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# Postpartum sexual abstinence in tropical Africa

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# Postpartum sexual abstinence in tropical Africa

## **Abstract**

Postpartum taboos on sexual intercourse have been encountered in many countries throughout history. They were once advocated by medical authorities in Europe. The Greek and Roman doctors of antiquity were opposed to sexual relations during nursing and their opinions were quoted until the nineteenth century. Galen (1951:29) thought that the milk of the nursing mother would be spoiled because of the admixture of sperm in the mother's blood. Soranos and Hippocrates believed that coitus and passionate behavior provided the stimulus that reactivated menstruation. Prior to the eighteenth century, there was no medical knowledge of the biological effect of bring on inence, and not the action of breastfeeding, was thought to delay the return of menses. This interpretation was still vivid in Europe in the eighteenth century.

## **Keywords**

Africa, tropical Africa, fertility, contraception, birth spacing, breastfeeding, lactation, abstinence, amenorrhea, intercourse, taboo, breast milk, sperm, sex, sexual intercourse, attitudes, beliefs, menstruation, menses, conjugal behavior, World Fertility Surveys, customs, traditions, religion

## **Comments**

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Tropical Africa

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POPULATION STUDIES CENTER  
UNIVERSITY OF PENNSYLVANIA

# POSTPARTUM SEXUAL ABSTINENCE IN TROPICAL AFRICA

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## POSTPARTUM SEXUAL ABSTINENCE IN TROPICAL AFRICA

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## POSTPARTUM SEXUAL ABSTINENCE IN TROPICAL AFRICA

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I order all women who are breastfeeding babies to abstain completely from sex relations. For menstruation is provoked by intercourse, and the milk no longer remains sweet. Moreover some women become pregnant, than which nothing could be worse for the suckling infant. For in this case the best of the blood goes to the foetus. (Galen, 131-200 A.D.)

Postpartum taboos on sexual intercourse have been encountered in many countries throughout history. They were once advocated by medical authorities in Europe. The Greek and Roman doctors of antiquity were opposed to sexual relations during nursing and their opinions were quoted until the nineteenth century. Galen (1951: 29) thought that the milk of the nursing mother would be spoiled because of the admixture of sperm in the mother's blood. Soranos and Hippocrates believed that coitus and passionate behavior provided the stimulus that reactivated menstruation. Prior to the eighteenth century, there was no medical knowledge of the biological effect of bring on inence, and not the action of breastfeeding, was thought to delay the return of menses. This interpretation was still vivid in Europe in the eighteenth century. (See for example Roussel, 1813, a medical textbook with multiple re-editions.)

Sexual taboos linked to breastfeeding are quoted in contemporaneous lay writings in Europe up to the late nineteenth century. In his novel *Fécondité*, Emile Zola (1903) associates the prolonged lactation taboo with normal and happy conjugal behavior. It is, of course, impossible to verify whether the average nineteenth century woman was abiding by the rules, but literature is explicit on the subject. In France, it is plausible that the upper classes were attempting to impose sexual continence on the wet nurses whom they were employing to raise their children (van de Walle and van de Walle, 1972).

Today, sexual abstinence is best known in the context of sub-Saharan African countries where it is widespread. It is also common, however, in other traditional societies elsewhere. For example, in contemporary Java sexual relations are proscribed during the entire period of breastfeeding. People believe that the man's semen spoils the quality of the mother's milk, a belief the Javanese share with many people of Tropical Africa (Bracher and Santow, 1982). M. Singarimbun and C. Manning (1976) found a postpartum abstinence of 23.4 months in the village of Mojolama in central Java. Varying lengths of postpartum abstinence have been reported in other Asian countries. The World Fertility Survey found an average period of abstinence of eight months in Haiti (United Nations, 1985). This paper will, however, deal only with sub-Saharan Africa.

### **BIRTH SPACING IN SUB-SAHARAN AFRICA**

The first fact about Africa, south of the Sahara, is that there are usually strong public and private norms about birth spacing as a behavior necessary for the health of the mother and the child. The following statement by the Head of the Federal Military Government of Nigeria, is representative of several made by African leaders in preparation for the 1984 World Population Conference in Mexico City:

[A population] policy should have as a main focus, guidance in fertility behavior which will emphasize the health of both mother and child. This policy calls for the reorientation of mothers as to the benefits of adequate birth spacing, a practice which has long been embedded in the African tradition but which is being eroded by the influence of modernization (UNFPA, 1985: 120).

