

WORLD HEALTH

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health and family planning



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Cover: mothers at a family planning information session in the Republic of Korea. (Photo WHO/P. Almasy)

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In an Egyptian health centre. Family → planning care is included within maternal and child health services. (Photo WHO/M. Jacot)





WORLD POPULATION YEAR
1974

family planning

A CONCERN FOR THE QUALITY OF LIFE

In the WHO perspective, family planning is concerned with the quality of life. It is a way of thinking and living that promotes the health and welfare of the family group and thus contributes to economic and social development.

World experience indicates that many births at short intervals and pregnancies at maternal ages below 18 or above 35 years are associated with health risks. Outstanding among these risks are increased susceptibility to fetal loss, stillbirth, perinatal mortality, prematurity, infant and childhood mortality, malnutrition and infection, and the retarded physical and intellectual growth of children. Child spacing through family planning is thus a true preventive measure that lessens health-related pressures on the family and the community. It includes the prevention and treatment of infertility, especially if infertility occurs involuntarily before the achievement of the desired family size.

The needs of the family vary from country to country, and between regions within countries. The choice of methods for family plan-

ning also varies with the culture, with socio-economic status, and with the health services available.



A motorized health worker in the Republic of Korea. Services should reach out to all members of the community. (Photo WHO/P. Almasy)

The introduction of family planning activities is a relatively new departure for health services. Though adequately trained staff are urgently needed, there are schools for the health professions where family planning is not yet emphasized. Today this subject should be an essential part of every health-oriented curriculum.

Another concern is to bring family health care, including family planning services, within the reach of the people. Innovation and dynamism are needed to make sure that this care is not confined to urban areas but reaches out to the remotest community. Close contact between the consumer and the health service system should be established for people to understand that family planning really concerns *them* and *their* families.

Last year, WHO responded to requests from over 50 countries for





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Educating the educators. At Chandigarh (India) doctors, nurses and other health staff learn about family planning, which should be part of the curriculum in all schools for the health professions. At present the world does not have nearly enough trained people in this field. (Photo WHO/E. Schwab)

←
Provision of family planning care in Egypt. (Photo WHO/M. Jacot)

→
In a French family planning clinic, young couples attend a lecture. (Photo WHO/P. Almasy)



help in developing the family planning aspect of maternal and child health services. According to WHO, services dealing with fertility regulation should always be based on comprehensive mother and child care, including pre-marital and educational counselling, pre-natal care and assistance during delivery, care of the newborn, the infant and the child, nutritional advice, and immunization. In other words, family planning should not be pursued in isolation but should always be combined with a number of other measures whose objective is to improve the health of the family.

WHO has launched an extensive programme of research and research training to fill the main gaps in knowledge about family planning. Research workers in various countries are trying to improve some of the existing methods of contraception, to develop new methods, and to find the best ways of providing family planning care, especially where the basic health coverage is still limited. An important feature of the research programme is that it seeks to build up national research facilities, so that each country can find the solutions to its own problems rather than accept answers from outside.

The United Nations decided that 1974 would be World Population Year, and this should provide the opportunity to highlight a fundamental issue: in many countries, a large proportion of the people are not receiving even minimal health care. Needs in developing countries are great and the financial support for health purposes now being given from outside is quite inadequate. At the same time, however, the countries that need help must themselves undertake some basic reforms if they are to achieve their objectives in health care and social well-being. ■

health benefits FOR MOTHER AND CHILD

by Dr Abdel R. Omran
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In recent years, the social benefits of family planning have been widely discussed in relation to the population explosion, with its attendant social, economic, and environmental consequences. In our concern for the human race and for the world at large, however, we have tended to overlook the importance of family planning for the health and well-being of women, of children and of families. There is no doubt that the quality of life can be improved through family planning. This article is devoted to an examination of the health consequences of human reproduction and addresses itself frankly to the question: "What health hazards can arise from too many, too frequent, poorly timed, and unwanted pregnancies?"

The most impressive health benefit to children that results from adequate spacing of pregnancy, limiting the number of siblings, and appropriate timing in relation to the age of the mother is the manifest improvement in chances of survival. Scientists usually measure these chances in terms of the proportion of babies born dead (stillbirth), the proportion of infants who die within the first year of life (infant mortality), and the proportion of children who die between one and five years of age (childhood mortality). Studies in many countries have shown consistently that the chances of survival are better for earlier-born children than for later-born children, with the exception of the first-born child. The risk of death after the first child increases with increasing birth order, particularly after the fourth child. The special risks of the first pregnancy are biological as well as social. The reproductive system is not as well prepared for the first pregnancy as it is for the second or third, especially if the mother is very young. In addition, young mothers under twenty tend to be handicapped both socially and by lack of experience in handling the

physiological and psychological stresses of the first pregnancy.

For example, a study in India of 1,000 births indicated that the risk of death before or immediately after birth was 13 per cent for first-born children, 5 per cent for the second-born, 11 per cent for third-, fourth- and fifth-born, 16 per cent for sixth- to ninth-born, and 25 per cent for tenth- and later-born children. Similar results were reported from other developing countries and also from highly industrialized countries. For example, in a large American study nearly half a million births were examined, registered in New York State exclusive of New York City, between 1950 and 1952. The risk of fetal loss and childhood mortality was high for first-born, relatively low for second-born, and gradually increased with increasing birth order thereafter.

The question of whether this phenomenon is common to both rich and poor was answered by a nation-wide study in England and Wales, which included all births during one year. The risk of death for comparable birth orders was shown to be higher for low social class than for high social class infants, a not unexpected finding. However, the study also demonstrated that the risks of death are higher for fourth- and fifth-born children than for second or third in *every* social class (see page 8, figure 1). Thus, the benefits of family planning are by no means limited to the poor.

Significant factors

The experience of the medical profession over the last fifty years indicates that it is not only the *number* of children that leads to unfavourable health consequences, but also the *interval* between pregnancies and the mother's *age* at pregnancy. Research evidence confirms that too short an interval is particularly hazardous to

the child's health. For example, studies in the Punjab, India, on the Island of Kauai, Hawaii, and in Britain showed that fetal loss, stillbirth, infant and childhood deaths, and prematurity were extremely high for birth intervals of less than one year, and less so for intervals between one and two years. Adequate time is needed for the reproductive system of the mother to recover from pregnancy and childbirth and for the body in general to build up its depleted reserves in preparation for another pregnancy. When short birth intervals are combined with very young maternal age, the risks to the child's health reach the extreme. At the other end of the scale, a number of studies show that intervals of more than six years may also carry increased risk.

The timing of pregnancy in relation to the age of the mother is important, for the age at which conception occurs may determine whether the pregnancy will come to term, whether the child born alive will survive infancy and childhood, and whether he will be afflicted with disabling handicaps. As mentioned before, pregnancies occurring at too young an age—especially if repeated at short intervals—are risky for both mother and child, a fact particularly relevant to countries where girls marry in their teens (that is, while they are themselves still growing children). The risk is compounded further by widespread undernutrition of mothers.

At the other end of the reproductive span—after age 30 and definitely after age 35—risks of child mortality increase and certain disease phenomena more commonly afflict the survivors. For example, children born to older mothers are at a higher risk of developing congenital malformations and mental retardation.

Children who survive the hazards of unplanned reproduction appear to be more likely to suffer from a variety of



diseases, disabilities, and chronic ill-health than children in planned families. For example, it has been noted that children from large families are generally more prone to infectious diseases, malnutrition, and stunted growth and development. Alarming reports have been accumulating since World War II from a number of countries indicating that the intellectual development of children of high birth orders is typically much lower than for children of low birth orders. In other words, the IQ of first-, second- and third-born children is higher than that of fourth and later birth orders. Studies also show that mental retardation may be more common among children in large families. This fact is of striking political and economic significance, since the prevalence of high birth orders and the associated risk of low intelligence are higher in the less developed countries. High among the factors influencing intelligence in later-born children are declining parental interest and decreased emotional and verbal contact with the child in a large family. When mothers are mature enough and have a small number of children who are well spaced, they have a better chance of furthering the mental and intellectual development of their children than do mothers overburdened with too many children conceived too close together.

As early as 1865, it was noted that mothers who have a large number of children (grand multiparas) run greater risks of disease, pregnancy complications,

and labour difficulties that may be fatal. Unfortunately, this view was held by only a few physicians; the majority of physicians and laymen regarded the grand multipara as an easy obstetrical case, whose only serious problem was getting to the hospital in time. In the 1940s however, physicians began to realize the risks of high parity. It is now established that grand multiparas have an increased risk of dying during pregnancy, labour, and puerperium. They are also liable to increased obstetric complications such as disorders of the placenta, uterine rupture, haemorrhage, and abnormal presentation of the child at delivery. A review of 45,414 consecutive obstetric cases in the Johns Hopkins Hospital, Baltimore, USA, between 1869 and 1939 showed that, due to rupture of the uterus, hypertension, kidney diseases, or haemorrhage associated with *placenta previa*, women of high parity had a mortality rate three times higher than women of low parity. Although maternal mortality has greatly declined in many countries, the risks of high parity continue, especially when the mother is too young and birth intervals are too short.

