FINAL REPORT

SUBREGIONAL SEMINAR ON NEW DEVELOPMENTS IN FERTILITY REGULATIONS

Suva, Fiji
3-7 December 1979

Manila, Philippines
April 1980
SUB-REGIONAL SEMINAR ON
NEW DEVELOPMENT IN FERTILITY REGULATION

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# APPENDICES

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FAMILY PLANNING PROGRAMMES IN THE SOUTH PACIFIC: SOME EXAMPLES OF PROBLEMS, NEEDS AND EXPERIENCES

by

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1. Family health programmes in the Pacific

In the Pacific, fertility is still high and may even be increasing in some of the Melanesian countries such as the Solomon Islands. Family planning programmes have been introduced in the region since the sixties and have had an impact on family size in the Cook Islands, Fiji and Tonga. To a certain extent, family size has declined in Kiribati, Samoa and other Polynesian countries. However, crude birth rates still range from a low of about 30 to a high of 40 or more per thousand, while crude death rates are estimated to hover around 8 per thousand. Consequently, high rates of natural increase can lead to accelerated growth of populations in the area if emigration cannot serve as a means of relieving population pressure and if family planning delivery systems cannot be strengthened. With the limited resource base obtaining in these Pacific islands, serious development problems can ensue in the next two decades.

As a consequence of such high birth rates, populations are "young" with four to five out of every ten persons belonging to the age groups below 15 years. About one in five are women in the childbearing age. Cognizant of these demographic parameters and their relationship to maternal and child health, various countries in the Region -- Cook Islands, Fiji, Kiribati, New Hebrides, Papua New Guinea, Samoa, Solomon Islands, Tonga and Tuvalu -- have launched programmes of family health with the assistance of the United Nations Fund for Population Activities (UNFPA).

The major problems with the family health programmes in these countries are the lack of reliable statistics on which to base the planning and evaluation of the programmes and the shortage of trained staff at the supervisory level to manage the programmes.

This working paper for the seminar will attempt to provide a conceptual framework and examples for discussion; identify those problems and needs which could be resolved through appropriate local and global research; distinguish between those problems and needs resolvable by strengthening of available programmes and activities from those problems and needs more appropriately met by research; and stimulate researchers (clinical-epidemiological, social science and health services) to respond to the local problems and needs of the island communities by undertaking appropriate studies.

*Background paper used in the seminar.
2. Problems and issues

2.1 Clinical aspects of selected contraceptive methods

From the perspective of the clinician or the family planning service provider in the Pacific Islands, the choice of specific contraceptive methods cannot be separated from the problems of limited availability of health services and staff, difficulties in communications and travel, continuity of supplies or availability of supervision and referral services. In addition, the prevalence of such health problems as diabetes, hypertension or sexually transmitted diseases may affect the provider’s recommendations for one or another method. Finally, a wide range of cultural factors and perceptions will affect the choice of method.

In many cultures, the motivation for initiating contraception is high in the post-partum period. In most of the Pacific Islands, the majority of deliveries either take place in hospital or are professionally attended.

Whether such motivation exists throughout the Pacific Islands is not fully known. Although full breast feeding tends to inhibit ovulation and promote wider spacing between pregnancies, as a contraceptive approach it has a high failure rate, with as many as 10-12% of women becoming pregnant while lactating before the onset of the first post-partum menstrual bleeding period. In the post-partum period, of the non-coitally related (IUD, oral contraceptives and injectables) and non-permanent methods, each has its problems, either known or unresolved, and its advantages. Among the more important advantages of starting hormonal contraceptives or an IUD in the post-partum period is that many of the clinical side-effects, often the cause of discontinuation in the first few months, either are less noticeable or are better tolerated during this time. Furthermore, contact with potential providers of family planning services is greater during the post-partum period than at any other time. However, the combined oral hormonal contraceptives have certain disadvantages during the post-partum period. They cause a decrease in the quantity of available breast milk and its content of fats and proteins. On the other hand, the progestagen-only preparations either have no effect on breast milk or, as in the case of DMPA, are associated with an increased volume of available breast milk. The injectable long-acting progestogens have a number of other advantages which include the fact that they are: independent of coitus, free of the need for daily administration, given every 2 to 3 months, and are highly effective. Injections are often positively perceived in many cultures.

The injectable hormones do not appear to affect glucose, lipid or protein metabolism, nor do they adversely affect the woman's nutritional status. Where available, the injectables generally are at least as popular as oral contraceptives among both current and new acceptors. However, as with other methods, continuation rates are poor. In Tonga, for example, although over 30% of new family planning acceptors choose injectables, after one year only 50% continue, and after 2 years only 15% are continuers. It is not clear, whether the poor showing of the injectables reflects the occurrence of specific side-effects, discontinuity of supplies, adverse publicity or the loss of the sense of novelty.

Limitations of both budget and clinically experienced staff may not permit individualization of the oral hormonal contraceptive to the particular woman. Breakthrough bleeding in the first part of the cycle may be countered
by an oral contraceptive with a higher estrogen level, whereas other symptoms such as depression, fatiguability and breast tenderness may be managed by use of an oral contraceptive with less progestational potency. Whether such individualization can be developed on the basis of check lists remains to be seen. Irregularity of supplies, purchasing policies limiting the numbers of oral contraceptives preparations of changes in the preparations provided may contribute to discontinuation of use of oral contraceptives. The high incidence of diabetes among some Pacific Islands populations may constitute a further disadvantage of oral contraceptive use.

The popularity of the IUD varies widely in the Pacific Islands. However, when any of the more widely used devices are inserted in the post-partum period, high rates of spontaneous expulsion are noted, along with high pregnancy rates. Furthermore in the presence of high rates of sexually transmitted disease, as has been documented in some Pacific Island areas, there is an even greater risk of pelvic inflammatory disease among the IUD users. In such women there would be a very high risk of infertility. Such a pattern among younger women and adolescents would constitute not just a medical problem, but a social tragedy in cultures that place a high value on a woman's fertility.

Cited below are examples of other issues or questions related to the clinical aspects of family planning programmes in the Pacific Islands related to the specific fertility regulating methods.

(1) Is discontinuation of a specific method due to:

- side effects such as bleeding which is related the method (IUD, injectable or oral contraceptives) or resulting from failure to take oral contraceptives daily;
- symptoms that are attributable to the method or that are not related to, but blamed on the method; or

(2) Is discontinuation due to personal or non-medical reasons such as:

- a desire for pregnancy, or the fact that there is no further need; or
- is discontinuation described as being personal, but actually reflects dissatisfaction with the side-effects of the method?
- How often does the unavailability of supplies or change in available preparations result in discontinuations?

(3) Do medical contraindications constitute an important cause of discontinuation, e.g.:

- blood pressure changes (OC),
- infection (IUD)
- liver disease (OC), or
- chemical diabetes (OC)

(4) What other factors affect discontinuation, i.e.:
(a) Women's characteristics
- age, parity
- body weight
- ethnic group
- menstrual pattern

(b) Contraceptive characteristics
- hormones: dose, ratio and type of estrogen/progestogen
- frequency and mode of use

(c) Information, misinformation, or lack of information provided to the women with respect to long-term safety (both client and provider perceptions) and the perceived and actual effectiveness and incidence of side-effects.

(d) Health/family planning service
- periodic unavailability of method or support and care for problems encountered
- the site where family planning care is provided
- characteristics of the family planning provider

(5) Possible areas for local research related to specific family planning methods include:
- Discontinuation rates and reasons for discontinuation
  - by method
  - by certain client characteristics that can assist in improving care
- Method selection and reasons (given free choice)
  - by clinic
  - by provider
- Acceptability, safety and continuation
  - by level and characteristic of staff (including TBA's)
  - by characteristics of the woman
  - by extent of male involvement in decision making

2.2 Socio-cultural context of family planning and contraceptive use

Today, there are evidences of changes in the lifestyle of the Pacific populations but traditional customs are strongly upheld in relation to the selection of marriage partners and the bearing and rearing of children. The fulfillment of familial and clan obligations to the living and the dead reflect both traditional customary practices and those introduced by government and the churches.

In order for family planning programmes to be effective in the rural setting, existing values, norms, traditions and ideologies must
be taken into account. In many villages past legacies of depopulation and infant mortality may lead to an unwillingness on the part of the community or particular family or clan group to endorse family planning programmes if these are put forward in isolation from other programmes.

The integration of family planning services into overall health care in rural areas, the recognition of needs in food production, housing, home management, community improvement, etc., may make these programmes more acceptable to the community as a whole. There is less emphasis then on family planning as an end in itself and more on the totality of family and community needs.

The Balinese case can be cited here for possible adaptation. Since 1974, the Indonesian family planning board (BKKBN) has assigned the local level promotion and monitoring of the family planning programme to the banjars, the basic unit of the Balinese village community (Meier, 1979). The banjars are hamlets and sub-villages made up of between a dozen and several hundred nuclear families. Five to 10 banjars are joined into a village depending on its size with the average village containing around 4,000 people.

Cooperative action for both the economic survival of the residents and the preservation of the physical and ceremonial aspects of Balinese Hinduism originate in the banjars. Each banjar is headed by an elder, a Kelian who is elected every five years. Meetings of the banjar are held monthly and attendance is compulsory for all heads of households. Fines are imposed for unexcused failure to attend the meeting and even for late arrival. At the meeting, the banjar members may discuss the building of a dam, the introduction of a new strain of rice, programmes promoted by the provincial government, or the manpower requirements for the next festival.

Five years ago, meetings began to deal with the family planning practices of the banjar members. The Kelian asks each banjar member what he and his wife are doing about family planning. The contraceptive-use status of each household is then recorded in the banjar registration book along with information about new births, miscarriages and the number of children in the family. Eventually, these entries are converted into monthly and quarterly statistics on methods chosen, numbers of pregnancies and births, and numbers of dropouts and non-acceptors. In turn, this information is fed into the islandwide and nationwide programme statistics and evaluation schemes.

Indonesia's use of the banjars to promote and monitor the government-sponsored family planning services, on the local level, offers an instructive lesson to all those concerned with finding ways of solving problems of excessive population growth. Bali's experience shows that it is possible to work out a viable balance between cherished traditions and inevitable social and economic change. The banjars have demonstrated that innovative programmes like family planning can be built into existing patterns in Balinese society.

It is apparent that social aspects of family planning include an understanding of the relationships in the community. The attitudes of women in the rural areas are not always known and understood. To
illustrate, the National Development Plan of the Solomon Islands (1975) stated:

"Government and Mission contacts have been almost exclusively with the men, who normally represent the family in contacts with the outside world. Comparatively, little attention has been given in extension or adult education programmes to the need to communicate with the women. This has occurred partly because extension services tend to think of the village as the basic social unit; in village meetings women are inhibited from speaking whereas in family or clan gatherings their real influence is apparent; and partly because extension workers are virtually all men, who again are inhibited from communicating directly with groups of women."

To promote discussion between husbands and wives, discussion groups and leadership training for married couples in villages in the Solomon Islands have been emphasized in the Family Life programme under the Catholic Church Health and Welfare Service. During such discussions, other areas of concern are brought forward for possible solutions.

In rural communities in Papua New Guinea, family and social activities are clearly differentiated as being the concern of men and women and are often sub-divided by age and membership in clan and family sub-groups. At meetings men and women usually sit separately and women may be unable to present their views or ask questions. Of course, this does not denote that women do not wield an influence on decisions affecting family and community life. It merely signifies that problems, questions, misunderstandings, etc., cannot be clarified in larger meetings and these meetings may serve symbolic, rather than practical purposes. There may be constraints even in separate groups of men or women. Relationships between members of the same family or clan may require special respect or avoidance and often one may not speak in front of another or may only speak after a senior person has spoken (see O'Collins, 1979).

For family planning discussions to be effective it becomes essential therefore, that there be sufficient time for all the different natural groupings to meet with health or community workers. Extension workers may need to spend a much longer time in a village to allow for a larger meeting where a film or talk on nutrition, family planning, or village technology is followed by hours of discussion in smaller group settings. Many discussions may well continue into the night thereby requiring overnight stays for extension workers.

2.2.1 Problems relating to social aspects of family planning

(a) It is clear that ignorance, difficulties in understanding the advice given by health workers, problems of follow-up, and overall embarrassment are inhibiting factors in the spread of knowledge and practice of family planning.
(b) Inappropriateness of information, education and communication (IEC) materials used in family health programmes. Tolerance of frankness in discussion or pictorial representation of the human body varies in different societies. Posters, films and other educational aids which may be appropriate in an urban setting with a highly educated audience may prove to be unsuitable for rural audiences. Messages on radio and in newspapers or posters acceptable to younger, more educated groups may annoy or offend those who have the power of veto.

(c) Family attitudes of the wider family or clan members who also need to be convinced of the benefits of this decision may affect the decision to limit or space children. In areas where younger people are eager to obtain information and to become acceptors of family planning services, approval by the older community members may still be necessary.

Health service delivery system

Organization: Health ministries are usually headed by a Minister who is responsible for health policy formulation. The day-to-day management of the Ministry is the responsibility of a Director or Permanent Secretary of Health. Administratively, the South Pacific countries are often divided into districts with the larger ones having a district hospital. At the central or headquarters level, there are usually four or five divisions.

With the exception of Fiji, the public sector provides most of the health services. Administrations are highly centralised in the major national centres. The hospital system consists of a large national hospital with smaller district hospitals. Some health centres may be equipped with some in-patient beds. The health system at the periphery consists of health centres and nursing stations. A number of countries are developing a village aide type of worker similar to the aid-post orderly of Papua New Guinea.

In many of the countries, public health services are provided through a network of centres staffed with public health nurses. These services include maternal and child health, nutrition, immunization, and communicable disease control.

Manpower: Nurses comprise the largest category of health personnel representing about half of the total available personnel. The second largest category is made up of physicians who are usually found in hospitals with a few assigned to health centres. The health inspectors compose the third largest category.