Maybe more than anywhere else, individual women have a clear notion of an ideal spacing between births. Survey questions on family size often leave African respondents puzzled, and many will answer that the number of children is "up to God". In contrast, a question on the optimum interval between births usually elicits a precise answer. Length of ideal spacing may be stated to be between two and five years depending on age, parity, local customs and sometimes personal preferences. At any rate, public opinion universally approves of a reasonable interval between births.

Traditionally, spacing is seen as the most rational means to insure the well being of both the mother and the baby. People are convinced that a new pregnancy may have serious deleterious effects on the health of the suckling child. Spacing births is so inherent in African culture, that there exists a name in most languages for the woman who becomes pregnant while still nursing. These names imply disapproval, mockery and other negative connotations, for example as in Senegal, that of bad luck (Ferry, 1981). Similarly, in many sub-Saharan cultures, there is a name for the disease of the

suckling child whose mother has sexual relations or is pregnant. For example, among the Havu of east Zaire, the child removed too soon from the breast because his mother is pregnant will and suffer from bwaki; among the Baganda, the baby will get obwosi and among the Dioula and the Bambara of the Sahel the child will have sere. Among the Ikale of Nigeria, the baby will suffer from a condition called apa (Adeokun, 1983). Among the Ewondo of Cameroon, the child whose mother has sexual relations during breast-feeding will contract agnos. In short, spacing is the norm and the woman who does not succeed is viewed negatively by the community. The term kwashiorkor came from a Ghanaian language before being adopted in medical literature. It describes the disease of the child who has been weaned too soon and does not receive adequate food. Such diseases as kwashiorkor and marasmus, caused by protein or calorie deficiency, are often attributed in traditional lore to the quality of the mother's milk, which has been "poisoned" by male sperm. Similarly, episodes of child diarrheas, which are especially frequent at the time when the women give supplementary food or when they wean the child, are often attributed by the community to the resumption of intercourse.

#### POSTPARTUM SEXUAL ABSTINENCE

Until recently, demographers agreed that most couples were not efficient birth spacers. This generalization was based on fertility surveys in the Western world. Do we have to revise this view in the light of information on voluntary spacing behavior in Africa? To allow us to do so, this spacing would have to be in excess of what is the normal result of ordinary breastfeeding.

The fact that the African populations had traditional intercourse taboos was well documented in anthropological literature. After Frank Lorimer published his book on Culture and Human Fertility (1954), it became an object of speculation among demographers that there might be populations in Africa that were spacing their births, if not consciously, at least in conformity with an implicit rationality recognized and enforced by the social system. For Lorimer, "the cultural interdiction to impregnate a wet nurse is a customary way of fertility control which is very widespread in patriarchal African societies". In Africa, "abrupt weaning must often have been followed by the sickness and death of the child. Such association of events must have been a matter of common observation" (Lorimer, 1969: 87). Abstinence, then, allowed the mother to breastfeed the baby for a longer period of time and Lorimer stated that "motivation for fertility in all societies is toward children, not toward live births as statistics. A baby at the breast is worth more than one in the womb and one lying neglected on the ground" (Lorimer, id.).

Perhaps more than anybody else, John and Pat Caldwell (1977)

contributed to establishing the place of sexual abstinence in the study of the determinants of fertility in Africa. They showed that the Yoruba of Nigeria push the duration of the sexual interdiction to its maximum. In the Yoruba populations surveyed, taboos were almost universally observed and lasted often up to three years following the birth of a child. Typically, the sexual taboo was maintained for six months after the end of breastfeeding.

At the time, the Caldwells exaggerated both the prevalence of abstinence and its effect on fertility:

In Yoruba society, and in most of sub-Saharan Africa, fertility is reduced not by postpartum amenorrhea extended by prolonged lactation but by postpartum sexual abstinence which exceeds the period of lactation (Caldwell and Caldwell, 1977: 197).

A later study edited by Page and Lesthaeghe (1981) showed that the Yoruba were by no means representative of all Africa. Adekun's survey (1987) has shown that the long postpartum taboo is not universal even among Yoruba populations. Below, we shall present evidence that breastfeeding remains the main determinant of fertility levels in the sub-continent.