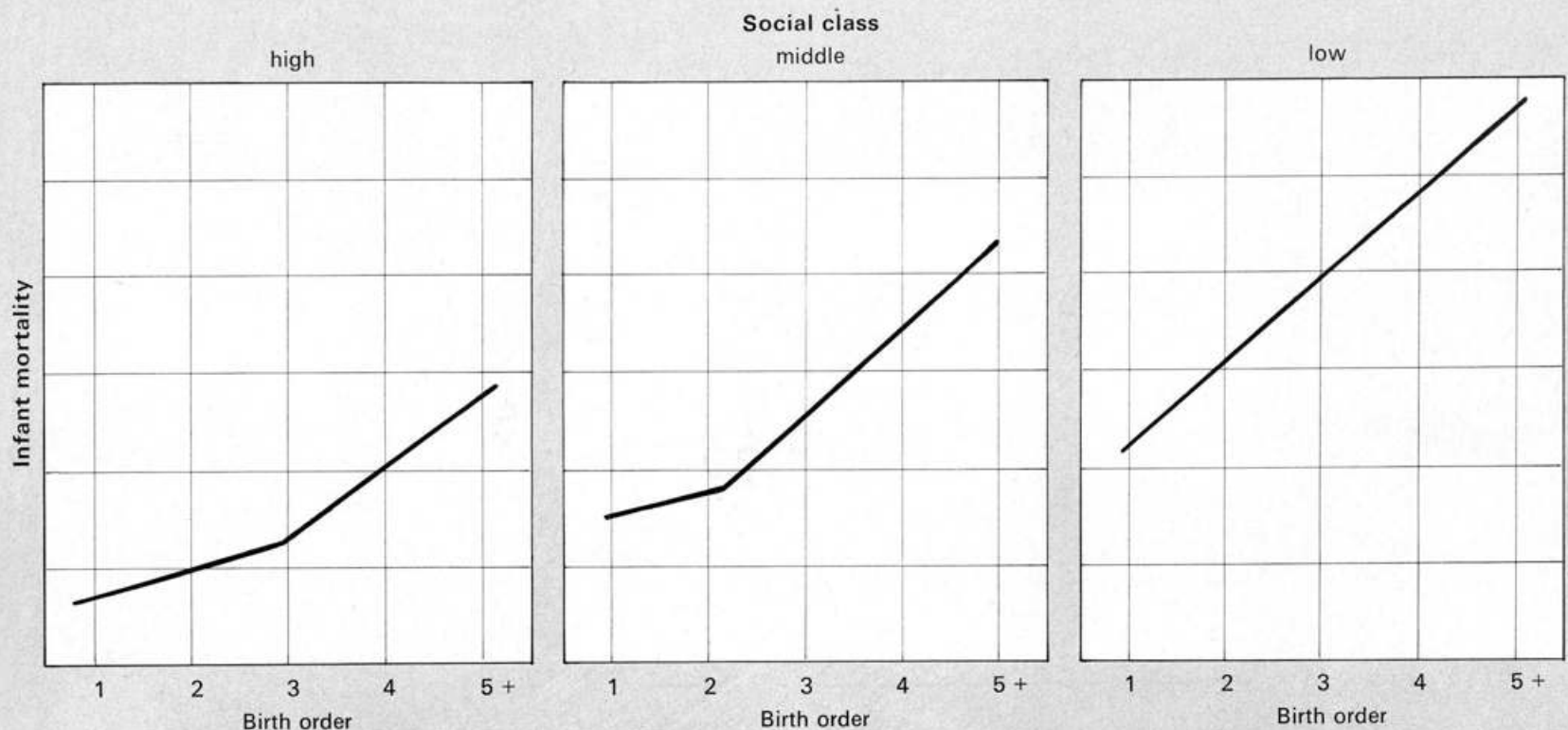
Recent studies have shown that in addition to complications of pregnancy and labour, women of high parity are also at an increased risk of developing diabetes, cancer of the cervix, rheumatoid arthritis, hypertension, malnutrition, and chronic ill-health. (By the way, fathers of large families are more likely to develop hypertension and gastric ulcers.) In a socio-

medical study in England, an attempt was made to measure the efficiency of a mother in caring for her children and it was found that maternal efficiency decreased markedly after the third or fourth child.

Another important factor is maternal age. Mothers who conceive between the ages of thirty and forty have twice the risk of dying in pregnancy or childbirth of women of twenty to thirty, the prime age for childbearing. The risks increase progressively to four or five times the prime risk for women over forty. In a study in Thailand, women over thirty-five accounted for 40 per cent of all maternal deaths though they had only 20 per cent of all births. Pregnancy at age thirty to thirty-five or over is thus considered "high-risk pregnancy". It has been estimated that if, in Thailand, this category of high-risk pregnancies could be avoided through family planning, approximately 1,500 women per year would be saved from death and 250,000 births would be averted. Family planning of this sort would thus serve a double purpose by preventing undesired population growth and at the same time saving the lives of women who are greatly needed by their husbands and children.

Another aspect of reproductive behaviour is its relationship to family adjustment. With the increasing social emphasis on family relations and marital harmony, patterns of family formation are gaining wider significance. A number of studies show that there is generally a decline in

Figure 1 Risk of infant mortality (1-2 months) by social class and birth order (in England and Wales)



For the health of mothers and their offspring, the best maternal age for having children is between 20 and 35 years. (Photo WHO/P. Almas)





A young Tunisian woman listens to a health worker explaining the physical and social benefits of pregnancy spacing. (Photo WHO/J. Mohr)

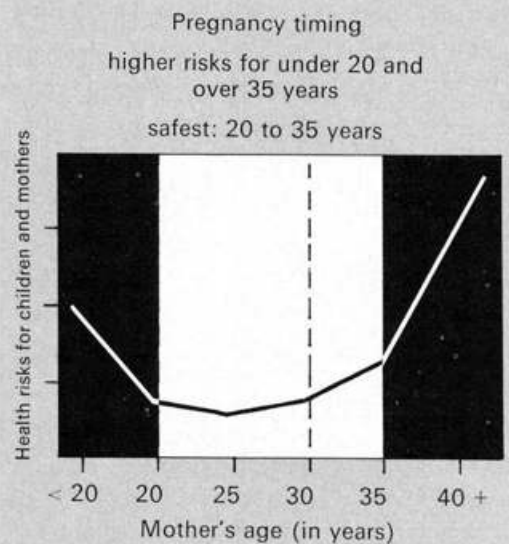
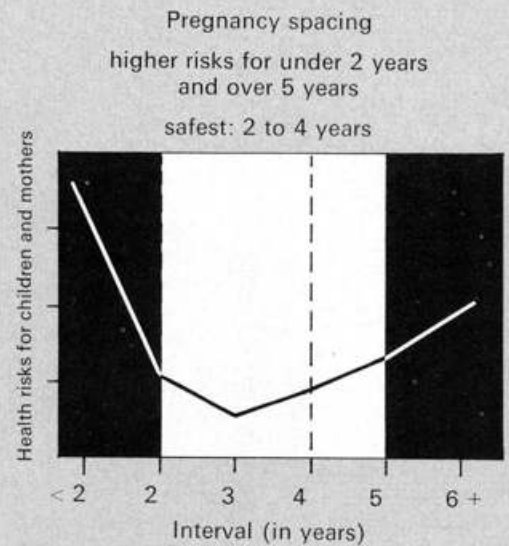
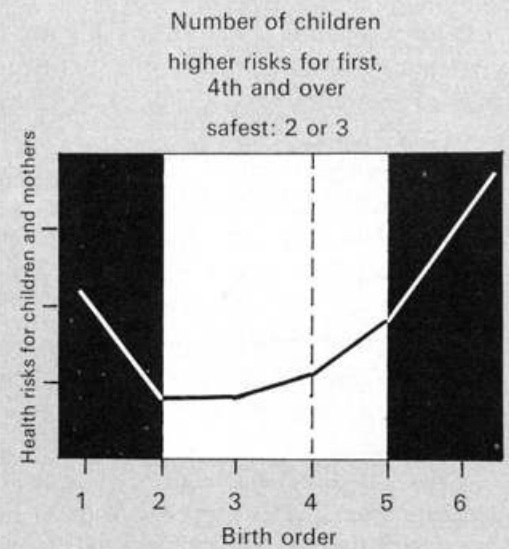
successful marital adjustment with an increasing number of children. In one such study concerning the social and psychological factors affecting fertility and the interrelationship of family size and marital adjustment, couples were asked to report on their marital happiness. Analysis of the data showed that couples with less than three children were, on the average, happier in their married lives than those with three or more. Other studies of child behaviour point to an increase in behavioural problems (including juvenile delinquency) among children of later birth orders and children classified as unwanted by their parents.

Towards a happy, healthy family

World-wide experience indicates that effective family planning can favourably influence the health, development, and well-being of families and individual family members in many ways:

1. By making it possible to plan family size—that is, by enabling every couple to have the number of children considered best in terms of health, socio-economic resources, and family goals. Four health objectives should be considered in planning family size:
 - a. To lower levels of fetal, infant, and childhood mortality and sickness.
 - b. To improve the physical, mental, and intellectual development of children.
 - c. To secure the health and life of the mother.
 - d. To enhance family health and adjustment.
2. By planning birth intervals, to improve maternal health and child development and well-being.
3. By making it possible for women to have children at the ages at which pregnancy carries the least risk for the mother and the best chance of successful outcome—a matter of particular significance with regard to the first and last pregnancies.
4. By making it possible to avoid unwanted births, whether legitimate or illegitimate.
5. By preventing abortions, especially high-risk (illegal) abortions.
6. By making it possible through genetic counselling for couples with hereditary diseases or handicaps to avoid passing them on to their children.

Figure 2
Safe landmarks
for human reproduction



Source: Data extracted by the author from several studies.

Enabling couples who are involuntarily infertile to achieve their desired family size within the health and social context is also an integral function of family planning.

In drawing up a healthy reproductive plan, parents should observe the following rules of thumb in regard to relative safety (see page 11, figure 2):

— The optimum age for having children is between 20 and 30-35. With a pregnancy at younger or older ages there is a risk of disease, disability or death for both mother and child.

— The period between the end of one pregnancy and the beginning of another should be no less two and no more than five years.

— Two or three children, well spaced, properly timed, and expressly wanted, is the best number. Health risks increase

for fourth, fifth, and later children and for unwanted children of any order.

— To minimize the relatively high risk (which apparently cannot be bypassed) for the first child, the first pregnancy should not occur below age 20, the mother should be at her most healthy, and adequate medical supervision should be sought during pregnancy, during labour, and after birth for both mother and child.

Modern family health practices dictate a change in the definition of family planning, and I should like to propose the following definition:

Family planning, from the health point of view, is not merely the regulation of the number of children, but it is also the appropriate spacing, the timing (in such a way that children are conceived at the least risk to the mother's life and health), and the assurance that each child shall

be wanted and prepared for. Family planning should, by definition and objective, include treatment and prevention of infertility as well as fertility control.

Even though the responsibility for family planning lies mainly with parents, it also lies with the medical profession and health organizations who must further these ideals through education, health services planning, and daily professional practice. Charles Knowlton, a Massachusetts physician, said in 1832:

“It is as much the duty of the physician to inform mankind of the means of preventing the evils that are liable to arise from gratifying the reproductive instinct, as it is to inform them how to keep clear of the gout or the dyspepsia.”

In impassioned nineteenth-century style, Knowlton describes the risks of unplanned reproduction as follows:



“How often is the health of the mother, giving birth every year to an infant—happy if it be not twins—and compelled to toil on, even at those times, when nature imperiously calls for some relief from daily drudgery, how often is the mother’s comfort, health, nay, even her life, thus sacrificed! Or, if care and toil have weighed down the spirit and at last broken the health of the father, how often is the widow left, unable, with the most virtuous intentions, to save her fatherless offspring from becoming degraded objects of charity, or profligate votaries of vice!”

