integrated service.
Perhaps few women will come and ask for help spontaneously. Anyhow, it is not marginalizing to talk about the problem individually.
If the health personnel has in addition enough empathy to talk about the possibility of contraception for women at risk, starting from the necessity of regaining strength after a complicated delivery, or from the necessity to protect the internal pregnancy, or from the fact that she has an "indahekana" or a "kpedovu", the same initiative becomes acceptable.

In an integrated service the personnel may identify the women to whom they have to talk about the possibility of contraception, as well at the curative consultation as at the MCH, or following a house-visit ...

For deciding which technique(s) of contraception is (are) acceptable, the care has not only to be integrated but has to be global as well. In other words, that they take into consideration not only the biologic effectiveness of the method, but also the social aspects, economical, psychical and cultural aspects, in the context that this person, this couple, this family, lives.
Even if a less effective method is chosen (periodical abstinence, method of Billings, ...) it is the personnels' duty to explain the "technical aspects" thoroughly, and also the relative efficacy of each method. If the method is not satisfactory, the interested person may herself ask for a more effective method. Table 1 shows the efficacy, some objective elements on the feasibility and some indications on the acceptability of contraceptive methods.

Amongst women breast-feeding intensively, it is useless to systematically propose a contraceptive technique of short duration (tablets or injections).
A longitudinal study in Matlab (Bangla Desh) showed that amongst a group of women using contraceptive methods after the 11th month post-partum, about 30 % became pregnant two years after the previous delivery.
Amongst women using contraceptive methods before the 11th month post-partum about 45 % were pregnant two years after the previous delivery (Bhatia Shushum 1982).

If a technique, like the insertion of a coil, is to be delegated to the polyvalent personnel of the primary health care service, it will depend on the frequency of the demand and on the quality of the supervision of the personnel.

Urban environment

The bigger the demand is, the more urgent the solution is. The incidence of abortion is a good indicator of the intensity of the demand.

If abortions are frequent, the efforts to offer contraception in the integrated primary health care services will not be sufficient. The introduction and apprenticeship of new methods and techniques in the entire first level system, requires more time. Besides, we may expect a resistance from a part of the polyvalent personnel : people may exist who do not wish additional work. Some of them refuse, based on their value-system, to apply or to learn contraceptive techniques.

In the big cities, separate clinics on Family Planning often represent the most effective and most acceptable solution.
The building and the infrastructure may be easily found; the personnel may be chosen according their technical competence, and their motivation for such kind of work. An urban woman who wishes to use the service does not have to take into consideration the behaviour of the group; this is what makes the offer acceptable in a separated clinic. However, this should not hinder the polyvalent services from integrating the activities on contraception.

4. ACTIVE POLITICS ON DEMOGRAPHICAL RESTRICTION AND ON CONTRACEPTION

For many centuries the ecological balance of human populations has been maintained by epidemics. Before industrialization, we have known of very few situations for which collective measures to reduce the birth-rate have been taken.
The great famine in Ireland in the 40's of the 19th Century is an exception. In a few years the population was reduced from 6 to 4 million (Llewellyn-Jones p194, etc). Half of the people who disappeared emigrated, the other half died of starvation. The enormous misery, among other things, made the population accept that the cultivable land should not be further subdivided. A farmer could only be succeeded by one of his sons, and this one had to wait till the moment his father gave up his seat to him.
Early marriages, a huge number of celibates and less children, were the result of these measures.

The Chinese and Vietnamese Governments imposed even more strict norms as an essential element of their politics for the development of their population.
As in Ireland, 140 years ago, the norms are followed because of the social pressure (continue rations, social regression). As a sector

of development, the medical service is responsible for contribution to the general development.
The motivation to demand contraception will be present under these circumstances or there will be the notion of the necessity to reduce the birth-rate or there will be social pressure to do so.
Under these circumstances, it makes no sense to offer this care, separately from the health problems of the family.
The most important thing is that there does exist an answer to the demand. The more the demand is large and urgent, the more we have to appeal to specialized services.

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Contraceptive Techniques (a)

Technique	Efficacy	Toxicity and Complications	Contra-indications	Acceptability	Cost
Periodical Abstinence (a.o. Billings)	+ (spacing)	-	necessity to prevent pregnancy completely	?	-
Coitus Interruptus	?	-	idem	?	-
Condom	++ (if correctly used)	-	-	?	+
Spermicides	±	- if they do not contain mercury	-	+	+
Diaphragm	+ (combined with spermicides)	idem	certain rare anatomical anomalies	?	++
Intra-uterine device	2 preg/100 women years	infections (2% in the 1st year) perforation bleeding suffering ? expulsion	genital infections pregnancy uterine mal-formation	++	+

Contraceptive Techniques (b)

Technique	Efficacy	Toxicity and Complications	Contra-indications	Acceptability	Cost
Hormonal contraception	++++ (~ 100 %)	- Hypertension - Total mortality/100.000 women/years GB (1) Pill : 63.3 Controlled group : 46.0 - Thrombo-embolic diseases (2) - Biliary calculus (2) - Minor complications	Absolute : ? - Malignant breast tumours genital organs - Cerebro vascular thrombosis Relative : - Hypertension - Epilepsy - Diabetes - Liver or gall bladder diseases - Depression - Age/smoker	+++ (problem of regularity/stocks unavailable	+++
Forms					
Combined pill	< 0.1 pregnancies/100 women/years				
Three-phase pill	less effective				
Sequential pill	0.5 pregnancies/100 women/years				
"Mini-pill" (progestogenes)	2 pregnancies/100 women/years	Irregular bleeding			
Delayed injectable prog.	0.5-2 pregn./100 women/years			less rupture problems	
Implantation	?				
"Morning after pill"	+				
Sterilization man	++++	negligible	-	?	+
woman	++++	cfr. Laparotomy	-	?	++
Therapeutic abortion	++++	negligible	advanced pregnancies	?	+

(1) Lancet II : 727-733 and 731-733 (1977)
(2) Oral Contraceptives and health. The Royal College of General Practitioners (1974)