Overall ratios of health personnel to population are meaningless since at least half of the doctors and nurses are located in the central hospital. Outlying areas have very limited or no access to a health professional.

2.2.2 Problems of family planning delivery

(a) In any integrated health system, the same number of health workers have extra duties and responsibilities thereby implying that family planning must compete in time and interest with many other health activities including more urgent patient demands.
(b) Lack of manpower for supervision and training - improved supervision may compensate for lack of follow-up.

(c) Health personnel who have attended family planning training courses have never provided the service either because they have not obtained supplies or have not been able to complete training under supervision.

(d) Failure on the part of more senior health workers to support or encourage village or community level health workers to provide family planning services.

(e) Relationships between other levels of health workers and extension officers may limit effectiveness of service delivery.

(f) Innovative programmes developed in one part of the country are not publicized in other areas and may be unknown outside the limits of the particular section responsible for the health or welfare service.

(g) Inadequate of irregular supplies lead to acute shortages or to shifts in types of family planning methods prescribed.

(h) Poor or no IEC efforts at village level - although health workers are supposed to inform and motivate clients to practice family planning, many do not do so for a variety of reasons: apathy, lack of initiative, fear of legal liability, no training, conservatism.

(i) Maldistribution of health personnel in the country rather than a real shortage in terms of numbers.

Clientele

Family planning coverage of the eligible population is varied, ranging from a low of about 10 per cent to a high of some 25-30 per cent. In those countries where acceptance and current use is on the high side, contraceptive prevalence rates seem to have plateaued or are even declining. The average acceptor tends to be older and have a higher number of surviving children than the non-acceptor, earn some cash income and be more interested in spacing births rather than limiting them.

Family planning use is predominantly perceived to be a responsibility of the woman. More emphasis is given to the need for family planning where there are high risk factors. These include: high parity, previous obstetric difficulties, chronic illness of the mother, malnutrition in existing children, poor social environment, and large family size. In one of the countries, adolescent pregnancies are on the rise which may require appropriate sex education in the schools as well as access to contraceptives.

2.2.3 Problems of demand for contraception

(a) Traditional desire for a large family for prestige value and for supplying labour in the home and on the farm.
(b) Ignorance of the fact that contraceptives are available.

(c) Reluctance to speak about sexual matters even to members of the same sex and to undergo a pelvic examination.

(d) Fear of side-effects or fear of a foreign body inside a person.

(e) Lack of confidence in the health worker.

(f) Distance of residence to clinic where family planning services are available; also the availability of services only at special times making it obvious that attendance at the clinic is for contraceptive reasons.

(g) Requirement in some countries of a prescription and/or written consent of husband for any method of choice.

(h) Inadequate instructions given concerning the use of certain methods resulting in incorrect use and the suspicion that the method is unreliable.

(i) Lack of contact between husbands and the MCH staff. Therefore, husbands do not learn about the benefits of family planning and consequently, are opposed to it.

3. Research Implications

3.1 Research already conducted on the social aspects of family planning reveals that many current programmes do not take into account variations in community attitudes, beliefs or preferences. Too often traditional customs and life styles are ignored. These findings would argue for research to answer the following questions:

What effect has population growth (or decline) and rapid social change had on the attitudes and feelings of villagers concerning the number of children they, their clan, or their community should have at this particular point in time?

With increasing modernization, how far would these villagers hold to the attitudes and beliefs of the past?

For examples, the demographic survey undertaken in the Kainantu area, Papua New Guinea, revealed among other findings that:

... the ideal size recommended for various types of families also indicates that, by and large, the size is still influenced by the traditional values. For example, the size recommended for "own clan" and "Big Man" is higher than the size for other types of families which probably reflects the fact that the size of a clan is the primary determinant of life chances of a clan in the traditional inter-clan relationships and the "Big Man" is expected to have a larger family because of his traditional role expectations.
... the analysis of ideal size also shows that the regulation of family size is perceived to be a more immediate problem for an urban family than for other types of families.

... among never-users (i.e., those who had not used any method of contraception) about two-fifths of the respondents stated that if the (modern) contraceptives were easily accessible they would use them.

... the use of contraceptives is predominantly perceived as a responsibility of women.

... the ever-users included a fairly large number of relatively young women who were using contraceptives to provide adequate spacing between children.

... the users have slightly higher numbers of surviving children than the never-users.

... the place of work of the husband appears to be one of the more important correlates of ever-use of contraceptives.

... a higher proportion of ever-users received some cash income from gardens than the never-users.

The survey also revealed that despite limited availability of trained personnel, the Kainantu Family Planning Programme was quite successful in achieving its objectives. Its major strength lies in the fact that it has reached even those villagers who rate low on some of the indicators of modernization. The community appears to have accepted the idea of using contraceptives.

3.2 Educational and motivational programmes need to reflect an appreciation of the wide range of attitudes toward family planning or to particular methods of contraception. Different strategies are required to reach men and women and decision-makers in family and clan groups who are usually not the actual targets of most family planning services.

In this regard, the findings of Stycos and Marden (1970) concerning the increased contraceptives acceptance in clinics and hospitals when an intensive campaign was initiated in urban, low-income areas of Honduras using radio, film, sound tracks, and pamphlets are pertinent. The same results were noted in Taichung, Taiwan, when married women of reproductive age were subjected to a combination of home visits, mailings and group meetings (Berelson and Freedman, 1964; and Freedman and Takeshita, 1969).

3.3 Family planning personnel must develop greater sensitivity to the mechanical, physiological and psychological effects of various contraceptive methods in order to promote better patient understanding.

In Apelo's study of IUDs (n.d.), the reassurance that bleeding was to be expected as a side effect of this device was believed to have contributed to a high patient tolerance. Presser
(1970) showed that resistance of medical personnel against sterilization led to low acceptance of this method. But when medical personnel actively supported female sterilization in Puerto Rico, acceptance increased markedly (Presser, 1973).

3.4 The integration of family planning programmes with other areas of health and development has advantages only if doctors and other health personnel have the necessary interest and appropriate training in family planning. Department politics seems to diminish the enthusiasm of workers. Dynamic leadership both at the department and the field levels is essential (Apelo and deia Cruz, 1973).

3.5 To cater to a greater number of potential acceptors, the family health programme may utilize government administrators (Lucas, 1972), commercial marketing (Farley and Leavitt, 1973), personnel from indigenous health systems (Rogers and Solomon, 1975), social workers (Rao, 1974), paramedics (Rosenfield, 1972), trained auxiliaries (Fendall, 1972) as well as lay persons (Sun, 1972) to stimulate awareness and promote the acceptance of methods of contraception.

3.6 Services may be provided in clinics or outreach methods may be used. The delivery system in China is based on outreach. Home visits are the rule, local initiative is maximized. The system provides a full spectrum of fertility regulation methods and makes use of available health personnel at the local level, thus resulting in very high acceptance rates (Chen, 1973).

3.7 The development of women's organizations which sponsor regular meetings as has been done with Mothers' clubs in Korea and the use of groups of satisfied acceptors in Indonesia lead to increased contraceptive awareness and practice. The views of women are given an airing and they have the opportunity to press for improved services to meet health and welfare needs.

Gaps in research

(a) Awareness, knowledge, attitudes, and practice of selected male and female populations, different levels of political leaders, village influentials, and health workers.

(b) Alternative service delivery schemes for MCH/FP in selected communities/villages, e.g., with or without incentives, satisfied contraceptive users, "big" men/village chiefs, Indigenous traditional health care service providers, trade store operators, and the like.

(c) Continuation rates of the different fertility regulation methods and their effectiveness in different settings.

(d) Family relations and social problems in changing rural and social environments.

(e) Effectiveness of delivery of health services with specific regard to maternal and child health, nutrition and family planning.

(f) Information flows (including indigenous communications networks) and communication strategies.
REFERENCES


When pregnancies are not planned to suit the desires and needs of the family the resulting problems to mother, child and the entire family may be physical (medical) emotional and socio-economic.

Perinatal mortality statistics are traditionally used as a "yardstick" for measuring the quality of obstetric and neonatal care. However, other factors besides obstetric and neonatal services are involved. When the maternal factors associated with perinatal mortality are studied, they reveal problems which are related to the patterns of childbearing and are therefore amenable to influence by family planning. Thus perinatal mortality figures may also give an indication of the adequacy of family planning practices.

Maternal factors associated with perinatal mortality (and morbidity): see figure 1 on page 17/18.

(a) Age

Adolescent pregnancies and those occurring in women over the age of 35 years have a higher incidence of perinatal problems including chromosomal abnormalities in the older age group.

(b) Parity

The safest pregnancy is the second. After the fifth child, the risks to mother and baby increase rapidly. The commonest maternal complication is post-partum haemorrhage.

(c) Birth interval

Pregnancies occurring at intervals of less than one year (or greater than four to five years) carry a significantly increased risk of death to the baby and cause ill-health (e.g., anaemia and chronic fatigue) in the mother. Especially where breast-feeding is not the rule, contraception started early after a birth is necessary to properly "space the family".
(d) Socio-economic factors (education)

Socio-economic status is a relative term and may be difficult to classify as in New Zealand. The educational status of the mother (or father) is easier to determine and provides a guide to her reproductive efficiency probably because it is a measure of her ability to seek family planning advice and to seek appropriate medical attention for herself in pregnancy and for her children.

All too often the above factors are combined, e.g., the woman with poor education may begin childbearing at an early age, have repeated pregnancies at irregular short intervals and become a grande multipara at a later than desirable age in unsatisfactory economic circumstances.

The study of regional perinatal mortality figures may reveal areas where unsatisfactory child-bearing patterns are common and thus highlight deficiencies in the provision of family planning services. Example, within New Zealand an unusually high perinatal rate was identified in a region which contained a high proportion of Maoris living in a rural situation. Amongst those people there was found to be a high incidence of grande multiparity associated with inefficient contraceptive practice.

(e) Typical case history

Mrs Teb was a Maori aged 38 years. She had had 10 pregnancies with eight surviving children aged 18 years to 4 months. There had been one abortion (spontaneous) and one neonatal death due to prematurity. Her 9th and 10th pregnancies were complicated by hypertension and there had been a serious post partum haemorrhage at the delivery of the 9th baby, There had been no contraception until after the 5th pregnancy. Since then she had used O/Cs on several occasions but failed to renew the supplies. A lippes loop IUCD had been removed within one year of the insertion because of heavy periods and she had not returned for her Depo Provera after the first injection. The failure of contraception was found to be due to failure of "patient compliance" and to a lack of follow-up by the adequately staffed district nursing service. The poor patient compliance was not due to the woman's apathy or pre-occupation with her family, but rather to her husband's resistance to any form of contraception or sterilization. The reason for the husband's attitude which was shared by other Maori men in the region was not understood.

The family planning problem revealed was thus twofold:

(1) Inadequate follow-up of contraception - amenable to modification of existing district nursing services;

(2) The resistance of Maori men to contraception and sterilization - requires investigation.
Figure 1. after "A W.H.O. Report on Social and Biological Effects on Perinatal Mortality - 1978, Vol.2."
The high total fertility rate currently prevalent in Western Samoa constitutes a demographic time-bomb. During the intercensal period of 1971-76 the crude birth rate was 37.4 per 1000 population. The population of Western Samoa at mid 1979 is estimated at 160,966 and is expected to increase to 176,676 by mid-year 1984. The main characteristics of the population are:

(a) a high proportion of young people - 47% under 15 years;
(b) a high birthrate - at present the total fertility is 6.4 children per woman in child bearing age group; however the completed fertility has abated from a level slightly above 7 before the intercensal period;
(c) low mortality rates;
(d) a high level of outmigration estimated at 2,000 persons per annum.

Even with a continuing moderate decline in fertility the birth rate will continue to increase for the next 10-15 years.

The most important factor in the population dynamics of Western Samoa is the heavy annual outmigration in spite of the strict immigration policies recently imposed by the New Zealand government. But reliance on outmigration to relieve our domestic problems is at variance with the national goal of increased economic independence and self-reliance. (See Table I, page 27/28)

Unfortunately however, Samoa is entering a phase of economic hardship due partly to a recent devaluation of our currency and rising living costs, this is expected to increase even more the demand for family planning services.

The surge of economic growth, coincided with the establishment during 1972 of a definitive family planning programme. It was also at about this time that the population growth rate began to indicate a more significant trend downwards.

*Case study,
After several years of lobbying the politicians we have now succeeded in convincing government of the necessity to consider population factors in development planning and to adopt a population policy. This policy has been drafted and will be included in the next Five Year Economic Development Plan for Western Samoa.

A brief list of problems within the family planning programme would include, traditional attitudes favouring large families, poor coverage of services in rural areas, lack of trained and supportive staff, poor supervision of health workers, no effective motivational programme, supplies running out occasionally, inadequate equipment, lack of transport etc.

1. The family planning programme

The integrated MCH/FP programme was initiated in 1971, motivation programmes, orientation and technical training courses were conducted for the various categories of health and related personnel. Gradually services became available throughout the country but were dependent on qualified medical personnel, who were usually men, and often not highly motivated. Three methods were offered, oral contraceptives (2 brands only), IUD (Lippes Loops only) and condoms. Female sterilization by tubal ligation is performed in the National Hospital and very occasionally by keen District Medical Officers. In 1975 the injectable contraceptive, Depo Medroxyprogesterone (Depo Provera 150, or DP) was introduced.

1.1 The IUD

This has been and continues to be the mainstay of the family planning programme. The dependence on medical officers to insert loops, and women's shyness to be examined by men, placed a serious constraint on the greater acceptability of this method. Therefore, influenced by good reports from other countries (Flavier 1973, and others), of the use of non-medically qualified personnel to insert loops, a series of training courses for nurses began in 1976. Unfortunately however, nurses are frequently moved around, but in those areas with trained and keen loop insertion nurses, a significant increase in new acceptors was noted.