Truly, twentieth-century investigations have given the force of new evidence to Knowlton’s pioneering argument for improved maternal and child health and general family health through family planning. ■

for mother and child

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In a well-spaced family, two to four years should elapse between births. Here a Swiss mother prepares her first child for the arrival of a new baby. (Photo WHO/M. Jacot)

The unmarried mother and her child are especially in need of care and protection. Denmark has a “motherhelp” service for them. (Photo WHO/E. Mandelmann) →



FOOD, HEALTH AND FAMILY PLANNING

by Dr Nevin S. Scrimshaw

Professor of Human Nutrition, Massachusetts Institute of Technology, USA

By any frame of reference, the increases in world population projected for the decades immediately ahead are staggering. It took from the beginning of man to about 1840 for world population to reach the first thousand million, then only about 100 years for the second, and the third thousand million mark was reached in 1960, after an interval of only 30 years. At present growth rates, it will have taken only 15 years to reach the fourth thousand million in 1975. Regardless of any future effectiveness of family planning efforts, world population seems certain to reach six thousand million by the end of this century, or soon after. While the rate of increase has slowed or even stabilized in most of the highly industrialized countries, it is continuing unchecked in those places least prepared to cope with it in terms of either food supply or other resources.

Two of the world's most pressing problems, malnutrition and rapid population growth, are intimately related. It is no coincidence that the countries with the highest rates of population increase also report the highest rates of infant and pre-school child deaths, and have the most serious malnutrition among their lower income groups. Malnutrition is in fact the major determinant of these high death rates. At the same time, people are apparently reluctant to limit the size of their

families until they are assured that the majority of their children will survive.

There are other ways, too, in which nutrition and fertility are related. Severe malnutrition in early childhood may adversely affect the future learning power and behaviour of those children that survive it, while malnourished adults cannot work properly and are less productive. Both these factors can hold up the process of social and economic development, though paradoxically this very development could provide an incentive to individual couples to limit the number of their children. In the highly industrialized countries, the desire to limit family size has been a consequence of improved economic and social opportunity.

A vicious circle

Malnutrition of both mother and child occurs more often with frequent pregnancies than when births are fewer and widely spaced. The physiological processes of pregnancy and lactation demand an increased intake by the mother of essential nutrients to maintain herself and the foetus in good health during pregnancy, and later to support an adequate flow of breastmilk without detriment to her nutritional reserves. When the diet is inadequate, multiple cycles of pregnancy and lactation,

following closely one on another, so debilitate the mother that both her own health and that of her children are jeopardized.

Thus, a child whose birth follows closely upon that of a sibling may receive a poor start in life because of his mother's low nutritional status. Moreover, when he is displaced at the breast by another baby, there is often no adequate substitute food available for him. The name for the severe protein deficiency disease of young children, kwashiorkor, means "first-second" in the language of the Ga tribe of Ghana, a reference to the disastrous results that often ensue when the first child must give way to the second at the mother's breast. Such a "second" child may also be deprived of his full share of maternal care and attention, and receive fewer of the social and psychological stimuli now known to be essential for normal brain growth and development.

There is excellent evidence that breast feeding delays the resumption of ovulation and menstruation after birth. In countries where the lactation period is long, intervals between pregnancies may be extended by 5 to 8 months. This means that breast feeding is not only beneficial to the child, but can also contribute to contraception by preventing from 14 to 25 per cent of the births that would be expected if bottle feeding were the rule.



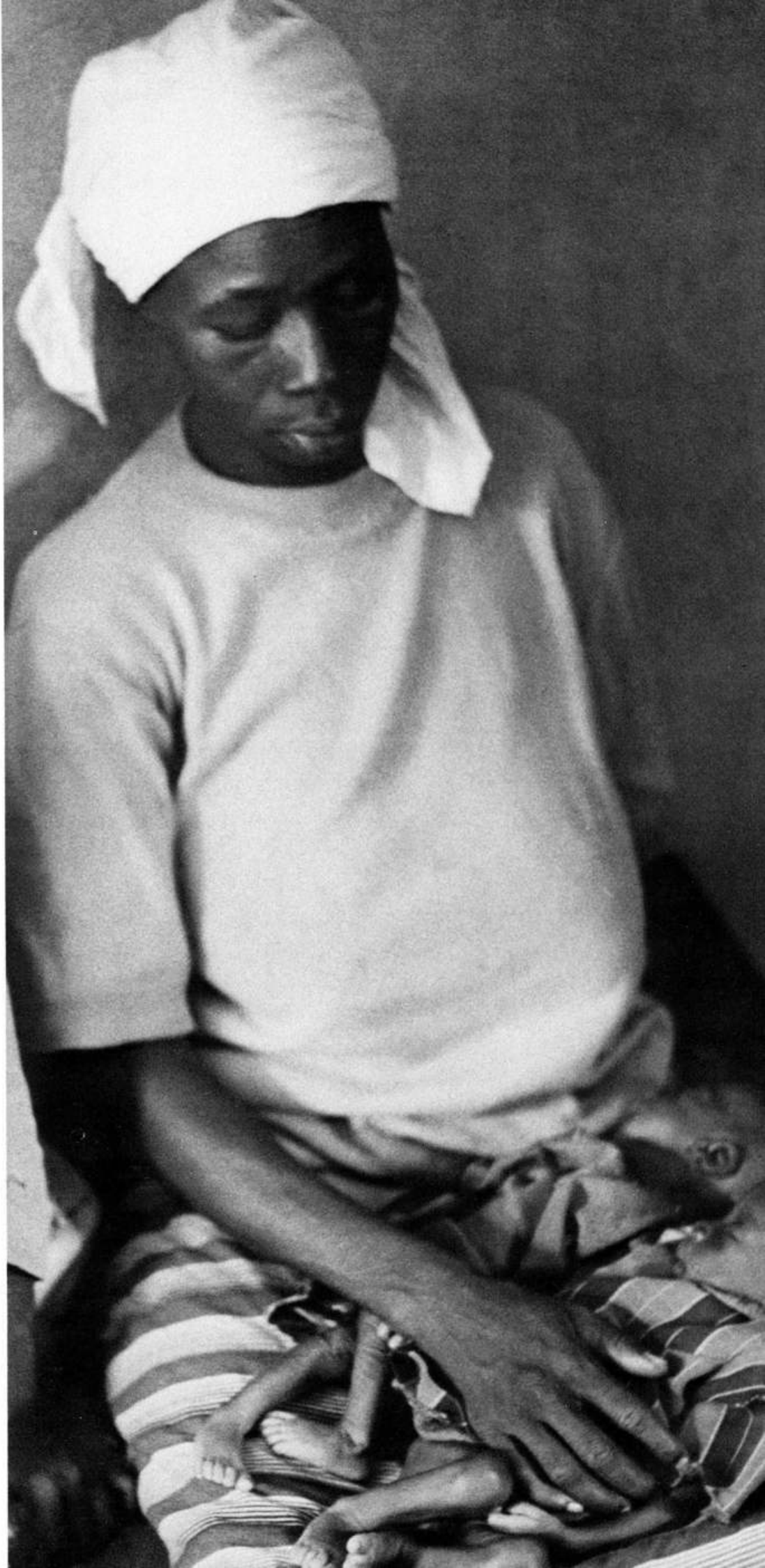
The consequences of the trend away from breast feeding in countries where it has formerly prevailed can thus have a major and unfortunate impact on efforts in those countries to reduce their rates of population growth.

Interrupted lactation can also lead to a direct increase in malnutrition. In the new urban areas, mothers must often go to work shortly after childbirth, with the result that infants are bottle fed. Frequently the consequences are disastrous, because their mothers have neither the resources nor the knowledge to provide proper artificial nourishment.

Combined effects

Until relatively recently, little significance was attached to the fact that children born in some countries weighed 200 to 300 grams less than those born in others. We now know that this deficit in birth weight is due to inadequate food intake in the last months of pregnancy and that there are higher death rates at and just after birth among low-birth-weight infants. Recent work by Dr Leonardo Mata of the Institute of Nutrition of Central America and Panama (INCAP) in Guatemala has shown that infants who are small for their age tend to remain so throughout the first and second years of life and to have a high death rate. Thus, to the effects of malnutrition during pregnancy are added those resulting from lesser quantities of breast milk produced by poorly nourished mothers. When these children are also given inadequate supplementary foods once breast milk is no longer sufficient for them as the sole source of protein and calories, the resulting malnutrition is so serious that many of them die. Whether the actual cause of death appears to be malnutrition or infection, it is almost always due to the combined action of both.

The children who survive continue to suffer from both infectious and nutritional diseases. The most serious consequence of such illness is not smaller adult body size, for studies in Mexico, Guatemala, Colombia, Chile, Indonesia and a number of other countries have shown that severe malnutrition in young children may damage the central nervous system, and this



← Children of malnourished mothers suffer from the double handicap of a low birth weight and an insufficient supply of breast milk. Without adequate supplementary feeding many of them die from the combined effects of malnutrition and infection. These month-old African twins, who weighed only 2.5 kg together at birth, have gained practically no weight since. (Photo WHO/E. Mandelmann)

In Costa Rica: food education of parents is an important aspect of family planning, since better nutrition is one of the most effective ways of reducing child deaths and paving the way to acceptance of pregnancy spacing. A combination of maternal and child health, nutrition and family planning programmes is both more economical and more effective. (Photo WHO/P. Almasy) →



may interfere with subsequent learning capacity and behaviour.

Malnourished children have smaller head circumference, smaller brains with fewer cells, and modified nerve fibres. Yet these physical changes in the brain may be less important than the behavioural changes resulting from lack of stimulation. An inactive child neither demands nor receives as much attention as a healthy, active, inquisitive child. Children who are apathetic because they are malnourished are therefore exposed to fewer stimuli from interaction with their mothers, with other adults, and with their overall environment.

Acceptance of family planning

There is no real doubt that high infant and pre-school mortality associated with

malnutrition of mother and child is a major deterrent to the acceptance of family planning. Nowhere has family planning been successful where death rates were high. People must feel reasonably certain that at least one child will survive, but the present pattern of disease and death among young children in many parts of the world carries no assurance for them that this will be the case.