World Fertility Survey data from Africa confirm that the postpartum sexual taboo is still very widespread, but large variations in its duration have been observed even inside the different countries surveyed. For example, in Cameroon and in Ghana, the gap between the minimum and the maximum duration of abstinence by region is respectively 10.6 and 23.5 months (see table). Anthropological literature indicates that local customs and traditions are very diverse, and evolve rapidly (Schoenmaeckers et al., 1981). Wide differences between ethnic groups in the length of postpartum abstinence were reported in Ghana. Traditionally, among the Ashanti of the Southern province, the woman was secluded for 40 days after childbirth, and then given 40 more days of recovery. After that, she then returned to her husband and normal sexual relations were resumed (Fortes, in Lorimer, 1969: 265). Among the Bono of Brong-Ahafo, where the woman must abstain during six months after the first child, Warren (1975) found that a period of 40 days was sufficient for subsequent pregnancies. In contrast, the Lowilli of North Ghana, the Tallensi and the Ewe of the Black Volta abide by a postpartum taboo of two or three years (Gaisie, 1981). In the Great Lakes region of Eastern Africa, tradition compels the spouses to have sexual relations within one week after delivery (for Rwanda: Bonte and Van Balen, 1969; for Kivu: Carael, 1979: 86 and 1981: 278). The absence of postpartum taboo among the Havu of Kivu is not compensated for by other deliberate child spacing practices: coitus interruptus is generally viewed negatively; abortion and infanticide are explicitly condemned (Carael, id.). The Banyankole of Uganda believed in the healing power of sperm, and customarily the man was enjoined to have intercourse with his wife four days after delivery; a recent survey shows that the timing is between ten days and



one month (John B. Kabera, personal communication).

Schoenmaeckers et al. (1981) have drawn a map of Africa (see Bongaarts et al., 1984: 523) where they distinguish three types of durations of postpartum abstinence. The first duration, 40 days or less, is increasingly observed among the followers of Islam who interpret the Koranic tradition in this way. Durations longer than 40 days and shorter than one year are observed in much of East Africa. Finally, durations of more than one year characterize, among others, non-Islamic Western Africa, and Central Africa.

The strength of the taboo may well be rapidly eroding. A mean of 12 months of abstinence has been reported in contemporary South Togo (Locoh, 1984) and in Bobo-Dioulasso, Burkina-Faso (F. van de Walle, 1986). It is likely that the taboos following a birth were of longer durations in the past, if one trusts the reports of earlier anthropologists. With the spread of Islam in Africa, long abstinence seems to have disappeared in some areas where it had been reported earlier. For example, Jean-Baptiste Durand had this to say about the populations of the coast of Senegal in 1802:

Women wean their children only when they are able to walk and bring a calabash full of water to their mother. They are promptly trained to do so, since during feeding, the spouses keep the laws of chastity, the infringement of which would be considered the weightier a crime, that it would be detrimental to the state of nursing mother and to the health of the child.

Henry, writing in 1910, and Tauxier in 1927 (both cited in Schoenmaeckers et al., 1981) reported a sexual taboo upward of three years among the Bambara of Mali. Today, however, the Islamic prohibition of intercourse during forty nights following a birth is very widespread in both Senegal and Mali. For example, F. van de Walle (1987) reported a mean length of abstinence of three months in the city of Bamako in Mali.

Besides the influence of Islam, modernization, urbanization and education are also whittling the custom of postpartum abstinence down. The long taboo was usually associated with male dominance, polygyny, the early marriage of women and a large difference in ages between spouses. Saucier (1972) argued that female abstinence can be maintained more easily in a society that practices female circumcision. All these traits are fading among educated and urban populations.

#### **THE DIFFERENT FUNCTIONS OF ABSTINENCE**

The long abstinence of the Yoruba of Nigeria has been attributed mostly to a concern to preserve the health of the baby, while a subsidiary motivation involved the mother's health. The Caldwells (1977: 198) specify that "...the main reason for ensuring the mother's health has been to ensure her capacity

for further successful childbearing". It appears clearly here that the aim of abstinence is to space births and to achieve a large family. For Locoh (1984) too, the purpose of abstinence in South Togo is pronatalist because it aims at keeping as many children alive as possible. We find it difficult to interpret the custom as a mechanism for limiting the size of the family or the growth of society.

Nevertheless, Orubuloye (1981: 53) notes that postpartum sexual abstinence has probably reduced fertility of the Yoruba by one-fourth, and believes that this custom will continue to be the most important way of controlling fertility among them. In an influential article, Lesthaeghe (1980) has compared the role of African postpartum taboos to that of the Western European pattern of marriage before adoption of family limitation. Both, Lesthaeghe argues, were social mechanisms aiming at adapting population to the available resources. (See also Frank and McNicoll, 1987.)

Some form of postpartum abstinence exists in a majority of African societies but it should not be assumed a priori that the intent of intercourse taboos is always to insure adequate birth spacing. In fact, a number of other reasons are given. Louis Henry (1964: 485) used the term "lactation taboo" as a general term covering African abstinence customs. The inference was that sexual relations were prohibited for the duration of breastfeeding. For the Caldwells (1981: 79), postpartum abstinence, although related to lactation, cannot be completely identified with a taboo of lactation. Indeed, in many societies the postpartum taboo is shorter than the period of breastfeeding, but among the Yoruba it is longer.