There is a tendency for necessary equipment and instruments to disappear or to be easily damaged. Moreover Samoan women believe that washing clothes by the river for long hours causes expulsion.

There is a belief that the loop is associated with "bad bodies", (i.e. being too thin) and it is not uncommon for loops to be removed because the acceptor, her husband or her family, believe that she is losing weight. The substitute method is usually the injectable which is thought to have the opposite and therefore desirable effect.
The possibility of precipitating anaemia from heavy bleeding is of concern particularly where the average Hb level of Samoan women is around 10.5gms/100mls.

The consequences of contraceptive failure is also a worry as there is no legalised abortion.

Loss of threads is again a problem associated with the IUD and several women have required surgical intervention for removal.

It is disturbing to read in a recent report by Guillebaud (1979) that "In view of increased blood loss, the Task Force on Intrauterine Devices of the World Health Organization, has gone as far as to record that it does not intend to use the Lippes Loop 'D' in future clinical trials and cannot recommend its use in future family planning programmes". He does however concede that good counselling, attention to detail, and vigilance by users and practitioners alike are the key components for satisfactory use of this contraceptive method.

A trial use of Cu7 and CuT has indicated so far a disappointingly high removal rate (mainly from excessive bleeding and cramps) and a rather high expulsion rate. These results however may be due to faulty insertion technique and we need to observe these women for a longer period.

A distinct advantage of the IUD is the fact that a woman often does not feel a need to return to the clinic if she is satisfied. As noted from our trial of the Copper devices an average of 40-50% of new acceptors do not in fact return for check-ups.

Loops are inserted free of charge.

1.2 The injectable contraceptive

Depo-Provera became available in 1975 on a trial basis at the Family Welfare Centre (FWC) only. At the end of the 2 year trial period it was obvious that this method in terms of continuity was not successful.

A total of 657 women had received one or more doses. Slightly less than 15% continued for 2 years. Similar studies on Lippes Loops showed that more than 60% of loop acceptors were protected after 2 years following insertion.

Since the trial, this method has greatly increased in popularity and I feel certain that the continuation rate has also improved, due to better counselling and experience of staff in selecting suitable clients.

Recently a further training course for nurses for all family planning methods was carried out. This was a 2 week theoretical and practical course held in Apia, followed by supervised loop insertions in the nurses own hospital or health centres.

Amenorrhoea is the most common menstrual change associated with DP use. However good counselling has resulted in a better acceptance by the women of this side effect. We usually explain that amenorrhoea can be useful as it helps to conserve their precious blood.
Weight gain and elevated blood pressure is occasionally a problem and can be the reason for having to discontinue the method—often reluctantly accepted by the client. It seems that we may have over emphasized the possibility of infertility as many women discontinue after 4-5 injections with the mistaken belief that they have had sufficient doses to have induced a prolonged or even permanent sterility, particularly if they are amenorrhelic.

Samoan women favour this method because it is associated with weight gain and hence a good healthy body.

Even with well trained nurses there is nevertheless a fear of the risks, however small of the long term effects of prolonged use of this drug and of allowing nurses to handle it. We no longer set a rigid age and family size limitation for new acceptors although we do advise DP for older high parity women and the TUD for younger low parity women.

Each single dose costs the acceptor WS$0.50, which is not considered excessive.

1.3 Oral contraceptives (combined pills)

The oral contraceptive rapidly lost popularity when the injectable became available, but is well accepted by urbanised modern women. Women frequently complain of dizziness in the early stages of pill taking and are not prepared to carry on taking the pill. All nurses are permitted to prescribe the pill but must follow a check list, 1 cycle of any brand costs 10 sene, but pills cost up to $1.80 in the town pharmacies.

1.4 Condoms

This method is not popular except for very short term usage. They are considered somewhat as a joke and are taken to be associated with promiscuity.

1.5 Sterilisation

Skilled medical personnel are needed. All operations are performed at the National Hospital. Written consent for sterilisation is a necessary prerequisite from the husband. About 100 Tubal ligations are performed annually. Many women who previously might have considered the operation are preferring to use the injectable.

1.6 Traditional methods

No safe, effective traditional fertility control methods is known to me, although there are many stories of various herbal concoctions and forms of massage—usually in an attempt to cause an abortion.

1.7 Infertility

The problems and needs for infertile couples are important but our expertise in this field is limited. Greater emphasis however is given to interviewing and counselling. A minimum of investigation is performed at the FWC but most cases are referred to the Gynaecologist or the Surgical team for further tests. An important proportion of infertile couples are found to be due to male sterility.
2. Ideal requirements for a contraceptive for Samoa

2.1 As perceived by the acceptor

(1) For side effects particularly those that might affect the menstrual pattern, especially towards heavy bleeding, and pain.

(2) High effectiveness i.e. the method works.

(3) Does not require frequent return visits.

(4) Requires the minimum of examination, especially vaginal. If examination necessary preference for female examiners.

(5) Husband approves of the method. Samoan men generally prefer their wives, to use the injectable. Perhaps because they like fat women!

(6) Culturally and socially acceptable - especially by female peers and mothers-in-law.

(7) Can be available at nearby hospital or health centre.

(8) Can be applied at any phase of the menstrual cycle, and after a missed period.

(9) Can be equally available to any women at any age.

(10) Immediate reversibility - although the delayed return to fertility with DP usage is perceived an advantage by some.

(11) Costs little.

2.2 Ideal requirements as perceived by the providers at central and district level

All the above including -

(12) Can be safely and effectively provided by non-medical personnel. Therefore a high level of training and expertise is not necessary for providing and maintaining the method.

(13) Free from "medical" side effects, i.e. Does not affect weight too much, the blood pressure, menstrual pattern that might lead to anaemia, no effect on lactation, and has no effect on metabolism (Samoans are prone to diabetes and gout).

(14) Requires the minimum of clinic facilities and costly equipment and instruments.

(15) Overall cost of providing the particular method low - even if most of the costs are borne by funding agencies.

(16) Effectiveness high in terms of continuity of use as it is appreciated that continuity of use can be critical in terms of having any significant impact on fertility levels. But it is also realised that of equal importance is continuity of practice and therefore a suitable "mix" fo methods is important.
(17) Does not affect the foetus or future progeny if the
method fails, after discontinuation, or from prolonged use.

(18) Requires the minimum of supervision.

It is interesting to note that, disregarding the condoms, the
IUD and injectable have almost equal rating, and as expected are better
rated than the other two methods.

An IUD that has fewer side effects, is highly effective
and does not require frequent medical intervention (e.g. medicated and
Cu. IUD's) would undoubtedly improve its acceptability and continuity
of use.

The Injectable contraceptive has great potential given the
proven high acceptability of this method. With better counselling,
greater availability in rural areas, better control of side effects
the continuity is expected to improve. However the costs to the provider
needs to be reduced considerably.

Oral contraceptives at this time have little place in our
programmes but further research on a once-a-month pill that is effective
and has few unpleasant side effects would be very useful adjunct to our
armamentarium.

Levels of fertility for population stabilisation cannot be
easily obtained without induced abortion, barring a major breakthrough
in contraceptive technology or major changes in human sexual behaviour.
Samoa unfortunately has no legalised abortion.

The development and availability of a substance and/or device
that can safely be applied by less qualified health personnel in
order to achieve menstrual regulation, I believe would have considerable
appeal to Samoan couples. The question of whether or not this is
abortion, to the couples involved, I doubt would be of major concern,
as there is a significant number of men and women attending our clinics
only a few days after a missed period asking for something "to make the
period go"!

3. Summary

3.1 The situation

The fertility level of Western Samoan women is high - presently
at 6.4 children/women aged 15-49 years. Population increase is
inevitable for at least 10 years. This is putting considerable strain on
the limited resources of the country as well as on the health and
welfare of mothers and children and their families.

A family planning programme has been in operation since 1971 but
it has had only very moderate success as shown by the slow total increase
in new acceptors and current users. The main reason is thought to be due
to weak motivational and informational activities and to non-availability
of effective and acceptable methods in rural areas.
One well accepted method suitable for younger women is becoming more available in the districts, viz, the Lippes Loop. One increasingly acceptable method also suitable for older women is becoming more widely available, viz, Depo Provera. Other currently available methods are not so well accepted for many and varied reasons.

Problems and needs of the programme are described but greater emphasis is given to problems associated with the acceptability and continuity of current available methods. Other important problems such as the major problem of logistics of supply and close supervision and follow-up for some methods must be considered. Limited local demographic family planning collection and usage data adds to the difficulty in extrapolating the effect of the programme.

The government of Western Samoa has recently become more appreciative of the necessity for a more stabilized rate of population growth. A population policy statement is expected to be included in the next Development Plan. Furthermore, in many respects attitudes of the population are favourable to family planning. The family planning programme, which is given high priority in the policy statement is expected to serve two main social functions:

a) to meet the needs and demands for family planning of the population; and

b) to reduce the population growth rate.

Thus the expectations from the family planning programme are high. This places an even greater burden of responsibility on the Health Department and especially upon those who are more directly responsible for the programme.

3.2 The Short-term Goals for the Programme must therefore be

1. to double the rate of increase of new acceptors and current users by the next five years;

2. to have available in all areas a mix of family planning methods that is acceptable by the community;

3. to have available in all areas a service acceptable mix of family planning methods.

3.3 The Research Problem

This then is the problem we are here to address ourselves. What research leads can we identify?

The inherent qualities or characteristics of a fertility control method to a large extent determines the acceptability and continuity of that method, and of course the type of programme that is set up. For many, those programmes are already well established and therefore refinements and improvements to existing methods (as suggested earlier) may be considered sufficient for such programmes.
It is accepted that many factors contribute towards lowered fertility in the long run; these include education, per capita income, employment and status of women, availability of jobs, higher age at marriage. But in the short run would further technological research help us to reach our goals sooner? Policy is rarely determined on scientific evidence alone - what evidence that can be gathered is rarely complete or definitive enough for that. We need to know much more!

What really motivates couples to limit their family size? What really influences them on their final choice of method? What other political choices are available to us in order to achieve a more rapid reduction of fertility? These very important questions cannot be answered by me. They do however form important elements in a large competing complex of motives and means in a situation of social and economic change.

What we need is to be able to list and weight, social, political service and clinical factors necessary for fresh programme emphasis, and to achieve our demographic and humanistic goals.

As Freedman and Berelson (1976) have observed, without the necessary data, one can only rely on empirical experience, beyond that informed judgement. In the end policy making comes down to their judicious combination.
### Table 1

**Population Dynamics of Western Samoa, 1979-2001 (projections)**

<table>
<thead>
<tr>
<th></th>
<th>1979</th>
<th>1984</th>
<th>2001</th>
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<tr>
<td>Population size</td>
<td>160,966</td>
<td>176,676</td>
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<tr>
<td>% under 15</td>
<td>47.3</td>
<td>45.9</td>
<td>44.9</td>
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<tr>
<td>Total fertility rate</td>
<td>6.4</td>
<td>6.1</td>
<td>5.3</td>
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<tr>
<td>(children per woman)</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Crude birth rate</td>
<td>37.4</td>
<td>38.8</td>
<td>36.1</td>
</tr>
<tr>
<td>(births per 1,000 people)</td>
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<td></td>
</tr>
<tr>
<td>Infant mortality</td>
<td>35.2</td>
<td>35.2</td>
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</tr>
<tr>
<td>(deaths per 1,000 live births)</td>
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<tr>
<td>Life expectancy (years)</td>
<td>62.6</td>
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<td>62.6</td>
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<tr>
<td>Crude death rate</td>
<td>7.8</td>
<td>7.7</td>
<td>7.7</td>
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<tr>
<td>(death per 1,000 people)</td>
<td></td>
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<tr>
<td>Natural growth rate (%)</td>
<td>2.96</td>
<td>3.11</td>
<td>2.84</td>
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<tr>
<td>Net outmigration per year</td>
<td>2,000</td>
<td>2,000</td>
<td>2,000</td>
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<tr>
<td>Net out-migrants as % of population</td>
<td>1.25</td>
<td>1.14</td>
<td>0.8</td>
</tr>
<tr>
<td>Actual population growth (%)</td>
<td>1.71</td>
<td>1.97</td>
<td>2.04</td>
</tr>
</tbody>
</table>

*Source: Department of Economic Development, Apia, Western Samoa.*
"THE WILL OF GOD" - SOCIAL AND CULTURAL ASPECTS OF FAMILY PLANNING*

by

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Little attention is paid to which socio-cultural factors exert a positive or negative influence on reproduction in a particular society at any time. Only when the relationship between the medical and technical side of family planning are linked with the social and cultural factors that influence attitudes and behaviour, is it possible to see family planning programmes in totality. Factors such as race, religion, values and culture can affect the ability and the willingness of individuals to contribute to the attainment of family planning objectives.

The areas most affected by cultural influences are the recruitment of acceptors, selection and training of motivators, and programme planning. Factors such as leadership, motivation, personality perception and attitudes have cultural roots which interact with fertility patterns. The complexity of this inter-relationship needs to be understood to give family planning services a higher degree of success.

1. The concept

Although many factors influence fertility directly or indirectly, this paper is focused on the relationship between family planning and the widespread explanatory concept in the Pacific: "the will of God". This term is taken in this paper to include supernatural beliefs, family curse, and punishment. Religion as such may not have a direct influence on fertility, but its presence cannot be dismissed as certain elements in religion which could well have a direct influence.

In both Fijian and Indian society, people often justify the large number of children they have as the will of God. The term in Fijian is "na lewa ni Kalou", in Indian society it is "malik ke kushi". In Tonga the term is "koe finangalo 'oe 'Otua". Similar concept is found in many Pacific languages. The will of God concept, in many different languages basically performs similar functions.