Recent data from Puerto Rico, Pakistan, Egypt, the Philippines, Thailand, and many other countries show that fertility has followed mortality downward. This is the same pattern seen earlier in the countries that are now industrialized. It is noteworthy that in many of these countries when there were no family planning programmes people achieved the reduction

on their own. Also there is a striking and encouraging difference from the earlier patterns of Europe and North America: the time lag between falling mortality and decreasing fertility seems to be getting shorter. A short-term increase in population growth occurs as a result of improved nutrition of pre-school children, but the longer-term effect can be quite the reverse. The very social changes that are an essential prelude to better nutrition and lower mortality rates are themselves powerful constraints on fertility.

A less direct influence of malnutrition on the acceptance of family planning is its role in impeding social and economic development. Childhood malnutrition, with its adverse effects on subsequent learning capacity and behaviour, reduces the abil-

Family planning concerns fathers too.
(Photo WHO/E. Schwab)

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ity of populations to participate in the development process to the full extent of their genetic potential. Adult malnutrition increases absenteeism from work because of infectious and other diseases, and may affect physical fitness and work output. These factors can prevent an economic level being reached at which rising aspirations for consumer goods and for education of children are incompatible with large families.

Motivating factors

It has been suggested that there exists a kind of constellation of factors which, when present in a society, induce many people to become willing, and even eager, to limit family size. When such factors are absent, few people are interested in birth control, despite the availability of methods and government efforts to encourage family planning. We are still unable to define these factors precisely, but they are likely to include education, economic opportunity, and some degree of emancipation of women. Relatively low levels of infant and child mortality are certainly also important, and may in fact be a *sine qua non*.

Parents should obviously not be expected to take the birth and death rates of their community as guides to behaviour. Many may never have even heard of these rates. On the other hand, it is not unreasonable to assume that they are sensitive to the extra mouths to feed, the bodies to clothe, and the increasing expenses when more children begin to survive and population pressure on land and on other fixed facilities begins to build up in their own family or community. The more economic and educational opportunities a society can provide, the more rapidly these factors can be expected to operate.

A recent report from India emphasizes "It is generally held that contraception, including irreversible methods, is more easily adopted if it can be convincingly shown that the children already born are going to survive... Response to family planning efforts will certainly depend, to a very great extent, upon how people view their children's prospects of surviving to adult age." Where larger families are considered an advantage because they



Breast milk contains the best nutrients for babies. (Photo WHO/P. Almasy)

*food, health
and family planning*



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Children in a Colombian nursery school receive a food supplement provided by the World Food Programme. Malnutrition reduces a child's learning capacity and may disturb his behaviour. (Photo WHO/P. Almasy)

In many countries the practice of family planning has grown as social and economic conditions have improved. (Photo WHO/E. Mandelmann) →

provide more wage-earners or farm workers, this relationship may not be immediately evident. Ultimately, however, smaller numbers of children are seen to be desirable by sufficient families to bring about a receptivity or even demand for family planning assistance and a falling fertility rate.

Emphasis on family planning to the exclusion or neglect of other programmes of preventive medicine and public health in a developing country is unwise and generally ineffective. Because a reduction of the high mortality among young children is an important prerequisite for the success of family planning, there is a strong argument for combining family planning efforts with those health measures that will reduce such mortality.

There are other reasons why maternal and child health, nutrition, and family planning programmes should be brought together. Attendance at family planning clinics and the acceptance of family planning workers is often improved by such a policy. Moreover, there can be a significant increase in efficiency and a saving of time if the same health centre staff can



serve the multiple purpose of promoting nutrition, health, and family planning in their contacts with women of child-bearing age, whether in the hospital, clinic, or home. In addition, maternal and child malnutrition can be reduced or avoided entirely by effective spacing of pregnancies combined with measures to control infections and assure adequate food supplies to vulnerable groups.

High birth rates, poor social and environmental conditions, low-birth-weight babies, and high infant mortality and morbidity are all familiar and related in most poor countries. All the available evidence suggests that a necessary prerequisite for lowering birth rates is a decrease in infant and early childhood mortality rates. Where many children die, birth rates will remain high, but a fall in fertility follows within a few years after a visible decline in mortality. Thus, in many countries, preventing deaths in infancy and childhood deserves the highest possible priority as part of any effort to reduce birth rates and prevent excessive population growth.

The survival of infants and young children is determined more by their nutri-

tional status than by any other single factor. Attempts to reduce mortality by extensive and expensive improvements in medical care alone, or even by broad-scale application of public health and sanitation measures, have had minimal results. Improved nutrition has been shown to be the most effective means for lowering deaths among infants and young children. Thus, the success of efforts to promote willingness to limit family size in underprivileged populations depends at least as much on improving nutrition of mothers and children as it does on making available sophisticated techniques for contraception. Moreover, success in efforts to promote family planning will have important favourable repercussions on the health of mothers and children in developing countries and on the adequacy of food supplies.

Package programmes

Gopalan and Nadamuni Naidu have recently written: "What is needed are composite 'package programmes' which include such mutually reinforcing components as nutrition, health education, sex

education, family planning, immunization, and improvement of sanitation. Social changes aimed at raising the age of marriage and providing increased opportunities for employment and education of women, and social-security measures which will guarantee minimum living wages for families will, in the long run, produce greater impact on nutrition and wider acceptance of family planning than ad-hoc crash-feeding programmes and family planning campaigns."

The advantages of integrating nutrition and family planning services into basic health services, especially those affecting maternal and child health, are well recognized by WHO. The success of the family planning programme of WHO depends not only on the activities of the WHO Programme on Human Reproduction, but also on those of the units concerned with disease prevention and control, and health education. There are many who feel that this kind of multifaceted approach to reducing fertility rates in developing countries is the most important challenge now confronting the World Health Organization and the world today. ■

family planning

IN THE SOCIO-CULTURAL CONTEXT

by Dr Lars Engstrom

Chief Medical Officer, Division of Family Health, WHO

The falling birth rates of the twenties and thirties in the developed parts of the world were the result of new socio-economic aspirations emerging within the industrialized society. Contraceptives, difficult to obtain, were sold secretly, their use promoted only by certain voluntary or radical political organizations in an officially restrictive climate. The small family norm was achieved mainly without any contraceptive means; instead, coitus interruptus (withdrawal) and the rhythm method (safe periods) were used, either alone or in combination. Clandestine abortions were often resorted to when preventive measures failed.

The increase in abortions, and the health consequences of termination of pregnancy under unhygienic conditions and by quacks, eventually aroused the concern of health professionals and authorities, and led to the promotion of contraception by information, education and the provision of services. In some countries more liberal abortion laws were adopted. Official support for family planning services in the developed countries gained momentum during the 1950s and 1960s at the same time as new contraceptives such as intra-uterine devices and hormonal drugs became available. Unlike condoms, these methods demanded trained health staff and special facilities. Meanwhile, rapid population growth, particularly in the poor countries, had become an issue of world-wide concern, which further promoted officially or semi-officially supported family planning and contraception services in developed and developing countries alike.

Methods not calling for any special means, such as coitus interruptus or the

rhythm method, are still widely practised, in spite of easy access to modern contraceptives, often because they are more acceptable, or officially recommended, for cultural or religious reasons. They are often used in alternation with condoms and diaphragms, or in combination with chemical contraceptives, to increase safety.

The practice of the rhythm method of contraception requires registration by the woman of her menstrual cycles, and preferably some understanding on the part of the couple of the physiology of ovulation. Furthermore, it is important, for the choice and application of a particular method in a given situation, that the partners be able to talk to each other openly about sexual matters. Socio-cultural barriers, sexual taboos and lack of elementary knowledge of human reproduction may make this intra-couple communication difficult, particularly in traditional societies.

Apart from intra-couple communication, the use of condoms, diaphragms or chemical spermicides not applied prior to intercourse requires interruption which, for some couples may, interfere with sexual satisfaction. In addition, such methods demand bedroom privacy, light, and facilities for hygiene, storing and disposal. Crowded and poor housing conditions in the rural world often inhibit the adequate use of mechanical and chemical contraceptives.

Condoms, diaphragms, spermicides

The condom is a contraceptive with a long history. Its association with prevention of venereal diseases and consequently with pros-

titution is expressed in the term "preservative" still in use in some places. This connotation has caused reluctance to accept the condom in certain societies. The introduction of other names for condoms, like "nirodh" (to stop, to control) in India, seems to have reduced this psychological hindrance.

To touch the genital organs is unclean or taboo in some cultures, which restricts the acceptance of methods requiring the insertion of spermicides, diaphragms, etc., in the vagina. Another not uncommon barrier that has to be overcome, through patient information and education of the individual user, is the fear, based on ignorance, that objects introduced into the vagina may disappear up into the body or into the bloodstream and cause injury.

Intra-uterine devices

It was expected, with some enthusiasm, that the intra-uterine device (IUD) would become the contraceptive method of choice in the developing world, since it would not require any additional initiative or activity on the part of the woman or the couple once inserted.