Spacing as such is not necessarily a conscious objective when the woman refuses sexual relations because she believes that it will spoil her milk. The health of her child is the predominant concern. The Lowilli of North Ghana believe that sexual relations during the nursing period will interrupt the flow of milk and that the child will not grow (Goody, 1956). Among the Yoruba (Caldwell and Caldwell, 1977: 199) as well as in other groups such as the Ewondo of Cameroon (F. van de Walle, 1987) there exists a strong belief that the man's sperm actually enters and poisons the milk which is being fed to the baby. The child's diarrheas are interpreted as the result of this poisoning of the milk. In the logic of this taboo, the woman who decides to resume sexual relations should wean her child. But in Africa, as in most other cultures, normative rules are full of contradictions and exceptions. It is perceived that the evil of combining sexual relations and breastfeeding are relatively tolerable, compared for example to resisting the husband's entreaties or running the risk of losing him to another more available woman. Compromises and accommodations are possible. One such compromise is to have only intermittent sexual relations during the lactation period. Some women solve the problem by washing themselves and allowing time to elapse between intercourse and suckling. Abstinence is not always an "all-or-nothing" type of behavior, and it can still reduce fertility significantly

after sexual relations have resumed at a reduced pace. Other compromises could consist of giving traditional or modern medicine to the child to counteract the action of the sperm in the milk and keep the baby healthy, or even to use contraception to avoid pregnancy.

The list of motivations given for abstinence is long and complex. The shortest taboo, the one prescribed by Islam in a growing part of Africa, is 40 days. It is difficult to interpret it as a means to delay the arrival of the next child. What is involved here is more a notion of impurity of the woman during the postpartum period similar to her impurity during menstruation, when Islam also prescribes sexual abstinence. In a comparable way, the Ikale, a Yoruba sub-group, invoke agbon, a bad body odor of the woman following parturition, to justify an abstinence of two to nine months (Adeokun, 1981).

For many observers, abstinence serves other purposes than the health of the mother and her children. Different authors have seen in sexual abstinence the objective of furthering social control and assuring the necessary affective distance between husband and wife. Societies based on the extended family recognize the danger of nucleation; the role of abstinence is to keep husband and wife remote from one another, and this is perceived as beneficial for society. The taboos also serve to maintain patriarchal authority on the young generation and parental authority on children (Crael, 1981: 278).

It is certain that the practice of abstinence is only possible in cultures where the conjugal link is weak, where polygamy exist, where a single wife is never sure to remain her husband's only partner, and mostly where the extended family prevails. Saucier (1972) underlines that the taboo is more frequent in gerontocratic societies and in patrilocal and patrilinear exogamies where women are considered as outsiders and have little say.

In West Africa, it is not rare for the woman who gave birth to return to her paternal home and visit her mother for a time. In Bobo-Dioulasso it is said that such a woman "went to drink water at her mother's house". Kumekpor (1975: 978) reports a similar custom among the Ewe of Togo and Ghana. In this case the young woman stays with her parents or her in-laws until "... her child is weaned and she is ready to have another baby". Similar practices exist in West Zaire (Sala-Diakanda *et al.*, 1981) and in the Dagbon country in north Ghana where the young mother goes to live with her parents for two years after the birth of her first child (Oppong, 1973: 37).

More urbanized couples who have increasingly adopted a Westernized view of the couple and the nuclear family, are rejecting the long abstinence period as inimical to happy conjugal relations. For Pat and John C. Caldwell (1987: 244):

... a broader phenomenon which now affects the majority of Ibadan marriages ... is the potential that the abstinence period possesses for destroying marriages. With increasing education and middle-class jobs for wives as well as husbands and with models provided by the media and church, there is a growing interest in, and expectation of, marital sex by husbands. Many of them do not expect to have to go outside to find their pleasures and many put increasing pressure on apprehensive and confused wives for an early resumption of sexual relations ... Many of our respondents called this the "fighting period" ... The wife is afraid of alienating her husband's affection, of losing him altogether, or of his bringing home a new wife. These are new fears and new situations.

It is worth noting that postpartum abstinence is mostly a female responsibility. Male sexual behavior is usually not strongly conditioned by a concern for birth spacing or the quality of the milk and the diseases which the child may contract. It is unlikely therefore that men abstain from sexual relations to the same extent as their wives do.