The truth of this concept "the will of God" is less important than the role of beliefs and taboos in the social system and their effects on family planning programmes. What are the functions of this concept? Do those using the term, especially women, use it as an excuse for a large number of children? Or as a blanket phrase to halt further questioning? Or is there a real belief that children are God-given, the belief strengthening the common values held amongst those who place a high premium on children? Does the concept motivate behaviour favourable to the belief? Does this religious element have a positive function in the survival of society by regulating and motivating behaviour in such areas as family size? Or is the concept

*Case study.
used, encouraged by religious leaders for the survival of religion? Or is the term, the will of God, a convenient term used to explain all that is good, or all that is inevitable, or all that is fortuitous? For example the many children one has are considered as blessings from heaven; or women who become pregnant whilst taking some contraceptive describe their "accidental" pregnancy as the will of God. Any family tragedy such as the death of a child is also explained as the will of God.

This religious concept is used to explain both good and bad happenings, and nothing can be done about it by the person who is affected. This fatalistic attitude has strong cultural roots in the Pacific and fits in well with the Pacific Islanders "casual" attitude to life which has important significance to family planning programmes. Responsibility for personal or group happiness or tragedy is not taken by the individuals, but is attributed usually to someone higher than themselves, such as parents, chiefs, ancestors, super-natural being and God. But most commonly the will of God. By this same principle the decision for family planning in the case of the wife lies with someone else, usually the husband. The will of God is the ultimate explanation and answer for all things that go "right" or "wrong", God is not the initiator but the answer to all things. This religious concept fits conveniently with the way our society is hierarchically stratified.

2. Changing status of the family

2.1 Traditional practices

The family planning programme is advertised as bringing better health, happiness and better opportunities for education if families are small. But the concept of family planning and family spacing is not an innovation in Fijian society, as the philosophy behind it is seen in the traditional Fijian practices of birth control through the use of traditional medicines and methods and birth spacing by the avoidance of sexual contact during lactation. Traditional birth spacing has been as long as two or three years apart. Although the philosophy of birth spacing is familiar, the emphasis is not on birth spacing for population control but on the replacement of children due to high mortality rates. If the mortality rates were lower, the population would be in millions today. Several factors have brought about the increases in population in the last century:

(a) improvement in health programmes resulting in the reduction of mortality rates for both infants and adults;

(b) declining use of traditional practices of birth control;

(c) the breakdown of avoidance of sexual contact during lactation especially in urban areas.

But the introduction of modern contraceptives has not entirely destroyed this practice of child spacing through abstinence amongst the Fijians. The practice continues today particularly in areas where access to family planning services are limited. It was and still is common to find regular spacing of two to three years between dates of birth of children throughout a wife's child-bearing life. For another child to be born while a child is still being suckled at the mother's breast is criticized and frowned upon by the Fijian community.
It implies that the parents are so absorbed with sex that they fail to take measures to ensure the continuing health of the unweaned child. The spacing is linked with the belief that any child born before the first child is weaned would be "save" (a weakling and a late developer). A "save" child would physically appear weak, thin and slow in movement. Perhaps such a condition is linked with malnutrition, but the Fijians regard such a condition as being linked with parental sexual relations occurring during the recognized period of abstinence. Sexual abstinence is generally observed from the time the woman knows she has conceived to the time that child voluntarily leaves the mother's breasts, or when the breast produces no more milk. But the spacing of children does not affect the desire of the parents as to the number of children they could and should have.

2.2 Marriage

In Fijian society, the primary purpose of marriage is the procreation of children to recruit more members for the survival of the kin group. Marriage is monogamous and both religion and law place taboos on any infraction of the marriage code. The institution of marriage is considered as the only conventionally tolerated outlet for sex, but such thinking and practice is confined to the most innocent. Marriage and having children are synonymous in Fijian philosophy, as children, rather than companionship is regarded as the true purpose of marriage.

But the introduction of family planning and the use of contraceptives has effected a number of changes in the family, two of which are dealt with below.

2.2.1 Use of contraceptives

The use of contraceptives, according to some informants, is altering the very basis of marriage which has caused some reluctance especially on the part of husbands to accept family planning. According to one informant, to have children is only natural and it is the will of God and he would not agree for his wife to use contraceptives. Another informant stated that both he and his wife were reluctant to accept family planning because of the fear of male doctors seeing and touching the private parts of women. Several informants stated that they wish to have as many children as possible so that they could be cared for in old age. One of the informants comes from a family of twelve children and she wished to follow the same pattern. All informants ended their explanations with having children being the will of God. They feared that the use of contraceptives will stop families having a larger number of children and this basically cannot be right in the sight of God.

The use of contraceptives will not only prevent the formation of large families but it could have serious effects on the harmony and the stability of the family. One informant stated that some husbands were unaware that their wives were using a family planning method and that the wife's inability to conceive has been the cause for some husbands to associate with women outside the marriage which in a number of cases has resulted in child birth. In other situations where husbands have later found out about their wife's use of contraceptives the feelings of suspicion seriously affected the marriage. Another informant stated that although her husband agreed for her to
have her "tubes tied" she has noticed a considerable change in his behaviour towards her. Before making the final decision to be sterilized she was warned by friends to think about it seriously as she was still young and could easily lose the attention of her husband. This informant stated that in the past her husband had been faithful to her but it is now not the case and she attributes the problems she is experiencing in marriage to sterilization.

The problem associated with the faithfulness of wives has been raised by more than one informant. One informant stated that as he worked away from home for certain periods of time he would never agree that his wife use contraceptives as he would be continually suspicious that his wife may not be faithful to him during his periods of absence from home. The fear of pregnancy outside marriage acted as a controlling factor for both men and women in maintaining family stability, but the use of contraceptives has shifted this fear from the woman, but it seems to have increased it for men. In Fijian the saying "E sega ni vanua e cavu kina no dalo me laurai" is very apt. This means literally that "it is not the place where dalo is uprooted is it seen". Dalo is a rooter, which shows a large gap in the soil when uprooted, which is likened to the use of contraceptives as women can have illicit sexual relations without it ever coming to the notice of husbands.

The use of contraceptives not only raises the issue of the faithfulness of wives but in Indian society, the chastity of girls. In Indian society, girls are groomed for marriage early in life and they are expected to maintain their virginity until marriage. Any suspicion regarding the loss of virginity greatly reduces her chances of a good marriage. Thus family planning is said to contribute to some relaxation in traditional values and standards of family life.

2.2.2 Changing economy

The changing economy of the family and the emphasis on education and employment opportunities for females is causing marriage to take place later in life. This is particularly noticeable in the Indian community where the average age of marriage in the 1960's was 16 and in the 1970's is 19 to 20. But traditional Indian society still commands that females remain chaste until marriage (however much it is disregarded in practice) and any use of contraceptives before marriage would greatly affect the stability of the marriage.

Urbanization and mechanization is changing the very basis of the economic and social obligations in the Fijian family today. Urban migration is weakening kinship ties and the ties to the land tenure system. Although there is change in Fijian society today, the development of airports in the outer islands and better communication with the rural areas facilitates a trend for families in urban areas to keep in touch with their village of patrilineal origin in a search to maintain their identity with the group, the village, and the land. The new changes in the family system has caused the family to move to a different economic and demographic base. The move is from a rural subsistence economy to a monetary economy and although there is some resistance by the Fijians to family planning, family planning itself has been introduced to meet, deal with and fit in with the changes that are occuring in the family and the economy today.
2.3 Resistance

The resistance to family planning is inevitable as it comes into fundamental strife with our values and our beliefs.

3. Traditional beliefs

Fertility in Fijian society is affected by a number of traditional beliefs. Fijians by tradition are said to place a high premium on children, although some informants believe this is a fairly modern concept. The emphasis on large families was probably emphasized in the 1800's due to the very high mortality rates suffered during such epidemics of new diseases to which Fijians had no immunity, such as measles and influenza. In pre-European times, replacement was necessary for those lost in hurricanes, droughts and tribal wars. The emphasis on large families was to replace those lost through premature death.

3.1 Kinship system

The Fijians believe that the larger the family the greater the strength politically, economically and socially of the mataqali. Many members within the mataqali lessen the burden each member carried in discharging such responsibilities as building a new church, a new school, better supply of water, repairing houses and food production. Although this belief continues to be widely practised there is a growing class of urban elite Fijians who are better educated and better paid such as some of our high ranking civil servants, who find that the larger the family group, the greater the burden in an urban setting. There is growing evidence that some members of this urban elite do not always acknowledge nor meet kinship obligations.

The kinship system itself is becoming narrower in range and spread over a wider locality, but the strength of the kinship system is still dependent on the system of mutual obligations.

3.2 Curse and punishment

In Fijian society a couple's status and moral rectitude is closely linked with the number of children they produce. The Fijians refer to a man with a large number of children as "Tamata dodonu", honest man, "Tamata kalouga", fortunate man, "Tamata vutungi", rich man, "e na ka kece", in everything. A man is honest, fortunate and well-to-do if he has not violated any traditional beliefs and customs and the number of children he produces are considered as blessings or rewards. A couple with no children is sometimes said to have "calava vakavanua", wronged the land, and one of the "totogi" punishment is not to be blessed with children.

Sometimes when a woman is not able to conceive and her husband has an illegitimate child outside marriage, the Fijians refer to the woman as "na yalewea vakaiti kakana" (the woman upon whom food is wasted). This implies that the woman is good for nothing as she cannot produce children. Marriage and having children are synonymous in Fijian philosophy and as stated by an informant, Fijian women marry to produce children. "Na vua ni kete, no lewa ni kalou" the seed of birth in the stomach is the will of God.
In order to consider the religious concept termed as the will of God and its relationship to family planning, I propose to consider a case study in Fiji to see whether the concept of the will of God has a positive or negative effect on family planning goals.

3.3 The case of Laisa

Laisa, a 50-year-old woman comes from Wainibuka, who works in Suva as a housekeeper. She was married at the age of 18 years. Her father died when she was 10 years of age and her mother remarried and moved away from the village leaving Laisa in the care of a maternal aunt. Laisa has eight children, six of whom are married and living in the village, whilst the remaining two are in casual employment in Suva. Laisa has five sons and three daughters.

Laisa stated that she went to live in her husband's house soon after marriage. For the first year her parents-in-law were kind to her but she noticed a change in attitude in the second year.

At first there were joking remarks about her inability to become pregnant and that if she were not careful her husband would find another wife. The joking remarks about her barrenness continued in the third year of marriage but with the added element of suspicion of a curse, or that there was something wrong with the family. The suspicion and the remarks grew more intense as time went on. Her husband told her that she was "no good" and that food was being wasted on her. He began to seek the company of other women and would stay away from home for days. Finding the situation intolerable, Laisa returned to her village and talked with her maternal aunt about the threat to the stability of her marriage because of her inability to conceive. One of her paternal uncles told her that her inability to have children was a punishment for her father's evil deeds. Her father as a young man used to regularly drink at the "sau tabu" (sacred burial grounds) in an attempt to show his companions that there was nothing to fear. His foolish bravado resulted in his early death. Members of the mataqali got together and a proper ceremony of apology (bulubulu) was performed to the Chief. Laisa was also advised by her maternal aunt to visit a certain woman in the neighbouring village who had traditional powers for effecting birth. Laisa made the visit accompanied by the aunt and after the sevusevu (a presentation to make a request) of yaqona, Laisa was given a mixture of leaves crushed in water to drink. On her first massage she was told that her "kato ni gone" (womb) was turned the wrong way. After three weeks, she was told that the massage and the herbal medicine had corrected this disability and that she should return to her husband.

However, in the meantime, Laisa learnt that her husband had gone to live in Suva with another woman. Laisa subsequently met another man from a nearby village and they began living together. She was divorced after the birth of her third child and she married the father of her children. She had seven children by the age of forty.

Laisa stated that she had learnt of family planning from the women in the village who visited Suva, and also from the nurse who regularly visited village. Her immediate reaction on hearing about
family planning was "era qarava no luvei keimami" (do those
advocating family planning look after our children?). "I am a
fortunate woman to have seven children, and if God gives me another
one I shall be happy". She refused to accept any family planning
methods as she wanted as many children as she could have. She had
her eighth at the age of 41. She did state that women who heard
about family planning in Suva agreed with its philosophy whilst in Suva,
But back in the village they become absorbed in the daily activities
of family life. The children are not starving and they attend school,
and family planning is as remote to them as Suva.

Laisa relates the story on one woman she know who was taking
the pill, but that she forgot to take them regularly and became
pregnant. Laisa readily explained her pregnancy as the will of God.

3.4 The land tenure system

The concept of fertility is also closely tied to the land
tenure. The identity and the strength of the group can only be
maintained if the group is large. A group is said to be a "mataqali
kaukauwa" a strong community if there are many members, especially sons
to carry out the "colacola ni vanua", the burden of the land, or the
responsibilities associated with being a member of the group to the
land. Many children and especially sons, the stronger the group,
and the better the opportunity for sharing such responsibilities associated
with the communal preparation and participation in marriages, deaths,
the planting of food, repairing of houses, the feeding of visitors
and sharing in the daily life of the Fijian people. A decline in the
membership of the mataqali means a decline in strength, economic,
political and social security and the burden of the land becomes greater
as it is shared by a few. The burden associated with traditional land
tenure could affect the few members of the mataqali so greatly that they
leave the land and seek wage labour elsewhere, thus opening the gaps wider
for criticism by other groups when land is left unutilized.

A number of informants stated that it is general talk amongst
Fijian women that what family planners are advocating in limiting
the number of children is not only wrong, but wrong in the sight of
God. Children are God given, "Ko ira e ra vosataka tu na yalayala
ni gone" those who speak about family planning "era mai qarava tu no
luvei keimami?" do they look after our children? "Era kana ena veisiga"
they (that is the children) eat daily, "era yuly" they attend school,
"era rawati ira" they manage. Family planners also advocate that
small families are happy families - what would happen if a child dies?
It is this fear of death that motivates many large families.