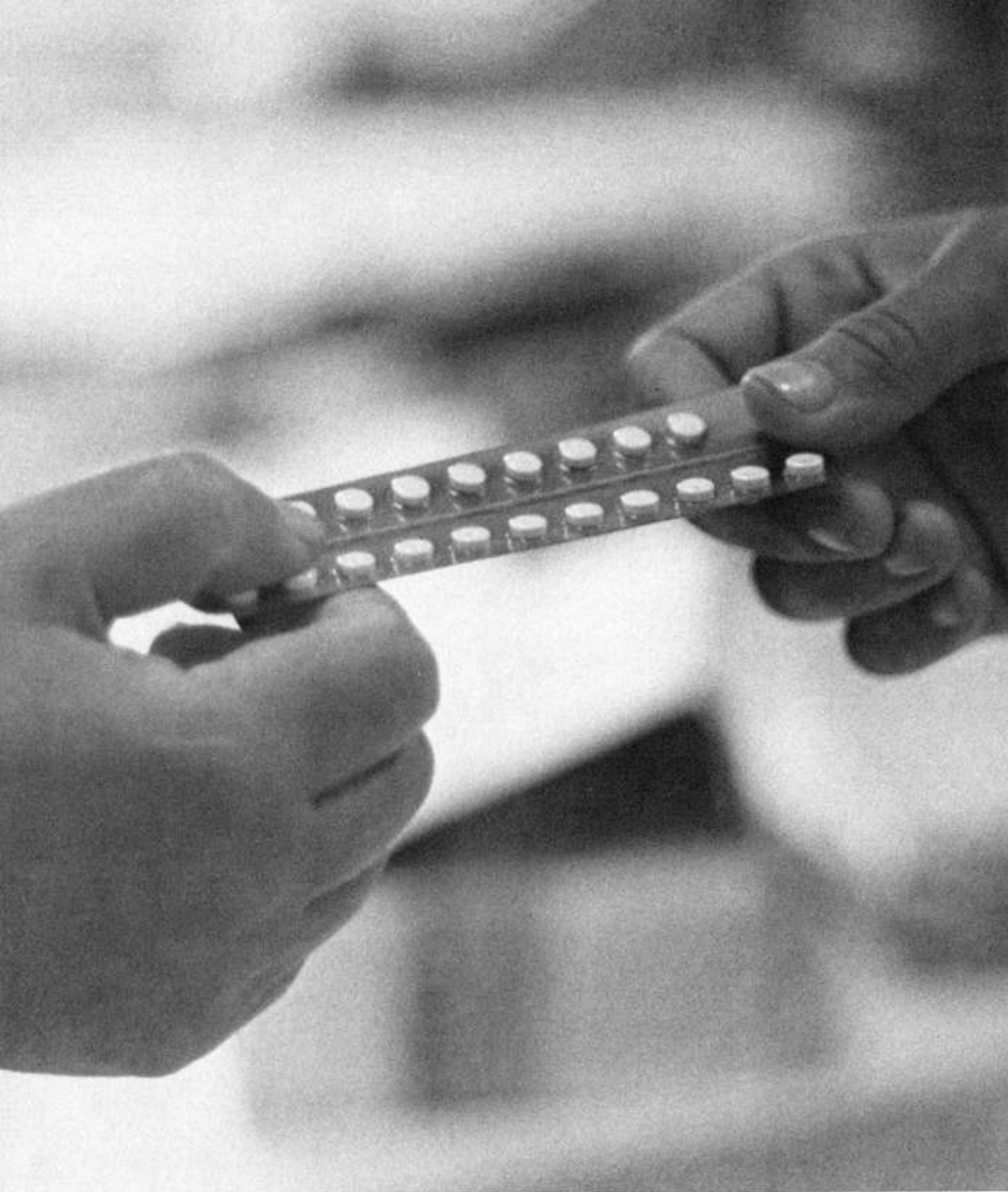
However, after an initial period of success, acceptance of the method declined, and many women wanted to have their IUDs removed. Apart from insufficient information and education on the method and its side-effects, and insufficient follow-up because of the scarcity of services and trained staff, increased reluctance or refusal to accept or continue to use an IUD often had its roots in psychological attitudes and sociocultural behaviour.



←
A health educator in Uganda explains the various contraceptive methods. Acceptance depends to a large extent on how services are offered to the public. (Photo WHO/E. Schwab)

Good family living and crowding don't go together. (Photo WHO)
↓





←
Contraceptive pills are highly effective provided they are taken regularly. (Photo WHO/M. Jacot)

The diaphragm, a method requiring constant motivation and regular supervision. (Photo WHO/E. Schwab) →

Side-effects associated with the IUD, such as prolonged menstrual bleeding or spotting between menstruation, led in certain cultures to the women being regarded as unfit for prayers and sexual intercourse, with resulting disturbances in family life. Ignorance about anatomy and physiology gave rise to all kinds of rumours concerning probable harmful effects and resulted in a variety of psychosomatic symptoms that had no connection with the IUD. The Japanese physician, Ota, who designed and tested various intrauterine devices, observed that a metal ring shaped like a wheel with spokes was most acceptable, possibly, according to him, because it bore a similarity to certain religious symbols.

Hormonal contraception

Contraceptives taken by mouth have a psychological advantage for some people in

that they dissociate the contraceptive action and sexual intercourse, and do not involve any physical or psychological interference with the genital organs. Such contraception, however, requires that the woman be accustomed to taking medicines regularly for long periods of time, which is not so common in the rural developing world as in modernized societies.

Some side-effects due to oral pills are also less acceptable in certain cultures for psychological, religious and traditional reasons, particularly if not counterbalanced by an awareness of the causal relationship between the hormonal compound and the side-effects. Irregular break-through bleedings may have the same psychological effect as bleeding complications connected with the IUD. On the other hand, the common side-effect of a reduction in the amount of menstrual bleeding,

which is sometimes hardly visible or may even be absent altogether, may also cause worry that the body is not being regularly "cleaned" as it should be, and that retained menstrual flow may weaken the health.

Other side-effects associated with hormonal contraception, such as nausea and weight-gain, which may appear particularly during the first months of pill-taking, may give the woman a diffuse sensation of being ill and can lead to discontinuation if she is not offered reassurance and support by the health services. At the same time it is also true that weight-gain is an appreciated side-effect in some societies.

Injections of hormonal contraceptives every three months are included in several family planning programmes. This method is usually well accepted, since injections of other drugs like antibiotics are known to have strong



curative effects. Nor is there any need to remember to take a hormone pill every day. However, the only injectible hormonal currently available for use on a wide scale often causes long-lasting periods of bleeding or amenorrhoea (disappearance of menses), phenomena usually not acceptable for psychological and cultural reasons. Amenorrhoea can also cause fear that a conception has occurred in spite of the contraceptive protection.

Sterilization

Male sterilization as a fertility-regulating method once the family is large enough has an obvious advantage in that it requires no further action by the couple. Acceptance of sterilization varies between cultures, to some extent depending on how deeply the unfounded fear of loss of potency after the

operation is rooted among the male population. This association between sterilization and castration, which has no physiological basis, is also reflected in the legislation of certain countries that have more liberal laws for female than for male sterilization, although the latter is a far simpler intervention.

Services

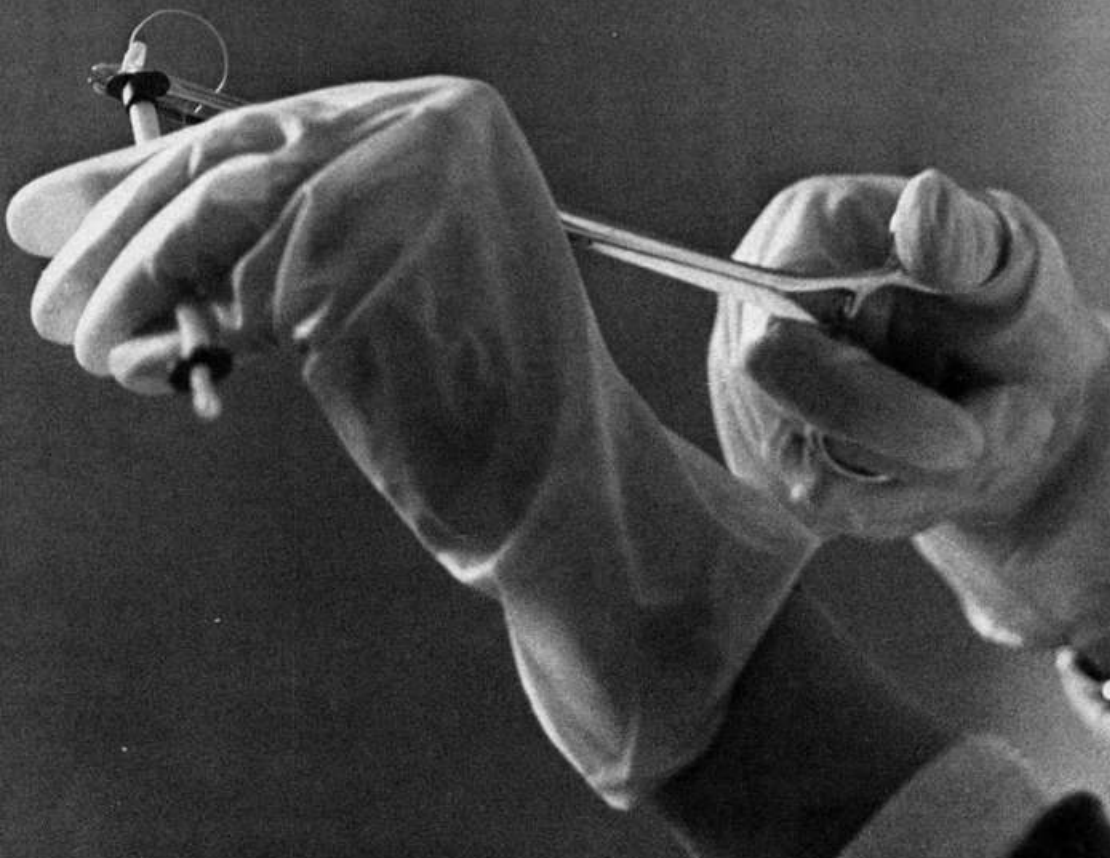
Acceptance and practice of fertility-regulating methods depend to a large extent on how services are offered to the public, since reproduction and sexual functions are usually sensitive matters, irrespective of sociocultural borderlines.

Clinics devoted exclusively to family planning services and home visits by single-purpose family planning workers can cause embarrassment in a traditional rural setting

where all the villagers know each other. In such situations, family planning and contraceptive services integrated with other health services are preferable, since they preserve the "anonymity" of the client.

It is also easier to talk about matters related to human sexuality with someone who is closer to one's own traditions, local language and social status than with someone at the top of the health hierarchy, like the doctor in charge of the clinic. The understanding by the health staff of the local traditions, beliefs and desires are therefore of the utmost importance in order to establish full confidence among the public and ensure better utilization and appreciation of the family planning services available.

Studies on knowledge, attitudes and practice suggest that more people want family planning than actually practise it. Psycho-



This poster bearing the word nirodh, meaning "stop" or "control", is used in the Indian Government's campaign to promote the use of the condom as part of their family planning programme.

←
The IUD, or intra-uterine device, being placed in an applicator for insertion. (Photo WHO/J. Mohr)

Vasectomy, a form of male sterilization, is a simple operation which after a time requires no further contraceptive action by the couple. (Photos WHO/E. Schwab) →

logical and behavioural factors associated with the various methods and with the delivery of services are important contributors to this difference between acceptance and practice. The result, particularly in societies with a strong motivation for limiting the family size, may be unwanted pregnancies that are interrupted in an unhygienic and hazardous way. Even in areas where the abortion laws are liberal and a termination of pregnancy can be granted on social grounds, and where the services for abortion care are adequate, the prevention of an unwanted pregnancy by contraception, and thus also the prevention of an abortion, is always to be preferred and promoted.