In polygamous unions, all wives are usually not with child at the same time. Caldwell and Caldwell (1977: 202) report that, among the Yoruba in monogamous marriages, 31 percent of husbands abstained from sexual relations during the period their wives were practicing postpartum abstinence while the balance had extramarital relations. Among polygamous husbands eight percent abstained, 88 percent had sexual relations with other wives and only four percent had extra-marital relations. Polygamous men are less promiscuous than monogamous men who look outside for partners during the postpartum period of their wife.

Finally, the existence of terminal abstinence should be mentioned. Older women may decide, or be encouraged by custom, to abandon regular sexual relations with their husband, either because they have reached a certain age, or because their children have married, and possibly become parents themselves. Terminal abstinence may occur at different ages, for different reasons and according to different customs. The Caldwells (1977) identified the existence of the custom among the Yoruba, and saw this as a potential exception to the generalization about the prevalence of natural fertility in Africa. In general, subsequent research including the results of the World Fertility Survey, has not confirmed that terminal abstinence is very important anywhere (Cleland and Wilson, 1987: 14).

#### IS ABSTINENCE AN IMPORTANT FACTOR IN SPACING?

In much of contemporary sub-Saharan Africa, a long period of spacing between births is the combined result of extended postpartum amenorrhea

due to prolonged on-demand breastfeeding, and of sexual abstinence. These variables --breastfeeding, amenorrhea and abstinence-- together determine the length of the protected or non susceptible period following parturition (Henry, 1964; Bongaarts and Potter, 1983), and are themselves influenced by local customs and the environment. Variations in the length of breastfeeding and of abstinence seem to be the principal sources of the heterogeneity of levels of natural fertility that exist in Africa (Bongaarts *et al.*, 1984).

Spacing norms ingrained in African populations do not necessarily imply the conscious use of techniques such as abstinence aimed at avoiding the next birth. After all, long breastfeeding which is still the rule in Africa (with a few exceptions among educated, urban women) is sufficient in itself to explain relatively long intervals between births (see Santow, 1987). Knowledge about the biological effect of prolonged breastfeeding on the postpartum period seems generally absent in African populations. What effect, then, does postpartum abstinence, often practiced in connection with breastfeeding and linked with it in the mind of the nursing mother, have on the birth interval?

By providing empirical data on the subject, the World Fertility Survey has greatly added to our knowledge of the relationships within this complex of factors. On the basis of WFS data for seven countries, Eelens and Donné (1984) have compiled a convenient *Factbook* which includes summary measures of the duration of breastfeeding, of amenorrhea and of abstinence obtained from current status data by the prevalence incidence ratio method. We use these data for several comparisons in Table 1 and in two figures included in this report.

Although there are *a priori* reasons to believe that some populations may synchronize the time of weaning on the resumption of sexual relations, there is little visible relationship overall between the duration of breastfeeding and of abstinence. But the relationship between the duration of breastfeeding and the length of postpartum amenorrhea has been found to conform to several formal expressions. Bongaarts and Potter (1983: 25) found that the curve best fitting the relationship between A, the duration of postpartum amenorrhea in months, and B, the duration of breastfeeding, was provided by the following exponential:

$$A = 1.753e^{0.1396xB - 0.001872xB^2}$$

As a first approximation, Lesthaeghe *et al.* (1981: 7) give the relationship as follows:

Postpartum amenorrhea lasts on average about 2 months for non-breastfeeding women and increases to roughly 60 to 75 percent of the average duration of breastfeeding in population practicing breastfeeding.

**Table 1. Mean duration of postpartum abstinence, breastfeeding and amenorrhea: minimum and maximum by region of residence**

Country	Abstinence	Breastfeeding	Amenorrhea
Ghana	12.4 (7.4 - 30.9)	20.2 (13.6 - 32.5)	14.6 (10.3 - 19.9)
Lesotho	18.0 (17 - 19.3)	21.8 (20.7 - 22.3)	11.4 (10.5 - 12.3)
Senegal	..	20.5 (18 - 22.9)	..
Benin	18.2 (12.3 - 23.0)	21.4 (17.3 - 23.1)	13.8 (9.6 - 16.5)
Cameroon	16.2 (11.3 - 21.9)	19.5 (13.7 - 22.9)	13.3 (7.9 - 15.5)
Kenya	4.1 (2.9 - 5.8)	17.8 (14.4 - 23.2)	11.7 (8.8 - 15.7)
Sudan	3.2 (2.5 - 3.9)	17.3 (17.1 - 20.0)	12.1 (9.7 - 14.7)
Cote d'Iv.	16.5 (14.2 - 20.2)	19.7 (16.8 - 22.6)	13 (10.2 - 15.9)

Source: F. Eelens et L. Donn , 1985.