The fear of death in Fijian society is much stronger that in
a Western society. In Fijian society, if a child dies, another child
is planned to take its place. Whereas in Western society a "replacing
child" is not a necessity.

Is it a happy family if we cannot produce more children so that
our family line continues? Family planning is alright for those who
live on wage earnings but to us "nai Taukei" - the natives and owners
of the land, if we are hungry, we can still go to the sea and fish,
or the bush for greens and vegetables, we can still manage to live
today. What family planners are really doing "me kawa boko ko Viti" that
Fiji be no more. This implies that the Fijian race becomes extinct,
"me ra qai taura na noda vanua na tani" and our land be taken by other
groups.
3.4.1 Commentary

Such comments have important significance to the Fijian people and reflects the attitudes and the values Fijians place on women, children, the kinship system and the land tenure system. The emphasis is on the socio-cultural aspects of procreation, rather than the economic aspects. It is the love and care and the psychological security in old age rather than security in money terms, that is more meaningful. Barrenness in a marriage is a strong motivating factor for having children outside of marriage and threatens the stability of the marriage. Some Fijians view the government family planning programme as having a greater economic thrust whilst their stress is on socio-cultural and the intricate inter-linking network of social relations where they depend on one another for care and security.

A western family model of two to three children differs from a Fijian family model as the values, customs and traditional beliefs differ greatly. To a Fijian a small family can carry the stigma of "na tamata e sega no wakana" a person with no relatives, implying that there is no one to carry out the traditional responsibilities that continue throughout the Fijian way of life. Security in old age and illness is of great concern to many Fijian people, and a person who does not have kin to attend to needs and to perform the rituals of a proper burial ceremony at death is considered poor and without relatives. If the system of care is destroyed through the limiting of the number of children then the burden of care falls on the State. Social welfare receives very low priority in the health structure and the State welfare system receives a very small slice of the financial cake.

The Fijian concept of a full life is to have children, family and friends around them. Nothing pleases grandparents more than to have their grandchildren around them. It is in the family structure where all obligations, responsibilities and needs are shared and met. Could this be successfully done by the State? The existing family system is the most effective welfare system. In some Pacific territories there is no alternative as there is no financial resources to mount a State welfare system. There is therefore complete dependence on the family system and its intricate network of reciprocal obligations.

4. Conclusion

The views expressed are those of local Pacific Islanders, set against the realities of the changes occurring in the family today, in the systems of traditional beliefs and taboos and their significance for family planning programmes. It gives the most superficial outlines. A deeper analysis of the viewpoints and the aspirations of local people should be developed, in order to take family planning programmes one step further from the stand of "we have the products and the techniques but we cannot sell them". This stand is like the behaviour of a new broom which wants to sweep everything clean with new ideas as if there was no history, no aspirations, no values and no beliefs.
For long-term effectiveness of family planning programmes an educational programme on population, the resources and the environment should be mounted at primary school level. Family planning need not be mentioned at all, but the programme should be mounted if there is any hope to meet the changes in the family and the economy today.

But for immediate action stronger links should be set up between family planning and the Social Welfare Department, Education Department, men's and women's clubs, youth groups, and the Judicial system through the Domestic Courts.

The family planning programme continues to be emphasized for the community and especially for those in rural areas. Family planning programmes could use more detailed knowledge about the people the programme hopes to reach. There are certain key persons they use as change agents, especially those who work at primary health centres and in community development. They are mostly women, as there is a tendency to work through women's committees and other women's groups. Family planning personnel are mostly known not to live in the community but in an urban area and travel at intervals to the village. Family planning personnel are mostly educated people, whose way into a community is through the village leaders. The higher the level one gets, there is a tendency to stereotype villagers as "simple people" and that family planning should improve their lot in life. The failure to take into account the way in which villagers feel and think about what they want often accounts for a lot of wasted effort.

The real power and the decision maker in the family is the husband. The role of man in a patrilineal society cannot be underestimated. Family planning programmes are targeted mainly to women and there is need to investigate new approaches. There have been many meetings, workshops, seminars and conferences organized from both outside and within the region with sophisticated terminology which is bamboozling and not readily understood by the overworked and the too few public health personnel who are the direct motivators of the family planning programmes. Also family planning receives low priority in the health structure in some countries, but in those countries where it is considered high priority, there is not enough resources allocated to family planning at national level. Assistance has been sought from international agencies such as UNFPA, WHO and UNICEF.

Perhaps the will of God concept will continue with fewer children, and family planning programmes can be seen eventually as being the will of God.

After all, how can we usefully cross-examine God?

5. Acknowledgement

I have incurred debts of gratitude to the many informants in both Fiji and Tonga for assisting me by participating in the interviews for this paper.

A very special debt is owed to Professor R. Crocombe and Mr Aseesela Ravuvu of the Institute of Pacific Studies, University of the South Pacific, Suva, Fiji, and to Dr Epeli Hau'ofa of Tonga, for their advice and comments.
A PROBLEM OF INFERTILITY*

by

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1. Problem example

Does infertility exist as a public health problem among some groups or sub-groups in the community?

2. Background

In many countries, the problem of high fertility may obscure the existence of a problem of infertility in some areas of the country or among certain groups of the population. Infertility as a consequence of anatomical, genetic and endocrinological disorders exists in all communities at an estimated prevalence rate of from 3-7%. Prevalence rates of 15% or more have been defined as constituting a public health problem (WHO Technical Report Series No 582). The difference between the "core" rate of 3-7% and the higher rates is probably attributable to acquired, and thus preventable, causes such as the consequences of tubal infection associated with pelvic inflammatory disease, post-partum sepsis, etc.

Research on the problem of infertility in the sub-region dates back to the early social-anthropological studies on the problem of depopulation in many of the islands such as Yap in the TTPI, and to the classical epidemiological studies by Scragg in 1954 in areas of New Ireland in Papua New Guinea. In the case of Yap recent speculation has focused on the possible role of induced abortion to account for the population decline, which in the case of New Ireland: the consequences of sexually transmitted Neisseria gonorrhea was associated with tubal obstruction and high rates of infertility. A community-wide antibiotic treatment programme for the control of gonorrhea was associated with marked improvement in the age specific fertility rates for those women recently entering their reproductive years.

Infertility and the provision of preventive or therapeutic services for infertility may or may not affect the use by a community of other reproductive health services, particularly family planning services.

In many areas of Africa from one-fourth to one-half of the women first attending the family planning clinics in these countries do so because of a complaint of infertility.

*Case Study.
3. **Existing data**

Definitions: Demographers, using census data often define infertility (or sterility) in terms of childlessness, or women who have never borne a child. They often fail to take into account lack of pregnancy risk, i.e. unmarried or non-cohabiting women, and rarely do they have any measure of secondary infertility.

For clinical and epidemiological purposes, the failure of conception after a defined certain number of months of unprotected coitus is the most appropriate basis of a definition of infertility, both primary and secondary. Unfortunately, rarely is such data available.

For clinical purposes twelve months of failure to conceive would warrant detailed clinical study, although any couple with less than one year complaining of infertility should be interviewed and counselled. For purpose of epidemiological studies, two years of unprotected coitus (after the post-partum onset of menses in parous women) would constitute the definition of infertility. In the absence of the duration of post-partum amenorrhea data four years of failure to conceive after a birth or abortion would constitute secondary infertility.

Data illustrating the possible problem of infertility using the Solomon Islands will serve as an example:

**Solomon Islands**

| Crude birth rate | 34.7/1000 population |
| Total fertility | 6.58 |

**Geographic variation:** Percent of women who have never borne a child by district (1970 census).

<table>
<thead>
<tr>
<th>AGE GROUP</th>
<th>District</th>
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<tbody>
<tr>
<td></td>
<td>Western</td>
</tr>
<tr>
<td>35-39</td>
<td>5.6</td>
</tr>
<tr>
<td>40-44</td>
<td>4.6</td>
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<tr>
<td>45-49</td>
<td>4.2</td>
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</table>

Despite a high crude birth weight and total fertility, the rates of childlessness among women towards the end of their reproductive years (35 to 49 years) varies from around 4% in the Western district to around 15% in Honiara, a level that for primary infertility alone, constitutes a public health problem. Similar variations are seen by ethnic group. Although a minority group in Solomons, the Polynesians appear to have significantly higher rates of childlessness.
Ethnic group variation: Percent childless women by ethnic group.

<table>
<thead>
<tr>
<th>AGE GROUP</th>
<th>Melanesian</th>
<th>Polynesian</th>
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<tbody>
<tr>
<td>35-39</td>
<td>5.5</td>
<td>13.3</td>
</tr>
<tr>
<td>40-44</td>
<td>6.4</td>
<td>15.5</td>
</tr>
<tr>
<td>45-49</td>
<td>6.7</td>
<td>13.9</td>
</tr>
</tbody>
</table>

Variation in indicators of secondary infertility (1970 census)

<table>
<thead>
<tr>
<th>AGE GROUP</th>
<th>Index used</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Percent with one birth</td>
</tr>
<tr>
<td>25-29</td>
<td>-</td>
</tr>
<tr>
<td>30-34</td>
<td>8.2</td>
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<td>35-39</td>
<td>4.7</td>
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<td>40-44</td>
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4. Potential research issues

Is existing census data adequate to define the magnitude and distribution of the problem?

Is the "excess" of infertility in certain areas or among certain groups associated with potentially preventable disorders, e.g. PID, sexually transmitted diseases in the man or woman, etc.?

Is there a relationship between the provision of diagnostic and therapeutic services for infertility and the use of other reproductive health services?
However, studies in developed countries have not dealt with issues of particular importance to developing countries, such as the effects on nutrition, possible interactions of hormones with endemic diseases, and the consequences of hormone use during breast-feeding. Moreover, in developing countries the relevance of research from developed countries is unknown on such long-term risks of hormonals on cardiovascular disease and neoplasia.

Research on these issues are of the highest priority in the Special Programme of Research in Human Reproduction.

Three-monthly depot-medroxyprogesterone acetate (DMPA) or two-monthly noresthisterone oenanthate (NET-OEN) has appeal to both service providers and to clients of family planning services. They can be provided on the basis of periodic team visits, are independent of coitus, and do not require daily and continuing motivation. Their main disadvantages relate to bleeding irregularities and the need for supportive services for the management of the problems of bleeding or amenorrhea.

Data have been accumulating from WHO-supported studies that DMPA has no deleterious effect on nutrition or on vitamin, lipid or carbohydrate metabolism. In the presence of undernutrition there is no evidence of increase in side-effects, bleeding irregularities or decreased effectiveness. Among women whose nutrition could be characterized as borderline, there is no deterioration of vitamin metabolism in association with DMPA.

In contrast, NET-OEN, which on the whole is metabolized more rapidly and which requires at least two-monthly injections, appears to be metabolized even more rapidly in smaller, lighter women than in heavier women. This more rapid metabolism appears to result in higher pregnancy rates in the lighter women. Although there is only limited data available on the metabolic effects of NET-OEN, there is little evidence suggesting that its effects are any different from DMPA.

A number of studies on the combined oral contraceptives in developed countries have resulted in widespread adverse publicity for the pill in the press of the developing world. Such publicity cannot help but affect the decisions of potential clients and providers. In a series of well designed studies from the United Kingdom, the risk of cardiovascular disease (CVD) among pill users was shown to be increased as much as four-fold. However, those at risk appear to be concentrated in the group of women who are over 35 years of age, are smokers and having been using pills for five or more years. Because CVD risks, and such factors as smoking, diet, etc. vary betwenn countries, the applicability of the data from the United Kingdom and the United States of America to the situation in other countries, particularly the developing countries, has been seriously questioned. Studies on the possible risk of CVD in association with oral contraceptives are being undertaken by WHO in Cairo, Hong Kong, Manila and Mexico City.

Research and new product development on oral contraceptives are being directed at dosages or ratios of estrogen/progestogen that have the least adverse effect on blood lipids and coagulation factors, as well as the least effect on blood pressure. The natural estrogen 17β-estradiol appears to have little or less of an adverse effect on lipid metabolism. Research to develop new products along these lines is continuing.
Thus, much if not most of the health service and social science research, is directed at local problems, whereas a large portion of the biomedical research is directed at problems encountered in many settings.

Before examining some of the recent advances in research at the global level, it is worth reviewing the relevance of research on existing methods at the local level. Local research is or should be directed at such questions as:

- Who is and who is not using available fertility regulating methods?
- Why are methods being selected or not being selected?
- Are they effective in the particular setting?
- Who are the ones who discontinue specific methods and why?

As clinical experience is family planning programmes accumulates, it is apparent that acceptance, side-effects and discontinuation patterns vary between different social-cultural settings, according to the characteristics of the provider and the circumstances where the method is provided. In order to provide acceptable services to the greatest number of women both desirous and in need of family planning care, a minimum requirement is information providing a profile of the user and non-user and the continuer and the discontinuer. Service statistics and demographic data, where they exist, may provide some of this information. They rarely answer the question, “Why?”

For example, do women not choose a method because of lack of confidence in its effectiveness or concern over long-term safety? Do press reports of studies in developed countries influence the use of specific methods? What side-effects are most commonly associated with discontinuation? Are there particular groups of women with greater motivation than others towards family planning in general or a specific method in particular? How do age, parity, body weight, etc. affect discontinuation and the side-effects? Are there certain groups of women who should be advised to avoid certain methods in preference to others? Are there trends over time in the characteristics of acceptors or preferences of methods that are of concern to the service provider?

Research on fertility regulating methods at the global level has been directed at assessing the effectiveness, safety and acceptability of current methods in a variety of cultural and health settings, and at the development of either new methods or improvements in the current methods that would overcome side-effects and problems encountered in the current methods.