In some religions and cultures, condemnation of the use of contraceptives seems to be stronger than the psychological reaction or guilt feelings produced by abortion, though the official attitude towards abortion may also be extremely restrictive. As an unfortunate result, illegal abortion rates are often high in such societies.

Need for research

In many countries birth rates have fallen through voluntary family planning with prac-

tically no contraceptive means, and often in spite of the governments's pronatalistic policies. However, in today's world the aspirations of individual couples to control fertility would be better fulfilled if safe, effective, easily applicable and harmless contraceptives were available. This would also avoid the large numbers of legal and illegal abortions currently carried out all over the world. Intensive research on human reproduction and contraception should therefore be given strong support. Great things have been achieved in this field during the last few years, but many problems still remain unsolved. The research activities in reproductive biology sponsored by the World Health Organization are an important part of these efforts. (See page 28.)

However, if a contraceptive method is to be appreciated and adequately practised, it must also fit the cultural and behavioural environment into which it is introduced. One could say that it is essential that research into the development of modified or new contraceptives take into account what is acceptable or less acceptable to various cultures in terms of route of administration, side-effects, interference with sexual behaviour, provision of services, and so on.

Knowledge about the acceptability, adverse effects, and so on of currently available contraceptives, on which the promotion and organization of services in many countries are being based, has almost exclusively been gathered from studies in the highly developed socio-cultural context. This knowledge cannot be directly transferred to countries where the socio-cultural milieu is different and where people differ in physical size, diet, child-bearing patterns, work habits and genetic constitution. Studies on efficacy and side-effects, therefore, often have to be repeated in various populations. Sociological research is also necessary on behavioural patterns and on how these patterns are reflected in the acceptance and continued use of a particular method.

Behavioural science studies on the acceptability and practice of the various contraceptive methods are also of great importance in the design of information-education activities directed at the public, and it is also necessary to make administrators, and the health staff who are providing the services, aware of local preferences and dislikes. Such education components have hitherto often been overlooked in the development of family planning programmes. ■



research

IN FAMILY PLANNING

by Dr A. KESSLER

Chief Medical Officer, Human Reproduction Unit, WHO

and C. C. STANDLEY

Scientist, Human Reproduction Unit, WHO

Research in family planning has grown very rapidly over the past fifteen years. The need for research is understandable, given the at times unrealistic demands for quick results in an area that is relatively new to society and highly complex from the social, cultural and even biological viewpoint.

Birth control methods interfere with *normal* body processes. They are used potentially over long periods of time, and many methods require rapid and complete reversibility of action. Moreover, they are employed on a continuous basis by very large numbers of people, frequently with little medical supervision.

The obstacles and setbacks encountered in family planning programmes in a number of countries have led to questions that can only be answered through research:

- how does one influence people's attitudes to family planning?
- what kind of services will best meet local conditions and customs?
- how can one make available contraceptive methods that will satisfy the variety of personal preferences of different individuals and couples, in widely differing cultures?
- how will successful family planning

practice improve the health and welfare of the family?

Questions such as these require the insights and techniques of many disciplines—biology, psychology, sociology, demography, operations research on health services, and others. Much of the research has to be done in the large cities and rural areas of developing countries; in some instances—for example, the development of new contraceptive agents—the major effort has been conducted in developed countries, in both industrial and academic institutions.

International programme

Demands for rapid answers, for explanations of setbacks in programmes, for new technology, have made it essential to use as effectively as possible the relatively small number of scientists with experience in this field. WHO has therefore tried to increase national research capabilities relating to family planning, and has set up an international research programme in contraceptive development and service.

Although more than 25 million women are at present using "the pill", many discontinue each year and many more avoid starting to use it, out of fear of the imme-

diated and long-term effects on their health. Wide publicity has been given to potential hazards, such as blood-clotting, cancer, hypertension. Research is being conducted in each of these areas. In the case of blood-clotting, the studies suggest a slightly increased risk in predisposed subjects, but the evidence is still subject to controversy. In the case of cancer of the breast, long-term studies now in progress in two countries suggest, if anything, a decreased incidence of cancer in the pill-users. A small proportion of women using the pill do appear to show a rise in blood-pressure, which returns to normal when they stop taking it.

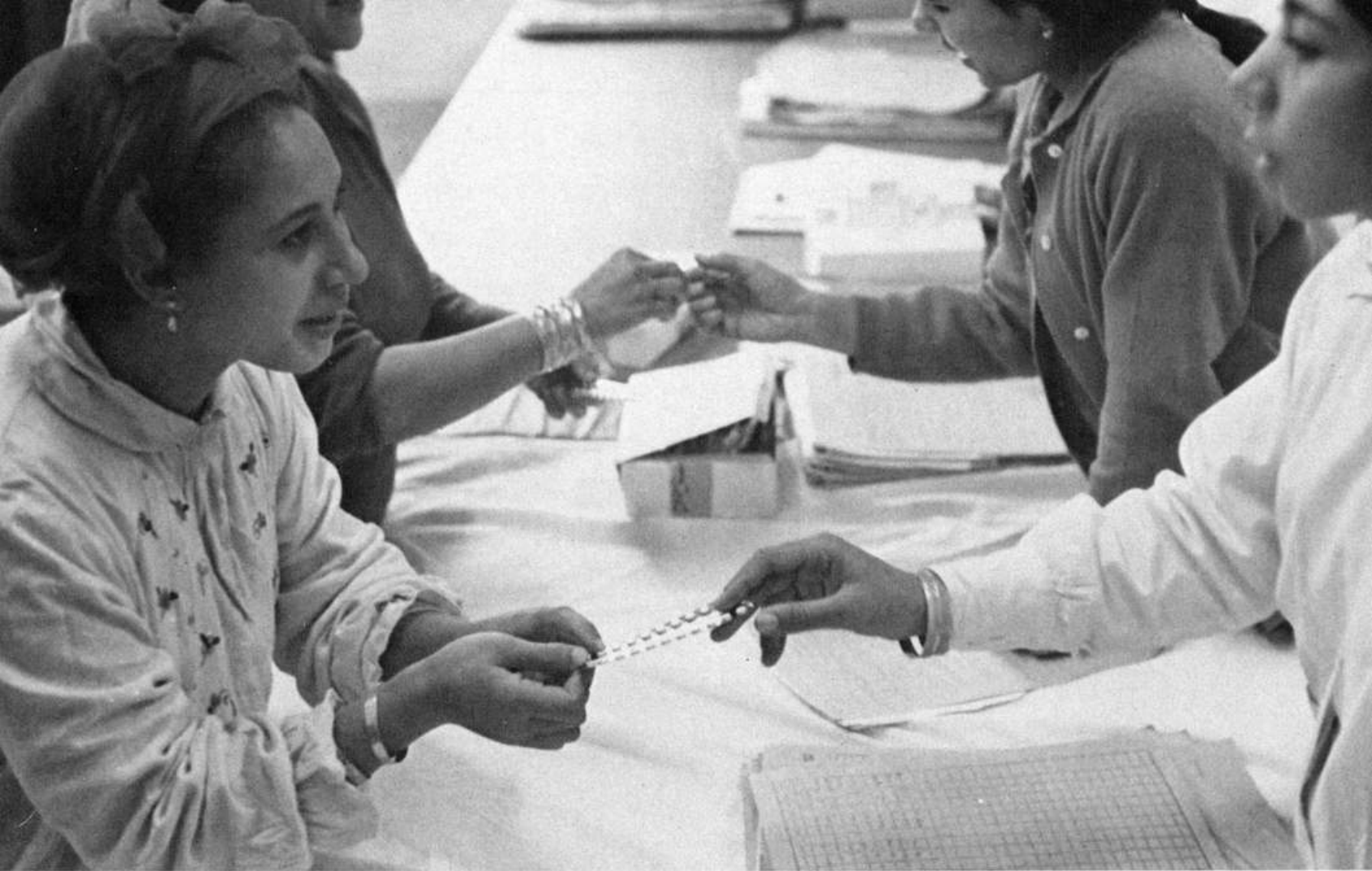
A persistent question about the pill is whether it is likely to have an effect on fertility later on. A few years ago wide publicity was given to a small study which suggested that women who had taken the pill might have children with chromosomal anomalies. The implications of this suggestion were so far-reaching that carefully designed studies, including some supported by WHO, were started. Data collected so far on much larger numbers of women tend to show that there is no increased risk for the pill-user of later having a child with chromosomal anomalies.



Map showing WHO Research and Training Centres and clinical centres engaged in research on new methods of fertility regulation.

Research is under way in several countries to determine how exactly age at pregnancy, spacing between pregnancies and the number of children affect the health of mothers and their families. (Photo WHO)





Studies on side-effects have generally been conducted in highly developed countries. One of the questions that has been worrying providers of family planning services is whether, in the presence of severe malnutrition or endemic disease, these same methods of fertility regulation will give rise to different or severer side-effects. For example, where schistosomiasis is frequent and impairs liver function, a legitimate question is whether hormonal contraceptives are contraindicated since the liver plays an important role in their metabolism. Similarly, where anaemia is widespread there is also concern about whether it may be aggravated by the increased bleeding frequently associated with the use of IUDs.

An even more fundamental question is whether the dosages of the ingredients of the pill, basically developed for women in one kind of country, are physiologically appropriate for women differing in body-size, diet, working habits and genetic constitution.

WHO has started research into these questions and is simultaneously helping

national family planning authorities not only to carry out studies but also to monitor the effects of fertility regulating methods.

New techniques

Despite recent advances in contraceptive technology, methods remain relatively crude and inconvenient, and are often associated with unacceptable side-effects. Every advance has resulted in family planning being introduced to additional groups in the population, while the requirements of other groups are not being met.

The choice of a contraceptive may be largely determined by circumstance: whether it is used by the man or the woman, whether immediately before or after the sex act, or dissociated from it entirely, whether it involves drugs, devices, or surgical interference, or whether its effect is temporary, permanent, or reversible. Social, cultural and moral considerations all play a part in influencing the choice of specific methods. A method such as the IUD, for example, which calls for a gynaecological examination, may be unacceptable in certain cultures. Cost may also be a determining factor, as well as ease of obtaining the contraceptive. It follows that there is need for a wide range of contraceptive methods. The quest for an "ideal contraceptive" is based on the mistaken and simplistic assumption that any single method would be universally acceptable.