Although presumably more accurate, Bongaarts' formulation is less intuitively satisfying than this one, which brings out the essentially linear relation between the two variables. The WFS data for Africa confirm the linear relation: the coefficient of correlation between the duration of breastfeeding and that of amenorrhea among the 48 observations is 0.80 (see Figure 1). In a way, it is surprising that the link is so tight. There is probably a great deal of cultural variability in the introduction of supplementary food and the intensity of feeding episodes, and a great deal of ambiguity in the different definitions of weaning.

The relationship between amenorrhea and the birth interval is fairly direct. The main problems then are in assessing the effect of abstinence on the birth interval, since a substantial proportion of abstinence occurs when the woman is amenorrheic and not at risk of conceiving. For individual women, only abstinence beyond the resumption of ovulation (which for practical purposes, is signaled by the resumption of menstruation) will have an impact. The answer is a little different in a population where women have hetero-geneous behavior with respect to breastfeeding and abstinence, and may resume ovulation at different times. It would not do to take the average duration of abstinence in the population and compare it to the average duration of amenorrhea, since the averages conceal the heterogeneity. Assume, for example, two women, one who does not breastfeed at all and abstains for two years, and one who does not abstain, nurses her child for two years and as a result prolongs amenorrhea substantially. The average duration of abstinence and the average duration of breastfeeding for the two women will be one year each, but the average effect on the nonsusceptible period (i.e., the joint effect of breastfeeding and abstinence) may be considerably longer, close to two years.

Although there is no necessary relationship, Figure 2 shows that, empirically, there is a linear relation between the excess of the nonsusceptible period over the length of postpartum amenorrhea and the duration of abstinence. The linear regression equation between the duration of abstinence in months,  $A$ , and the duration of the nonsusceptible period,  $NSP$ , can be represented by the following equation:

$$NSP = -1.12 + 0.389 A$$

Thus, as a rule, the WFS data suggest that every month of average duration of abstinence in a population accounts roughly for a prolongation of 0.4 months of the nonsusceptible period over and above the period of amenorrhea (see Figure 2, based on Eelens and Donné, 1985). In general, the effect of abstinence over that of breastfeeding-caused amenorrhea, to use an expression of Lesthaeghe (1986: 221), is no more than "a bonus". The abstinence bonus is of course increasingly significant when its duration extends past the average duration of postpartum amenorrhea.