Clinicians and administrators are increasingly realizing that there are wide variations between population with respect to the effectiveness, side-effects and acceptability of different fertility regulating methods. Great interest and publicity continues to surround the hormonal contraceptives, both the combined oral preparations and the injectable long-acting progestational agents.
Many of the issues and problems encountered in the developing world with respect to family planning programmes and specific fertility regulating methods are also encountered in the Pacific Islands. It is apparent from an examination of available data that because of the circumstances of geography, language and literacy, and a limited health infrastructure, the problems in family planning programmes encountered elsewhere are often even more magnified in the Pacific Island communities. Resources are limited, infant mortality and total fertility remain high, and where family planning programmes have been in existence for some time, there appears to be a levelling off of current users of contraceptive methods at 20 to 30 percent of eligible women. One year discontinuation rates appear to be high for most methods, while the efficacy of the different methods in the Pacific Islands is unknown.

Several problem themes appear common to the MCH/FP programmes of the islands in the sub-region. These include:

- incomplete programme coverage of the population
- insufficient numbers of staff trained for the delivery of family planning services
- an inadequate information system for programme evaluation

In view of what are apparently problems in the organization and delivery of family planning services and the need to adapt such services to existing local customs and institutions, it can be asked, "What is the role of research to these family planning problems and issues encountered in the Pacific Islands?"

First, research must be examined at its various levels, by disciplines relevant to family planning programmes in the islands. During the seminar, we will be examining research as related to the biomedical aspects of fertility regulating methods which includes laboratory-based clinical and epidemiological research; and, as related to both social science and health services. On also can examine research that is essentially locally based to answer locally relevant issues, and that which is more globally based to answer issues that are relevant to, but also transcend the specific local problems

*Applications of research: some family planning experiences and examples presented during the seminar.*
Certain aspects of the problem of long-term safety of oral contraceptives relate mainly to the developing world. Nutritional problems and endemic parasitic infections are potential areas where an adverse oral contraceptive interaction might take place. In the United Kingdom and other developed countries, the finding that the laboratory indices of vitamin B₆ and riboflavin metabolism may be adversely affected by oral contraceptives has not been borne out in studies in developing countries. Studies in India, Mexico, Republic of Korea and Thailand do not show any evidence that women using oral contraceptives have any increase in either laboratory or clinical indices of vitamin deficiency. These studies do show, however, that the majority of all women in these countries, regardless of whether using or not using the pill, have laboratory evidence of B vitamin deficiency, and that 15% to 40% have clinical evidence of deficiency.

The variation in the metabolic effects of oral contraceptives between different populations is most clearly illustrated with respect to glucose metabolism. In developed countries it is recognized that 10% to 12% of women will develop chemical diabetes, i.e. an abnormal glucose tolerance curve, whilst on oral contraceptives. The incidence of such changes varies widely. Thus, in centres using the same oral contraceptive preparation, the incidence of chemical diabetes was 11.8% and 16% in Chiang Mai (Thailand) and in Hyderabad (India), the incidence in Bombay (India) was 40.7%. It is not known whether the occurrence of chemical diabetes in association with oral contraceptives is in any way related to the risk of clinical diabetes. There is no evidence from any of the large number of existing studies that there is any increased risk of clinical diabetes in association with oral contraceptives.

Liver involvement is common with many parasitic infestations. In areas where these infections are common, there is some concern whether or not such involvement is either aggravated by oral contraceptives or whether the oral contraceptive effects are modified by the altered liver function. Evidence from studies on Clonorchis sinensis from the Republic of Korea and Thailand suggest that in the case where the liver parenchyma is not damaged by the parasite, there is no adverse effect attributable to oral contraceptive-parasite interaction. It remains to be seen whether the same holds true for the situation where parenchymal damage is associated with the parasite's involvement of the liver. Studies on this subject are underway in Egypt and the Philippines.

There is increasing evidence that the pattern of metabolism of hormonal contraceptives varies widely between individuals. The variation may be related to racial or ethnic group, possibly to diet or nutritional status, or possibly local intestinal factors such as bacterial flora, levels of binding proteins, use of other drugs, etc. With wider use of low-dose preparations and the ever present problem of women forgetting to take pills daily, the use-effectiveness of oral contraceptives may be poor in some settings. Thus, in some Indian centres one year pregnancy rates of women using oral contraceptives have been as high as 10%. Among women characterized as bad tablet takers, the pregnancy rates are 4 to 10 times higher than among women who regularly take their pills. Recent research has been directed at
developing oral contraceptive delivery systems that would provide an even release of hormone over the 24 hours. At present, the ingestion of a single combined pill results in a peak blood level in a few hours, followed by a rapid decline. The missing of one or two pills in the first half of the cycle will frequently result in failure to suppress ovulation.

The IUD represents a fertility regulating method with many advantages for the family planning programmes of the Pacific Islands. However, in some cultures, certain types of sexual activity may be limited or prescribed during menses or at times of inter-menstrual bleeding. Under these circumstances, acceptance and continuation of the more widely used IUD's may be low. Furthermore, in populations where anaemia may be common, the blood loss associated with IUD's, particularly the Lippes loop, may be a significant health hazard in some women. Dietsing supplementation with iron or use of the progestogen releasing IUD's may be advisable.

Recent well-controlled clinical trials have demonstrated the relative effectiveness, safety and continuation rates of the more commonly used IUD's. It is clear that modification of the IUD design and the incorporation of hormones in the IUD have brought about some small but significant increase in retention, a lowering of pregnancy rates and decrease in bleeding. Current research has also improved the effective duration of use of the copper and the progestogen releasing devices. However, post-partum or post-placental insertion still is associated with high expulsion and high pregnancy rates, although post-abortion insertion is not associated with such high rates. It would appear that the technique of post-placental insertion and the management of the third stage of labour is more important than the modification of existing devices.

Recent research completed by the WHO on natural family planning has shown both proponents and opponents of the method to be correct in their statements about the method. Close to 95% of women from a variety of different cultures, including those with high rates of illiteracy, can be taught to recognize the symptoms of ovulation. Despite the high level of understanding and an ability to recognize ovulation changes, even during the first post-partum ovulation before menses resumes, failure rates are quite high, i.e. as much as 20% during the 3-month training period. Failure is not due to the inability to recognize ovulation, but due to the couple knowingly having coitus during the unsafe period. Even among couples motivated to begin the method, the drop-out rates are high. However, for the small number of couples who have both the motivation and discipline to follow the method, effectiveness is as high as any of the other more modern methods.

Research on existing methods of fertility regulation is not a panacea for the solving of all the problems of family planning programmes in developing countries. Many of the problems may be resolved by improvements in management and organization, in recognizing and adapting programmes to the existing cultural values and institutions and in providing accessibility and sufficient choice of methods to help resolve local problems. Good clinical research does not require sophisticated
laboratory or computer facilities, nor does it require large amounts of funds. The relevant research questions are identified from a close interaction of all health and family planning personnel with the members of the community being served. Examples of the types of research questions that may be answered at the local level are presented in the background paper for this meeting.
THE APPLICATION OF SOCIAL SCIENCE RESEARCH
TO FAMILY PLANNING PROGRAMME NEEDS AND PROBLEMS
IN THE ISLAND COMMUNITIES OF THE SOUTH PACIFIC*

by

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1. Introduction

Recently much attention has been devoted to the creation
of development strategies which follow the Pacific Way. Refusing
to unthinkingly follow the pattern laid down by the industrialized
countries reflects a healthy self-awareness. In the area of
population planning there is much to be gained from using tradition
in developing the future. It is unwise to expect to improve upon
the present without a historical awareness of how the current situation
came about.

In 1927 when Stephen Roberts's Population Problems of the
Pacific was published it was clearly understood that the problems
referred to were those associated with depopulation and the threat
of extinction faced by the 'native races'. Fifty years later
there has been a complete change and it is equally widely accepted
that the population problems of the Pacific are now those related
to excessively rapid rates of growth and the threat of population
outstripping resources. Even for those areas which have extensive
natural resources and ample fertile land the accelerated rate of
growth of the population may seriously hamper attempts to improve
the standard of living simply because more has to be done each year
to keep pace with increased numbers before anything can be done to
improve the quality of the services provided. In examining the
social factors influencing fertility it is necessary to bear in
mind the rapidity with which changes have occurred. In many areas
it is not more than two or three generations since death rates
exceeded birth rates and populations were visibly dying out.

In cultural terms fifty years is a very short time. In
general one would not expect social behaviour, especially in such
a crucial area as family behaviour, to change within a generation and
much less to undergo radical change twice within a couple of
generations. The fact that so few Pacific peoples did die out is
excellent evidence for their inherent adaptability. Still there is
a strong case for drawing upon tradition rather than trying to force
a complete change in behaviour. Looking back to traditional times,
prior to the disastrous epidemics and social disruptions of the
periods of European contact and colonialism, it is evident that
Pacific island populations generally did not experience long continued

*Applications of research: some family planning experiences and
eamples presented during the seminar.
periods of growth at current rates of natural increase. A population growing at 3 per cent per annum will double every generation (i.e. every 23 years) and multiply sixteen times in a century. As a result of the combined effects of disease, accidents, warfare and natural disasters, death rates were almost certainly higher then, and migrations also played a role in dispersing excess populations. However, there is also good evidence that fertility behaviour was also culturally regulated so that island populations did not breed like rats. Pre-decline genealogies suggests that less than 5 per cent of marriages produced more than five children (Rivers, 1922). Society imposed constraints to protect the survival of those children who were accepted and to keep up the strength of their mothers. Contrary to popular belief, the family of eight or more children is almost entirely a modern phenomenon resulting from the abandonment of traditional behaviour patterns (see Table 1 and the discussion below). An individual man would increase the number of his descendants by taking additional wives but not by unrestrained breeding.

2. The social science contribution

The social sciences have recently made three major contributions to the study of the determinants of fertility levels in human societies. The first is in providing the techniques for measuring fertility, which is a much less simple matter than it would appear at first sight. The second contribution is the Knowledge, Attitudes and Practices or KAP study which investigates the mechanisms of fertility regulation. The third is the Value of Children or VOC approach which concentrates upon parental and societal attitudes towards children.

Very broadly speaking, the KAP approach stems from the belief that the major barriers in the path of reduced fertility result from a lack of knowledge of, or access to modern contraceptives, or from a positive resistance to the practice of contraception as such. In contrast, the VOC approach was developed by those who were dissatisfied with the mechanistic KAP view which failed to explain the persistence of high fertility levels in populations with a knowledge of fertility regulating methods and no moral objection to the practice. At the foundation of the VOC approach is the conviction that the great majority of parents behave in a rational manner, and that, therefore, if they continue to have large families this is because they derive real benefit from doing so. Because of the nature of these theories KAP studies can easily be based upon relatively standardized surveys with set questionnaires with few variations from culture to culture. Studies of the value of children, however, depend upon an intimate knowledge of the culture concerned together with the use of semi-anthropological techniques.

In the South Pacific the most extensive KAP study to date is the Fiji Fertility Survey of 1974, which covered a sample of 4,928 married women. Other KAP studies have been carried out in the then Gilbert and Ellice Islands, Guam, Tonga, the Trust Territory of the Pacific Islands and Western Samoa. For anyone involved in the implementation of a family planning policy of a KAP
study provides an invaluable baseline measuring levels of fertility and the knowledge and practice of contraception. In areas where national statistics are very limited the statistics produced within the family planning programme can have little meaning in the absence of such a survey to provide estimates of existing fertility patterns and of the population at risk. KAP surveys also provide estimates of the practice outside the programme (either with supplies obtained elsewhere or through the use of methods which do not require supplies), as well as information on the family size goals of the population.

The original KAP studies concentrated very heavily upon modern contraception now there is a much greater acceptance of the importance of breastfeeding practices, abstinence and a constellation of related factors (known to the World Fertility Survey, the International Statistical Institute's Organization charged with co-ordination of KAP surveys, as 'factors other than contraception'). The Fiji Fertility Survey gathered detailed information on breastfeeding and post-natal abstinence (see Table 2). However the great bulk of information on such practices in the Pacific Islands is to be found in scattered anthropological studies which are neglected by those responsible for population policies.

A small sample of the data available on the practice of post-natal abstinence in the Pacific is presented in Table 1 to give some indication of the wealth of data available to those interested in localized areas. It would be relatively easy to compile similar tables of information on other factors affecting fertility levels such as pre-marital sexual behaviour, age at marriage, divorce, traditional contraceptive behaviour and the like. As an example of what can be done, in his study of Abortion in Primitive Societies (1955) Devreux presents quotations describing the abortion practices of more than sixty societies. He classifies the most common reasons for inducing abortion as perceived by the anthropological commentators into eighteen major categories, Almost half of the Pacific societies are claimed to practice abortion because of 'the trouble of raising children', 'laziness', rejection of the parental role. The second most common reason is the desire to prevent child-bearing by young unmarried girls which is mentioned for a third of these societies. Other common reasons, each applicable to more than one in ten of these cultures, are the woman's desire to preserve her beauty; the fear and shame associated with an unsanctioned pregnancy; the desire of the couple to avoid the prolonged sexual abstinence associated with pregnancy and lactation; fear of pain and ill-health associated with pregnancy; quarrels and desertion by the genitor and the desire to avoid the birth of children of mixed parentage. The statement that parents 'could not be bothered' represents an unjustified moral judgement, a more sympathetic observer might consider that the parents had insufficient material resources, energy and time to raise another child.

The anthropological studies clearly show that even in traditional societies women and men had a wide range of motives for wishing to postpone or prevent births. Here and now the practical significance of these findings is that family planning, in the true sense of the expression, is not a new, imported practice but a traditional feature of Pacific cultures. Those who wish to promote family planning should take care to build upon this traditional base. Thus they should stress the old idea of birth spacing rather than the
newer concept of birth prevention. They should also be aware of special needs such as those of young girls and lactating mothers and they should ignore the importance of the male role in the adoption of contraception in cultures which are still largely dominated by men.