WHO's research into the development of new contraceptives is being pursued through research centres in 21 countries (see page 29). Two examples will illustrate the kind of investigations in progress:

1. *Medicated intra-uterine devices.* Both the antifertility effect and side-effect of present IUDs relate to their composition, size and shape. The idea behind *medicated* IUDs is to use them as carriers for drugs which exert the antifertility effect. The smaller size of these "second-generation" IUDs makes insertion easier and reduces the frequency and severity of side-effects. New plastics being developed release drugs at a continuous rate and in such minute quantities that their action is restricted to

More than 25 million women, at a conservative estimate, now use the contraceptive pill. Many more would probably use it if they were not worried about possible immediate and long-term effects on their health. A question for research is whether the dosage of ingredients contained in the pill, calculated for women in Europe and North America, is appropriate for women of different body-size, diet, working habits and constitution. Left, Egyptian women in a family planning clinic. (Photo WHO/M. Jacot). Right, a poster in Malaysia. (Photo UNFPA/UNESCO/D. Roger). Below, a Tunisian woman who will be followed up as part of post-natal care. (Photo WHO/J. Mohr)

มึนคุมกำเนิด
ORAL PILL

เม็ดยา

เดือนพฤษภาคม
NOVEMBER

วันอาทิตย์	วันจันทร์	วันอังคาร	วันพุธ	วันพฤหัสบดี	วันศุกร์	วันเสาร์
SUN	MON	TUE	WED	THUR	FRI	SAT

มีวันที่เริ่มเป็นประจำเดือน
MENSTRUATION BEGINS ⇒ 1 2

3 4 5 6 7 8 9
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the lining of the womb. Many different compounds and ways of providing them are being studied. Another line of research is the investigation of drugs that could be incorporated in IUDs not for their anti-fertility effect but to counteract the most common side-effects, pain and expulsion. 2. Antifertility vaccines. The idea of a vaccine that would immunize against the formation of ova or sperm, or against pregnancy itself, has for a long time held much appeal. Although this approach has met with some success in animals, the vaccine preparations have not been pure enough for human use. Recent technical advances have, however, revived interest in the immunological approach, since they have made it possible to isolate physiological substances essential to various reproductive processes. The aim is the same as in other sorts of immunization, namely to block the action of these substances by stimulating the body to produce antibodies to them. At present, research is focused on antibodies to critical enzymes in sperm, to placental hormones involved in implantation, and to substances in the





In Denmark (left) and in the Republic of Korea (right) a doctor and a social worker gather information on women's experience with various contraceptive methods. WHO's role in research includes helping national health administrations to investigate the family planning needs of the community. The approach to information and education about family planning has to be adapted to the community and to the individual. (Photos WHO/E. Mandelmann and P. Almasy)

zona pellucida (outside envelope of the egg) that affect the penetration of sperm.

Antifertility vaccines are still an uncertainty and far from being ready for consumer use. Even when antibodies to the various substances can be successfully produced, the reversibility of the vaccines and their effects on other organs will have to be studied. Nevertheless, this programme of research is proceeding since, as compared for example with medicated IUDs that represent simply an extension of present methods, the novel approach offered by immunization has tremendous potential.

Providing family planning

Even when culturally acceptable methods are to hand that satisfy individual preferences, the problem still remains of

making them available. Different approaches are required for different populations. It cannot be assumed that a service pattern evolved in, for example, Europe, will be effective in Asia.

Lack of success in certain programmes has caused a number of assumptions to be queried. For example, information and education on contraception by IUDs and the pill have almost everywhere been directed solely to women. The possibility of obtaining a better response is being investigated in a WHO-sponsored study in Turkey, where educational activities are directed primarily to the husband, potentially the more important decision-maker.

An issue often raised about family planning care is the additional advantage to be gained by combining it with other health services such as maternity care, child

health and general medical services. Such questions are being studied in a large WHO-supported project in India. The study is based on the provision in different villages of combinations of family planning care and different types of health activities: maternity care alone, maternity and child care, child care alone. The two control groups of villages include one in which only family planning is provided, and one in which there is no "experimental" activity. The number of health personnel is the same in each of the four groups of study villages. Preliminary results appear to show an initially higher rate of acceptance in the "family planning only" villages, but this soon reaches a plateau and even begins to decline. In contrast, the villages where combined care is given, though they have a slower initial accep-



tance rate, maintain a steady rise which eventually overtakes the highest levels achieved in the "family planning only" villages.

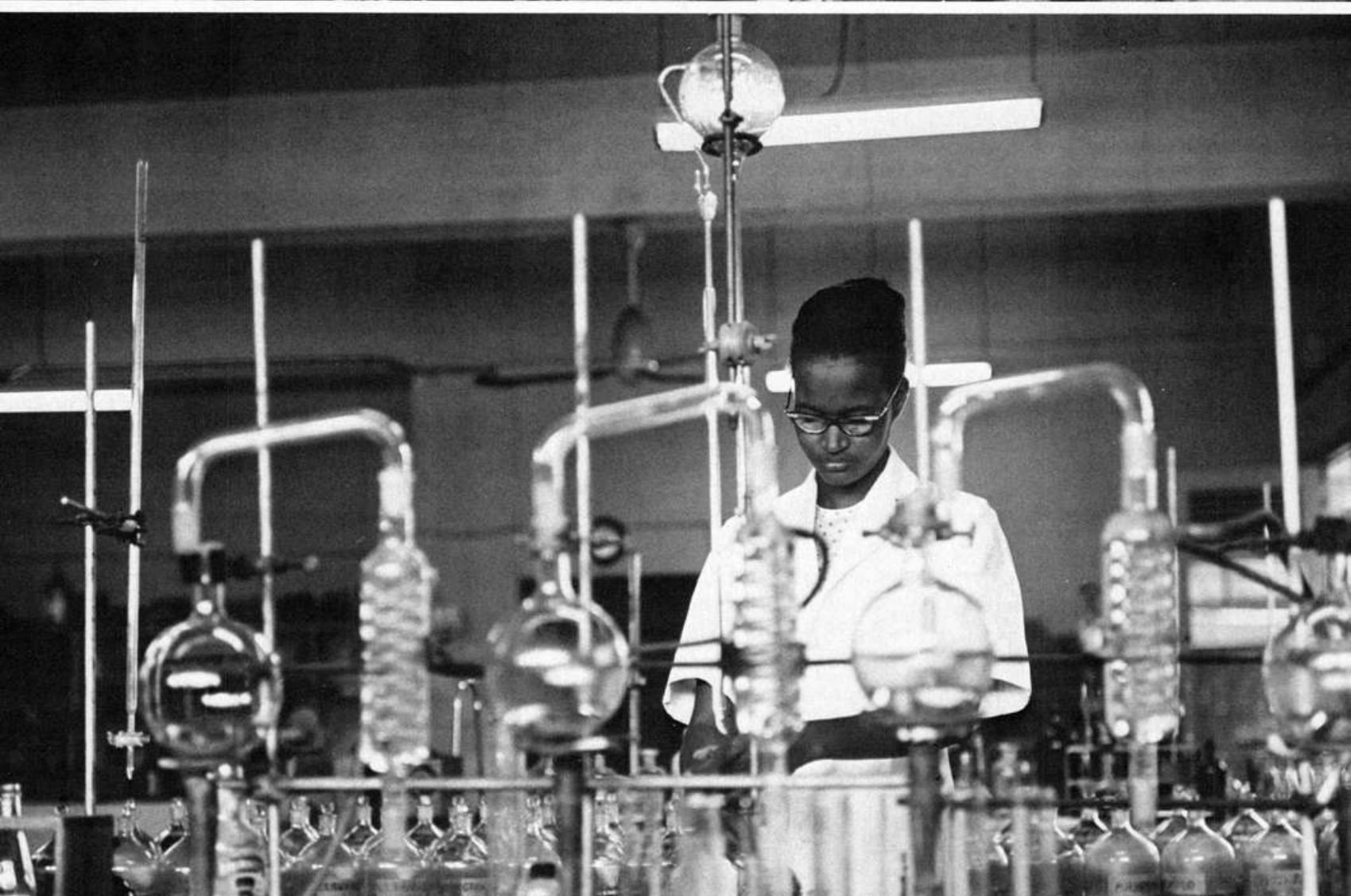
Motivation

A consistent finding in many countries is the importance of infant mortality in moulding attitudes towards family planning. Where many infants die, there is, understandably enough, little chance of family planning practices being adopted. A considerable reduction in death rates is being achieved in many parts of the world, and is contributing to the growth of population. This gives rise to two important research issues: at what level of infant mortality can one expect a community to begin to practice family planning, and do people base their decision to

practice family planning on *current* infant mortality or on the child loss experienced by their mothers?

Interest in these problems has led to the extension of a collaborative WHO study begun in India, Lebanon and Turkey to six other countries. Closely related questions being investigated include the health effects for mothers and children of age at childbearing, the number of children and the interval between pregnancies. It is frequently stated that the risks are increased at very early or late childbearing ages, in the larger family, and for closely-spaced pregnancies. Comparatively little data, however, especially from the developing countries, are available to substantiate these statements, though they form part of the fundamental rationale for family planning.

It has also been argued that family planning programmes can proceed, on a common-sense basis, without elaborate research. Although any approach may meet with success in its initial stages, since it can cater to segments of the community ready and eager for family planning, a programme not tailored to the requirements of the community cannot succeed. Decisions on the approaches to be adopted require at the very least information derived from sensible studies and small experiments. Although such studies cannot dictate policy in any absolute sense, they will provide guidelines, eliminate options and indicate ranges of feasibility. It may be significant that in the successful family planning programme there has been a regular feedback from the very beginning between research and the programme. ■



WHO's research programme is oriented to improving reproductive health and facilitating family planning care. The broad range of problems require for their solution the skills of scientists of different disciplines working in the settings of the community, the hospital, the laboratory.

The research team in the community (top left): this team, which includes doctors, nurses, social workers and statisticians, is collecting information in a poor part of Bombay on women's views of family planning, on difficulties they may have encountered in using different contraceptives, on the repercussions on their children's health of their many pregnancies. Questions for further investigation are thus identified, and guidance provided for improving care.

Clinical research (top right): certain problems can only be studied in a clinic or hospital setting, such as the metabolic effects of injectible contraceptives, or the efficacy of new treatments for sterility. Here, specialized examinations and tests can be carried out. All research projects involving human subjects are guided by the provisions of the Helsinki Declaration to ensure safety and informed consent.