Figure 1: Relationship between Breastfeeding and Amenorrhea

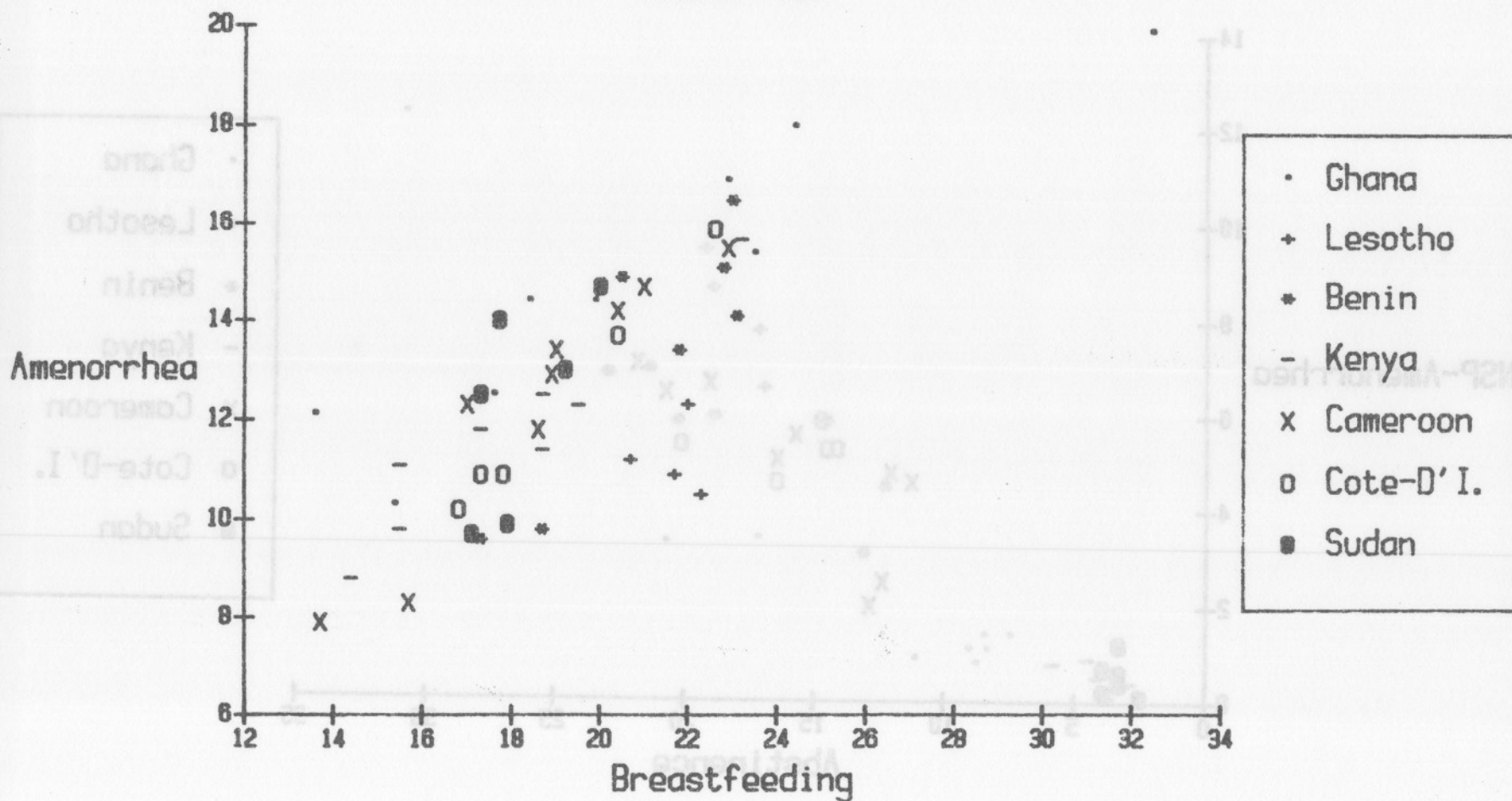
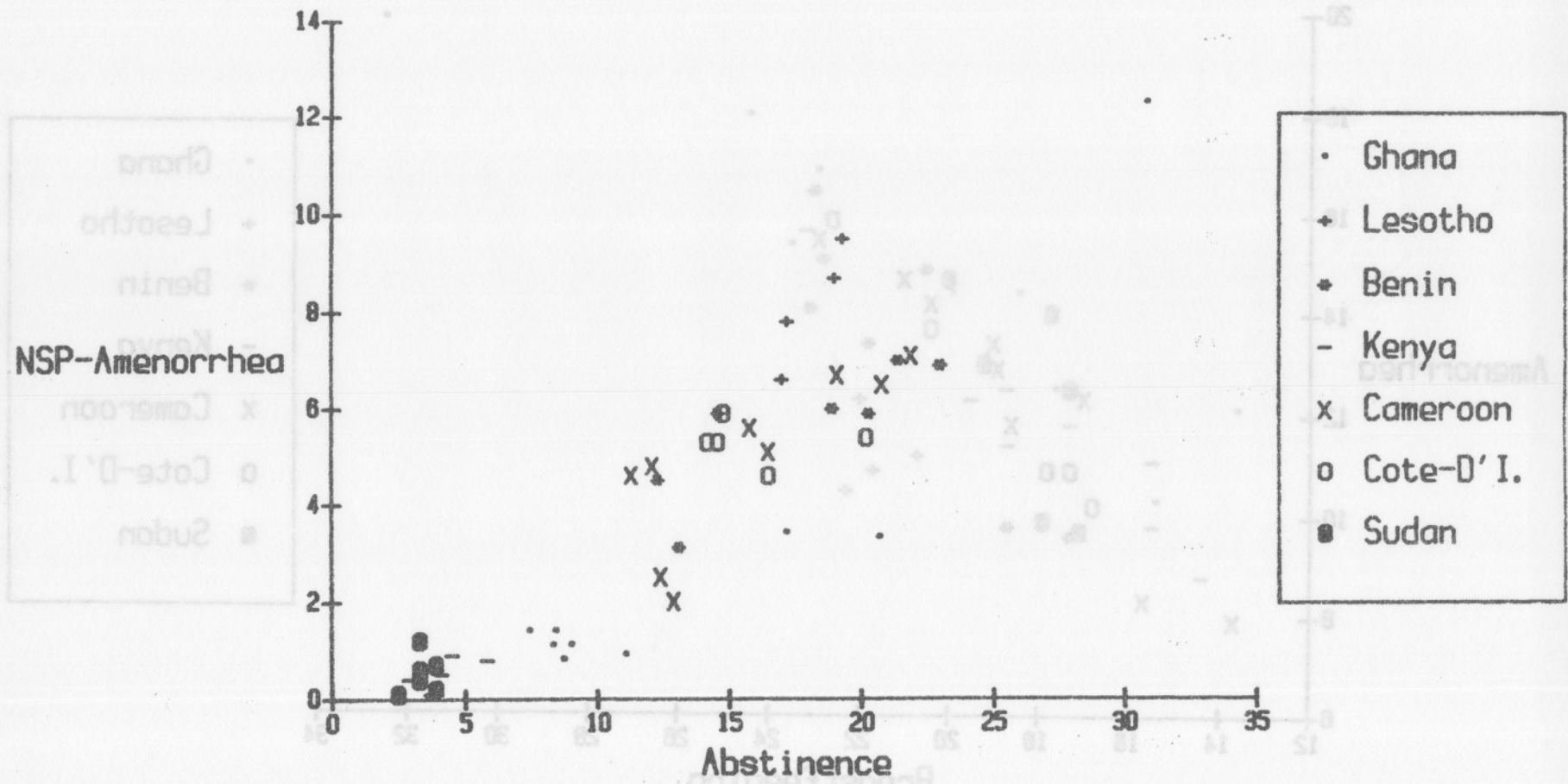