It may be argued that birth spacing is not enough and that family size limitation is the vital issue. If couples are prepared to use contraceptives to space births but still persists in having families which are considered to be too large by the planners then there would appear to be a conflict of interest between the family and the nation. Such conflicts can arise where resources are unequally distributed whether geographically, between social groups or between the generations. It is in such circumstances that the value of children studies come into their own in revealing the social and economic conditions under which parents deliberately choose to continue to breed large families. There have been no full VOC studies in the Pacific Islands although Pitchford's 1972 study of the outer islands of Kiribati and Tuvalu makes an excellent beginning and many anthropological studies provide valuable pointers (see the bibliography—there has also been a largely psychological VOC study amongst the native population of Hawaii). VOC studies should be promoted by interested governments who, as a side benefit, would gain invaluable information on economics at the family level. In the meantime it is still true that in any society in which contraceptives are not as readily available as soap or sugar everything possible is not being done to fulfill the existing demand for family planning.

3. Themes for consideration

The remainder of this paper is devoted to a brief outline of basic themes for consideration by those concerned in the design and implementation of family planning programmes in the Pacific. All of the points raised will not be equally applicable in all areas but the listing does represent a catalogue of the major issues for the region as a whole.

3.1 Breastfeeding, abstinence and birth-spacing

It is probably inevitable that social changes which are already underway such as the abandonment of 'men's houses'; the decline of polygamy and the strengthening of the bond of affection between husbands and wives will result in a rapid decline in the traditional practice of abstinence and most significantly in the practice of prolonged post-natal abstinence (as reported in Table 1). The duration of breastfeeding will almost certainly also be curtailed, although every effort should be made to ensure that the level which is optimal for the good health of the infant is maintained (Shaw, 1979).

In one not untypical New Guinea Highland population 83 per cent of all women aged 20-39 were either pregnant or lactating (Sinnet & Whyte, 1973). In this context it is vital to the welfare of children, mothers and the nation as a whole that effective means of birth-spacing, which are suited to lactating mothers, should be widely provided and promoted. This replacement of abstinence by contraception would represent an adaptation of Pacific tradition rather than a foreign innovation.
3.2 Adolescent sexuality

Although the churches are now agreed in condemning sexual intercourse outside marriage, traditional societies in the Pacific varied from the highly permissive to the puritan in their attitudes to adolescent sexual experimentation (Chowning, 1969; Glasse & Meggitt, 1969; Mead, 1939). Today young people are under increasing pressures because the age at which they are defined as being fully adult is rising along with the age at which their education is completed and the age at which it is socially acceptable to get married (MacArthur, 1971). The question which arises is this - given that, despite all moral injunctions, some young women will still expose themselves to the risk of a pregnancy which can throw away their education and all the resources devoted to it, what can be done? The argument that providing contraceptive services for the unmarried encourages promiscuity could equally well be rephrased to say that the failure to provide such services encourages illegal abortions, spoilt lives and also discriminates against women (Suu, 1978). This is an issue on which an individual decision has to be made for each area, taking local conditions into account. However, such a decision should only be made after weighing up the evidence on both sides, and a full consideration of possible distinctions to be made such as that between providing services for all who ask and advertising their availability. In some areas informal marital arrangements are so widespread as to render a family planning policy excluding the 'unmarried' meaningless.

3.3 The role of the male

In reading within the limited literature devoted to modern fertility control in the Pacific one has the impression either that men have no role to play in either conception or contraception, or that these societies are controlled by women to such an extent that their collaboration is not needed. Both impressions are equally false yet still very little is done to involve men as active participants in family planning (Stanley, 1979). Evidence of men's interest in the subject is provided by the widespread practice of coitus interruptus which is another much neglected topic (Folaki & Billings, 1972). Possible conflict between men and women has also been ignored, yet fear of female adultery is a major cause of opposition to contraception.

3.4 Choosing the right words

Words related to sexual behaviour and sexual organs have an almost magical power. Often in the case of family planning words do not have the same meaning to those who speak them as they do for those who listen to them. Family planning was originally translated into Fijian as tatarovi ni vakaluveti which implied complete prevention of birth, or sterility. The more recent translation yalani ni vakaluveti implies the control of conception and is more readily accepted (Hulls, 1973). In New Guinea the official family planning flip charts tell men to use their condoms "sapos yu slip wantaim long meri bilong yu" - if you sleep with your wife. In areas where sexual intercourse between spouses customarily takes place away from the house or in the bush such an instruction can be very confusing. "Puspusim" is the specific expression for coitus and would be much clearer. There is always a need to draw a difficult line between using polite language and using words which are clearly understood by ordinary people. Many
anthropologist have given detailed discussions of the sexual terms which are appropriate to different contexts (Hogbin, 1946; Firth, 1936; Lessa, 1966; Suggs, 1966). Suu (1979) has reported that the "terminology in the Samoan language, used in the family planning teaching is often regarded by parents and Christian educated youths as taboo and inconsistent with cultural beliefs". Some of the most common taboos are those placed upon sexual discussions in the presence of members of the opposite sex or between young and old.

3.5 Reproductive beliefs

The importance of using the right words in discussing reproduction is equaled by the importance of understanding something of traditional local beliefs about pregnancy, reproductive anatomy and childbirth. For example, in many areas of the Pacific it is believed that a woman cannot become pregnant from an isolated act of coitus but only from several successive acts which are needed to build up the foetus. It is also widely believed that a woman who has intercourse with several different men in a brief period of time will not become pregnant because their blood will not mix together. The effect of such beliefs upon adventurous young girls can easily be imagined (Chowning, 1969). Whilst the idea of a medicine to create temporary or long-term sterility fits in well with traditional beliefs (Ring & Scragg, 1973) many of the adverse reactions to the IUDs result from women's fears of the object inside them going 'walk-about'. It is very difficult to reassure and help women without first understanding their fears and the beliefs upon which they are based. Even amongst those who have experienced some formal education traditional beliefs often survive along with ill-digested biological knowledge. Even at the university level, male students have been known to put their faith in pills which they themselves were swallowing.

Beliefs concerning the polluting effects of menstrual blood vary very widely, but where they prevent a bleeding woman from cooking or working in her garden, they should certainly be taken into account in the design of any family planning strategy (Brown & Buchbinder, 1976). It would be very useful if a centralized index of reproductive beliefs and words, arranged by ethnic group and region, could be maintained for the use of family planning workers and medical personnel, so that experience once gained is not lost.

3.6 Rapid social change

Anyone living in the islands must be conscious of the rapid pace of change on a broad range of fronts. Policies and programmes must also change to take account of such developments. Some of the most important and relevant changes concern alterations in the status of women, in the structure of the extended family, in rural-urban and international migration and in the life-styles which people choose to adopt. The love of children is not simply a matter of quantity it is also a matter of quality.
3.7 Family planning services

All over the world the woman who goes in search of family planning services is likely to be faced by similar problems: long queues, longer waits, inconvenient hours and distances to be travelled, a lack of privacy and a feeling of remoteness from the official people providing the services who seem to be frightening, 'rude', and too busy to be bothered with individual questions from a healthy patients. Many of these problems simply reflect a lack of resources. The great majority of family planning workers do their best despite difficult circumstances. Still every family planning worker should try the experiment of being an anonymous, ill-dressed 'client' from time to time.
### Table 1

**Traditional Post-Natal Abstinence in the Pacific**

<table>
<thead>
<tr>
<th>Ethnic Group</th>
<th>Definition of Postnatal Abstinence Period</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alorese</td>
<td>To space births - the actual period varied but was longer for women who had large numbers of surviving children.</td>
<td>Du Bois, 1944:36, 100.</td>
</tr>
<tr>
<td>Benabena</td>
<td>Until the child cuts its second tooth.                                                                ---------------------------------------------------------------------------------------------------------------------------------</td>
<td>Lagness in Glasse &amp; Megitt, 1969:48</td>
</tr>
<tr>
<td>Kyaka Enga</td>
<td>When the child has learned to speak and is sufficiently mature to be appropriately passed over to its father's care for a substantial portion of the time. In 1955 this period was generally 3 years but sometimes as long as 5 years - medical missionary staff describe it as usually 4 to 5 years - the mean interval between a woman's first two births is 5.2 years. Women will not accept IUDs until two years after a birth.</td>
<td>Bulmer, 1971:145-146.</td>
</tr>
<tr>
<td>Lakalai</td>
<td>Abstinence is enforced during the suckling period not merely on the wife but on the husband as well, this may affect the potential fertility of wives of polygynists.</td>
<td>Binns, C. Family Planning among the Engas - First Australian Baptist Mission Conference on Enga culture.</td>
</tr>
<tr>
<td>Lesu</td>
<td>Until weaning. Coitus by the father with other women is also believed to be harmful to the child. The couple also abstain when the household pig has given birth.</td>
<td>Chowning, A. Lakalai Society, Ph.D. Thesis, Uni. of Pennsylvania, microfilm.</td>
</tr>
<tr>
<td>* Marquesans</td>
<td>It was customary to have intercourse immediately after a birth. Now it is considered to be 'animal' to have intercourse within the first two days. However most couples wait no longer than one or two weeks if they wish for more children.</td>
<td>Powdermaker, H. 1933:79</td>
</tr>
<tr>
<td>Melpa</td>
<td>A married couple should avoid intercourse till the end of the suckling period (average 2-3 years, range 1-3½), for the husband's semen, if ingested through the mother's milk, could kill the child. (In the early months of pregnancy, by contrast, semen is needed to mould the foetus into a creature with human features and limbs.) The taboo is given as one reason why men like to be polygynists.</td>
<td>Suggs, 1966.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Strathern A. &amp; M. in Glasse &amp; Megitt, 1969:152</td>
</tr>
<tr>
<td>Ethnic Group</td>
<td>Definition of Postnatal Abstinence Period</td>
<td>Source</td>
</tr>
<tr>
<td>---------------------------</td>
<td>----------------------------------------------------------------------------------------------------------</td>
<td>---------------------------------------------</td>
</tr>
<tr>
<td>Mundugumor</td>
<td>Until the child learns to walk</td>
<td>Mead, M. 1950:141</td>
</tr>
<tr>
<td>Solomon Islanders</td>
<td>Various definitions were given: 'until the child can run about', 'until the child begins to talk'. The most common however was 'until the child has yaws' which was usually at about age two. The father does not abstain. If the woman becomes pregnant too soon it is called a 'banana' pregnancy and is strongly disapproved of.</td>
<td>Blackwood, B. 1935:156-157.</td>
</tr>
<tr>
<td>Siuai of Bougainville</td>
<td>Intercourse between a nursing mother and her husband is considered thoughtless and wicked, and to result in undernourishment and illness for the nursing infant ... the father of a nursing infant is expected to refrain from sexual intercourse with all other females as well, and if he breaks this prescription, the infant will remain small and weak.</td>
<td>Oliver, D. 1955:182.</td>
</tr>
<tr>
<td>Urban Papua New Guinea</td>
<td>In all language groups there was a customary ban on intercourse (though not always adhered to) for one to two years after the birth of a child, i.e. until weaning began (although some women said they tried to delay weaning as they did not want more children for a while) .... In fact the most common means of birth control in Hohola seemed to be husband and wife sleeping separately.</td>
<td>Oeser, L. 1969:81.</td>
</tr>
<tr>
<td>Wogo</td>
<td>The milk of a woman who has recently indulged in sexual intercourse is supposed to have been rendered too 'heavy' for easy digestion, an effect produced also by the consumption of certain foods, notably pork, nuts, and a number of different kinds of fish. Mothers are therefore expected to refrain from cohabiting with their husbands - and other men - for a space of two years or so and for from half to three-quarters of this period to take the utmost care over what they eat.</td>
<td>Hogbin, I. 1971:180.</td>
</tr>
<tr>
<td>Yapese</td>
<td>Ideally women were supposed to abstain for 7 years, actually they abtain for 2-3 years - some of the younger couples ignored the restriction. As women had to collect food from different gardens and cook it in separate pots for each age group of children, women had very strong reasons for not wishing to have large numbers of children, as they just could not cope.</td>
<td>Hunt et al. 1949.</td>
</tr>
</tbody>
</table>
### Table 2

**MEDIAN DURATIONS OF (A) BREAST-FEEDING, (B) AMENORRHOEA, AND (C) SEXUAL ABSTINENCE FOLLOWING LAST LIVE BIRTH CONFINED TO WOMEN WHOSE LAST BIRTH OCCURRED BEFORE 1913 - BY CURRENT AGE AND BACKGROUND VARIABLE**

#### (a) Breast-feeding

<table>
<thead>
<tr>
<th>Level of education</th>
<th>Current age</th>
<th>Fijians</th>
<th>Indians</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>15-24</td>
<td>25-29</td>
<td>30-39</td>
</tr>
<tr>
<td>No schooling</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Lower primary</td>
<td>11.0</td>
<td>10.7</td>
<td>11.3</td>
</tr>
<tr>
<td>Upper primary</td>
<td>11.3</td>
<td>9.9</td>
<td>9.7</td>
</tr>
<tr>
<td>Secondary or higher</td>
<td>(4.3)</td>
<td>(4.9)</td>
<td>(8.0)</td>
</tr>
</tbody>
</table>

#### (b) Post-Menstrual

<table>
<thead>
<tr>
<th>Level of education</th>
<th>Current age</th>
<th>Fijians</th>
<th>Indians</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>15-24</td>
<td>25-29</td>
<td>30-39</td>
</tr>
<tr>
<td>No schooling</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Lower primary</td>
<td>(7.5)</td>
<td>(7.6)</td>
<td>8.7</td>
</tr>
<tr>
<td>Upper primary</td>
<td>3.7</td>
<td>3.5</td>
<td>3.9</td>
</tr>
<tr>
<td>Secondary or higher</td>
<td>(2.2)</td>
<td>(2.3)</td>
<td>(2.4)</td>
</tr>
</tbody>
</table>