The biochemist's contribution (bottom left): reproductive processes are regulated by specific hormones. Their action and levels vary during the menstrual cycle, in pregnancy and certain diseases. Methods for the detection of small amounts of the hormones in blood and urine have been developed during the past decade. These determinations by the biochemist have greatly contributed to understanding reproductive health and disease.

Animals (bottom right): as in other areas of medical research, animals serving as models for man have contributed considerably to knowledge of normal human reproductive process such as spermatogenesis and pregnancy. Diseases occurring naturally in animals have shed light on commonly occurring conditions in man such as fetal distress.





ONE WORLD FOR ALL A PHOTO COMPETITION

For "World Population Year 1974", the Cologne PHOTOKINA, an international exhibition of photography and cinematography, announces a photo competition on the theme "One World for All".

The competition is being supported by the United Nations, the World Assembly of Youth (WAY), and the International Federation of Photographic Art (FIAP). It is being organized by the Cologne PHOTOKINA in conjunction with the German UNESCO Commission and a German Youth Organization in Nordrhein-Westfalen.

The competition is intended to be a kind of visual stock-taking of how people live in various countries. In particular, it is intended to reflect social, political, technological, economic, cultural and health conditions.

The competition is therefore concerned with man in conflict or in harmony with his surroundings.

Situations, development processes, behaviour patterns, etc., may be depicted either in single photographs or in series of photographs. A situation can often be brought into sharper focus by contrasting opposites, as for example:

- food — hunger
- fine clothes — rags
- domesticity — homelessness
- health — disease
- work — unemployment
- industriousness — laziness
- youth — age
- riches — poverty

Conditions

When submitting their entries, participants must certify that:

- a) the entries are their work and they possess all rights to them;

- b) they agree to lend negatives, free of charge and for non-commercial purposes, for the production of enlargements and press photographs and for possible inclusion in the PHOTOKINA catalogue. Photographs and transparencies which are not selected will be returned after judging. All entries will be carefully handled, but no responsibility can be accepted in case of damage or loss. Photographs exhibited at Photokina may, with the consent of the photographer, be retained for its permanent collection.

The copyright will remain with the photographer.

Closing date and address

Entries must be received by the PHOTOKINA Office, D-5 Köln 21, Postfach 210760, not later than 2 April 1974.

Opening date of PHOTOKINA: 27 September 1974. ■



These three photos are examples illustrative of the theme of the competition. Left, a Japanese grandfather listens to his grandson practising music—a contrast of youth and age. Above, this study of disease and misery is in direct opposition to the photo right, a healthy, happy child. (Photos WHO|E. Schwab and WHO)



AROUND THE WORLD

Health facts about Europe

Dr Leo A. Kaprio, WHO Regional Director for Europe, recently gave an account of European health and pointed out that the most spectacular decline in mortality had occurred in the younger age groups. Over the last ten years, there has been a decline from 30 to about 20 first-year deaths per 1,000 live births (median of infant mortality). Five countries in Europe have achieved an infant mortality of less than 13 per 1,000.

Causes of death have also changed. Deaths from infectious and parasitic diseases continue to decline, while the proportion of deaths due to degenerative diseases, accidents, violence, and suicide continues to increase. At present, cardiovascular diseases account for more than half of the total number of deaths in about 10 European Member States, and in 10 others for more than 40 per cent. Malignant neoplasms (cancer) cause about 20 per cent of all deaths, with annual death rates ranging from about 100 to 250 per 100,000 population.

Information on morbidity is less complete than on mortality. Some of the notifiable acute communicable diseases have disappeared and others are disappearing from the European scene. Nevertheless, in some countries the number of annual reported cases of typhoid fever reaches several thousand and of diphtheria several hundred. There is no apparent change in morbidity from infectious diseases caused by viruses (upper respiratory infections, influenza, hepatitis).

While the diseases associated with infectious agents still remain one of the main problems, there has been a definite shift in the importance of pathological

conditions determined by the combination of genetic, environmental and behavioural factors. In children and adolescents the most important health problems are congenital disorders, accidental injuries, malignant neoplasms, and mental and social maladjustment, often manifested later as alcoholism, drug dependence and suicide. In older people the most important health problems are chronic degenerative diseases, including mental diseases.

In the general morbidity picture there are some pandemics that could be prevented, at least theoretically. For example, traffic accidents cause close to 100,000 deaths and perhaps 3 million injured per year in central and western Europe.

Again, lung cancer is a growing epidemic and continuous increases can be expected as long as more women and younger children start to smoke. Alcoholism is not always reported as the official cause of death, but together with drug misuse causes more and more problems in many countries.

Dr Kaprio concluded that if rigorously logical health promotion campaigns were applied in Europe, it would perhaps be appropriate to destroy cigarettes, strong alcohol and even cars instead of fighting flies and mosquitos. Such ideas appeared utopian for the moment, and in the meantime the new managerial skills available had to be used to provide enough medical care and rehabilitation for the large number of casualties caused by the present way of living.

Stress in Stockholm

Stockholm is to become an international centre for the study of stress, one

of the twentieth century newest health concerns.

The Laboratory for Clinical Stress Research at the Karolinska Institute has been designated by WHO, with the agreement of the Swedish Government, as an international research and training centre on psychosocial factors and health.

Dr Thomas A. Lambo, Deputy Director-General of WHO, last month officially inaugurated the centre, whose functions are to carry out research on health effects of psychosocial factors in order to provide a more comprehensive basis for health action that may improve the quality of life. The centre will also train scientists from various countries for this purpose, facilitate transcultural studies and develop procedures for disseminating information on public health measures.

Health staff in Africa

In ten years, between 1963 and 1972, the number of medical schools was increased from 17 to 31 in African countries south of the Sahara. Yet in spite of this noteworthy progress, these countries had, as of 31 December 1971, only one doctor for 17,500 inhabitants, one midwife for 17,000, one laboratory technician for 62,000, and one sanitary engineer for 2,370,000. Stark though they may be, these figures fail to reflect the differences between town and country. In fact, most doctors stay put in the urban areas, and the rural areas suffer from a perennial lack of health staff at all levels.

(From *Health Progress in Africa, 1968-1973*, published by the WHO Regional Office for Africa.) ■

Some WHO Publications on Family Planning

Biology of Human Reproduction

Biological Components of Human Reproduction: Studies of their Variations in Population Groups, 1969, TRS No. 435

Endocrine Regulation of Human Gestation, 1971, TRS No. 471

Reproductive Function in the Human Male, 1973, TRS No. 520

Fertility Regulation

Biology of Fertility Control by Periodic Abstinence, 1967, TRS No. 360

Methods of Fertility Regulation: Advances in Research and Clinical Experience, 1971, TRS No. 473

Advances in Methods of Fertility Regulation, 1973, TRS No. 527

Public Health Aspects

Nutrition in Pregnancy and Lactation, 1965, TRS No. 302

Health Aspects of Family Planning, 1970, TRS No. 442

Spontaneous and Induced Abortion, 1970, TRS No. 461

Family Planning in Health Services, 1971, TRS No. 476

Human Development and Public Health, 1972, TRS No. 485

Education and Training

Health Education in Health Aspects of Family Planning, 1971, TRS No. 483

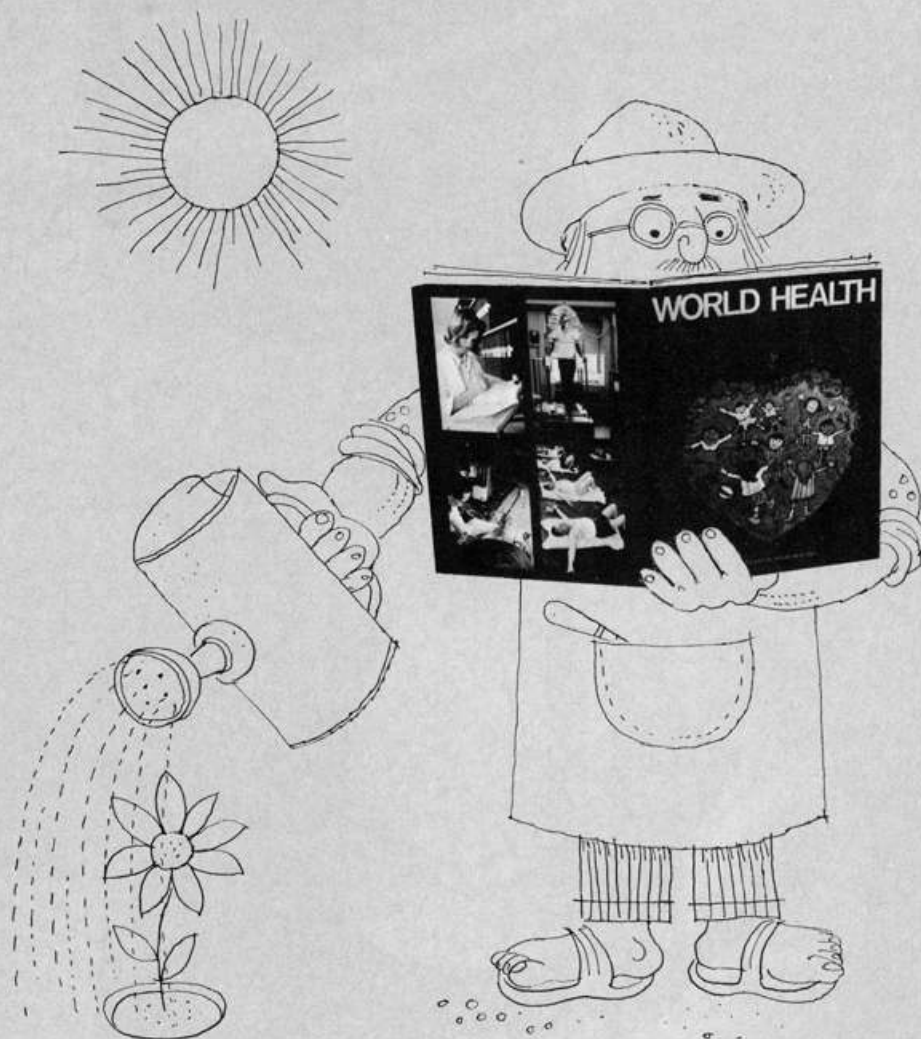
Education and Training for Family Planning in Health Services, 1972, TRS No. 508

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