Figure 2: Effect of Abstinence on the Non-Susceptible Period



## THE CASE OF BOBO-DIOULASSO

Through a combination of methodologies, we have investigated the operation of the proximate determinants of fertility in Bobo-Dioulasso, a town in Burkina Faso, where the Sahel Institute and the National Institute of Statistics organized a multiround infant and child mortality survey. Starting at the time of birth, the survey collected prospective information on the birth interval variables (resumption of intercourse and of menstruation, supplementation and weaning, new pregnancy) for women whose child was still alive; observation was truncated either by death of the child, departure of the mother, or by the second birthday of the child. The data were analyzed in a series of hazard models. Additional information of a qualitative nature was collected in tape-recorded interviews of a small sample of women (Trussell *et al.*, 1987). The qualitative survey revealed strong norms about spacing and strong desires among women to abstain for an extended period, ideally until the child was weaned. A certain stage of physical maturity (teething, walking, ability to carry a pot of water) was indicative that the child could be weaned.

Actual behavior of the women, as revealed in the prospective survey, was somewhat at variance with the stated norms. There was little statistical evidence of an intercourse taboo linked to lactation. Neither full nor partial breastfeeding had any effect on whether sexual relations were resumed. It is likely, however, that the intensity of sexual relations was reduced considerably for a nursing mother, and this seemed to contribute to the not inconsiderable apparent effect of supplemented breastfeeding on the rate of conception (50 percent against 80 percent for unsupplemented breastfeeding). Only full breastfeeding, however, provided any delay in the return of menses. Women seemed much more likely to resume sexual relations if they had resumed menstruation. The main reason to wean the child was the advent of another pregnancy.

The Bobo-Dioulasso data suggest that the interaction of breastfeeding, abstinence and amenorrhea may be more complex than appeared at face value. There may be many local combinations and adaptations. Retrospective statements made about the duration of abstinence may be normative in nature, and reflect what women feel they should have done rather than what they have done. Breastfeeding with supplementation may have little effect on the end of postpartum amenorrhea, but an effect on fertility may be obtained by a reduction of the frequency of intercourse on the part of women who are afraid of the effect of intercourse on the quality of their milk, a fear that is all too frequently reinforced by the multiple diarrheas which affect the child.

## CONCLUSION

One of the paradoxes of fertility regimes in Africa is that they place strong emphasis on the advantages of spacing, but actually achieve a lengthy birth interval mostly by extended and intensive breastfeeding, even though the populations are not aware of the physiological effect of lactation on fertility. Abstinence, the one mechanism that could be volitional, is actually rather ineffective in attaining the goal of spacing. This is because much of abstinence is actually doubling up as a protection during the period of breastfeeding amenorrhea, when women are not at risk. We have seen, however, that abstinence is often not primarily perceived by African populations as a spacing mechanism, but rather as a purification ritual or a means of preventing the pollution of the milk. The logic of this relation was already expressed by Galen, more than a millennium and a half ago.

Intercourse taboos have been reduced in many parts of Africa. This may have resulted in rises in fertility. (For Kenya, see Frank and McNicoll, 1987). Some observers have predicted the disappearance of abstinence as a relevant proximate determinant of fertility in the near future (Lesthaeghe, 1986: 14). If couples continue to be conscious of the importance of spacing, they may increasingly substitute contraception for abstinence. But where abstinence has not been seen traditionally as a spacing mechanism, the prognosis is less favorable. The net result might hinge on the extent to which the population sees contraception as preventing the poisoning of breast milk, for instance by preventing the mixing of sperm with the woman's blood. Such an interpretation might well seem obvious in the case of barrier methods, and might even appear attractive for hormonal methods of contraception.

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