#### (c) Post-partum sexual abstinence

<table>
<thead>
<tr>
<th>Level of education</th>
<th>Current age</th>
<th>Fijians</th>
<th>Indians</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>15-24</td>
<td>25-29</td>
<td>30-39</td>
</tr>
<tr>
<td>No schooling</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Lower primary</td>
<td>(10.4)</td>
<td>9.7</td>
<td>11.1</td>
</tr>
<tr>
<td>Upper primary</td>
<td>9.5</td>
<td>10.0</td>
<td>10.3</td>
</tr>
<tr>
<td>Secondary or higher</td>
<td>(6.2)</td>
<td>(6.8)</td>
<td>(7.0)</td>
</tr>
</tbody>
</table>

#### The Percent Distribution of All Ever-Married Women According to Current Exposure Status - by Current Age

<table>
<thead>
<tr>
<th>Current age</th>
<th>Prepar</th>
<th>Post-partum</th>
<th>Tubal</th>
<th>Sterilised</th>
<th>Not sterilised</th>
<th>Exposed</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fijians</td>
<td>15-24</td>
<td>24</td>
<td>17</td>
<td>5</td>
<td>1</td>
<td>0.2</td>
<td>53</td>
</tr>
<tr>
<td></td>
<td>25-29</td>
<td>19</td>
<td>16</td>
<td>6</td>
<td>4</td>
<td>2</td>
<td>56</td>
</tr>
<tr>
<td></td>
<td>30-34</td>
<td>11</td>
<td>14</td>
<td>5</td>
<td>12</td>
<td>6</td>
<td>51</td>
</tr>
<tr>
<td></td>
<td>35-39</td>
<td>4</td>
<td>12</td>
<td>5</td>
<td>12</td>
<td>15</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>40-44</td>
<td>2</td>
<td>4</td>
<td>7</td>
<td>12</td>
<td>36</td>
<td>38</td>
</tr>
<tr>
<td></td>
<td>45-49</td>
<td>0</td>
<td>1</td>
<td>9</td>
<td>8</td>
<td>64</td>
<td>17</td>
</tr>
<tr>
<td>Indians</td>
<td>15-24</td>
<td>22</td>
<td>5</td>
<td>4</td>
<td>1</td>
<td>0.3</td>
<td>69</td>
</tr>
<tr>
<td></td>
<td>25-29</td>
<td>14</td>
<td>2</td>
<td>3</td>
<td>14</td>
<td>1</td>
<td>66</td>
</tr>
<tr>
<td></td>
<td>30-34</td>
<td>6</td>
<td>2</td>
<td>3</td>
<td>30</td>
<td>3</td>
<td>56</td>
</tr>
<tr>
<td></td>
<td>35-39</td>
<td>3</td>
<td>1</td>
<td>6</td>
<td>38</td>
<td>4</td>
<td>48</td>
</tr>
<tr>
<td></td>
<td>40-44</td>
<td>1</td>
<td>1</td>
<td>10</td>
<td>35</td>
<td>14</td>
<td>39</td>
</tr>
<tr>
<td></td>
<td>45-49</td>
<td>0</td>
<td>0</td>
<td>11</td>
<td>28</td>
<td>33</td>
<td>28</td>
</tr>
</tbody>
</table>

**Source:** Fiji Fertility Survey 1974, Principal Report, Tables 21 & 22.
HEALTH SERVICES RESEARCH* 

by

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Medical Officer
WHO Special Programme of Research in Human Reproduction
Geneva

Health services research is somewhat like the response given by the five blind men asked to describe an elephant. To the epidemiologist it is the application of epidemiologic principles to health service problems, to the administrator it is the solution to complex problems of balancing manpower, facilities, supplies and the logistic aspects of providing health care, to the economist it is that process by which the maximum cost-benefit and cost-efficiency ratios can be ascertained, but to the uninitiated clinician, nurse-midwife and others directly concerned with the providing of care, but who have had technical, computer oriented new health science with its own jargon, cryptic code words etc.

There is in fact nothing magic nor mysterious in health service research. Many of you may already have engaged in forms of such research in the process of evaluating different approaches to the organization, placement, staffing, presentation or provision of supporting services.

There is a fine line between the evaluation of health service management procedures and health services research. Some, but not all, would draw the distinct on the basis of the degree of documentation, and the prospective structuring of the evaluation. Obviously in the circumstances where alternative approaches are tested simultaneously with an attempt made to control extraneous or compounding factors, this would be considered as health service research.

In examining the application of health service research to family planning, I would like to draw your attention to the following taken from the Annual Report of the Special Programme in Human Reproduction.

"In the area of family planning, the main reasons given for its necessity by governments include the following:

- family planning is a relatively new area of health care all over the world, and its very newness gives rise to many questions, some of which require research;

- it is difficult to transfer experience from one setting to another, not only because the strong cultural connotation of family planning require an individual and local approach of the provision of services, but also because of the great variation in administration and political structures;

- family planning has potentially to reach a very large segment of the population, i.e. all couples of reproductive age, roughly one-third of the total population. This presents major problems of logistics;

*Applications of research: some family planning experiences and examples presented during the seminar.
- while this additional load can be easily absorbed by the health infrastructure of developed countries, it presents a major problem to the over-burdened and understaffed services of developing countries;

- with the introduction of new birth control methods comes the need to assess them locally and determine how best to deliver them.

It is clear that service research is needed to develop, using the scientific method, strategies and approaches to the delivery of family planning care and to the assessment of their efficacy and impact.

An infinite number of questions can be asked under the broad headings of planning, organization and evaluation of services. Those in which the Programme's collaboration has been sought and to which it is currently seeking answers are shown in the attached Table 11.

I would like to cite the results of two studies, not as examples that are applicable in this region, but as examples of how certain health service issues can be readily studied, analyzed locally and the results quickly translated into national policies and programmes.

"A series of studies have now been completed in Turkey, the Philippines and the Republic of Korea to assess the training required for nurses or midwives to provide clinical family planning care and to assess their competence relative to that of physicians under a controlled trial situation.

A manual for the provision of IUD's based on these studies has been prepared for publication and will be widely disseminated in three languages. It provides a step-by-step guide to the requirements for counselling and screening of new acceptors; the insertion of an IUD, client follow-up and the treatment of side effects or complications; and the removal of the device should this be necessary. The detection of contraindications or complications of IUD use is facilitated by simple checklists and management instructions are provided. The manual has already been translated into Turkish and is currently being used for large scale training programmes in Turkey and the Philippines. It is anticipated that the manual will be widely used in national training programmes and the Health Manpower Development Division of WHO has recommended that it should be made available to all training schools for nurses, midwives and auxiliary nurse midwives".

The study of non-physician insertion of IUD's has led to an extension of this approach on a national scale in Turkey.

Another study in Turkey dealt with the plateau phenomenon. In one health district, after many years of providing integrated MCH and FP services, the prevalence of users of modern effective contraceptives had levelled off at about 30% to 32% of eligible women. Those responsible for the services asked the question whether or not the level of acceptance and continuation could be raised by the provision of information and education to the other members of the family and particularly to the husbands. Approximately one year was spent in determining the knowledge and attitudes of married men, of the village, influential, religious leaders and others, and then in devising the information and education strategy. Indigenous leaders, religious leaders and other important
figures in the community were identified, information and education provided them, and their support was obtained before approaching the men as a whole. Sixty villages were in the health district, each with an average of 1,000 inhabitants. The villages were then randomly assigned to one of three programmes: a continuation of the MCH/FP activities; an intense programme of information to the woman, including more time spent on determining her fears and perceptions of contraception; and, information, education and motivation directed at the husbands and others.

After two years of implementing the programmes in the three sets of villages, there was no change in the prevalence of use in the control villages, i.e. those with the continued MCH/FP programme activities; there was a rise to 36% prevalence in the villages receiving the intensified women's education and motivation, and a rise up to 45% in those receiving the programmes directed at husbands and other influentials.

The types of health service research requested by Ministries of Health and Family Planning authorities, and for which WHO support is being provided, is noted on the attached Table 11 of the Annual Report of the Special Programme. One problem area that appears to be common to many of the South Pacific countries, is that of an adequate information system which can be used for planning, monitoring and evaluating services.

In theory at least an adequate simply designed record system should be able to identify problems of discontinuation, gaps in utilization, problems of continuity of supply etc. At the same time a record keeping system should not be so cumbersome and excessive as to result in a decrease in the amount or quality of services provided. Whether the issue is one for research or simply one of adopting existing models of information systems, I will leave to the subsequent discussion.

These examples are simply that - examples drawn from other countries and cultures. I do not mean to imply by their presentation that they offer solutions to the health service problems that you have encountered in your family planning programmes. The problems that you have may be entirely different. I present them mainly to illustrate the approach that we in WHO think can be taken in solving some of these problems. This approach includes:

(1) a situation analysis;
(2) a clear statement of the problem and the alternative strategies;
(3) a tight research design, often an experimental design, trying to control for other compounding factors;
(4) minimum but standardized data collection;
(5) rapid analysis and reporting to decision making authorities.
### TABLE 11. WHO ACTIVITIES IN HEALTH SERVICE RESEARCH IN FAMILY PLANNING

<table>
<thead>
<tr>
<th>Projects</th>
<th>Research issues</th>
<th>Countries</th>
<th>Start</th>
<th>End</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Use of different categories of health personnel</strong></td>
<td></td>
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<tr>
<td>Nurse-midwives</td>
<td>Provision of IUDs, pills and injectables in family planning clinics: training and performance compared with physicians</td>
<td>Philippines</td>
<td>1977</td>
<td>1979</td>
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<tr>
<td>Nurse-midwives</td>
<td>Provision of IUDs, pills and injectables in rural areas: training and performance compared with centres not receiving additional training</td>
<td>Philippines</td>
<td>1978</td>
<td>1980</td>
</tr>
<tr>
<td>Theatre-nurses</td>
<td>Post-partum sterilization: training and performance compared with physicians — pilot study</td>
<td>Thailand</td>
<td>1977</td>
<td>1979</td>
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<td></td>
<td>— national extension</td>
<td></td>
<td>1979</td>
<td>1981</td>
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<tr>
<td>Medical students</td>
<td>Vasectomy: training and performance compared with physicians</td>
<td>Thailand</td>
<td>1977</td>
<td>1978</td>
</tr>
<tr>
<td>Lay personnel</td>
<td>Teaching of natural family planning methods: training of lay workers and assessment of their teaching ability</td>
<td>Canada, Colombia, Kenya, Philippines, Republic of Korea, United Kingdom</td>
<td>1978</td>
<td>1980</td>
</tr>
<tr>
<td><strong>Integration of family planning with other services</strong></td>
<td></td>
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<tr>
<td>Field and management studies</td>
<td>Incremental effect of different service inputs into provision of family planning and MCH care</td>
<td>Sri Lanka</td>
<td>1978</td>
<td>1981</td>
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<tr>
<td>Supervision of integrated services</td>
<td>Training and evaluation of a new category of personnel supervising grass-root workers providing integrated care</td>
<td>Pakistan</td>
<td>1979</td>
<td>1982</td>
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<tr>
<td><strong>Use of different service outlets</strong></td>
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<tr>
<td>Urban municipal health clinics</td>
<td>User and service factors accounting for variability of choice of method and continuity of use in different clinics</td>
<td>Thailand</td>
<td>1979</td>
<td>1981</td>
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<tr>
<td>Home-visiting</td>
<td>Comparison of FP/MCH care delivered at home or in clinics</td>
<td>Turkey</td>
<td>1979</td>
<td>1981</td>
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<tr>
<td>Abortion services</td>
<td>Persistent use of clandestine abortion and high rate of second trimester abortion</td>
<td>India</td>
<td>1978</td>
<td>1980</td>
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<tr>
<td><strong>Community participation</strong></td>
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<tr>
<td>Community participation in planning services</td>
<td>Community definition of needs as a basis for action programme</td>
<td>Kenya</td>
<td>1978</td>
<td>1979</td>
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<tr>
<td><strong>Introduction of methods new to a programme</strong></td>
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<td>Injectable contraceptive</td>
<td>Assessment of safety and effectiveness in urban and rural clinics</td>
<td>Mexico, Pakistan</td>
<td>1979</td>
<td>1981</td>
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<tr>
<td>Projects</td>
<td>Research issues</td>
<td>Countries</td>
<td>Start of studies</td>
<td>End of studies</td>
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<tr>
<td>Need for services</td>
<td>Effects of timing, spacing and numbers of pregnancies on health of mothers and children</td>
<td>Colombia, Egypt</td>
<td>1973</td>
<td>1979</td>
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<td></td>
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<td>Pakistan, Syria</td>
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<td></td>
<td>Knowledge, attitudes and practice of family planning</td>
<td>Benin, Ghana</td>
<td>1978</td>
<td>1980</td>
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<td></td>
<td>Impact on fertility changes in practices</td>
<td>Nigeria, Togo</td>
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<td>Zaire</td>
<td></td>
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<td></td>
<td></td>
<td>Malaysia</td>
<td>1976</td>
<td>1979</td>
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<td></td>
<td>Incidence and associated morbidity and mortality of illegal abortion, and costs to health service</td>
<td>Nigeria, Turkey</td>
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<td></td>
<td>High rate of abortion in women who have access to contraception</td>
<td>Venezuela</td>
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<td></td>
<td></td>
<td>Republic of Korea</td>
<td>1979</td>
<td>1981</td>
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<tr>
<td>Traditional methods of child spacing in African cultures</td>
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<td>Impact on health services of illegal abortion</td>
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<td>Resort to abortion instead of to contraception</td>
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<tr>
<td>Costs</td>
<td>Cost studies included in 8 studies above</td>
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<tr>
<td>Resources for health service research</td>
<td>Collaborating Centre for Service Research in Family Planning</td>
<td>Turkey</td>
<td>1978</td>
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