PHARMACOEPIDEMIOLOGICAL ASPECTS OF ORAL CONTRACEPTIVES FROM A FAMILY PLANNING CLINIC IN PENANG

by

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Thesis submitted in fulfillment of the
requirement for the degree of
Master of Science

December 1995

ACKNOWLEDGMENTS

A special word of thanks to my supervisor, Professor Dzulkifli A Razak for his patience, encouragement and guidance throughout the period of this research.

Much thanks to Dr Mohamed Izham B Mohamed Ibrahim without whose help and guidance in the use and assessment of statistics, this thesis would be incomplete.

Thanks and appreciation also to the staff and committee members of the Family Planning Association of Penang for their assistance and permission to use the clinic-data, and also to Isahak bin Ismail from the School of Computer Sciences who developed the computer based program for the study.

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LIST OF ABBREVIATIONS

CBR	Crude Birth Rate
CDR	Crude Death Rate
CIN	Cervical Intraepithelial Neoplasm
COC	Combined Oral Contraceptive
DUP	Drug Use Process
FFPAM	Federation of Family Planning Associations Malaysia
FPA	Family Planning Association
HAWA	Secretariat for Women's Affairs
IPPF	Internationall Planned Parenthood Federation
KAP	Family Planning Knowledge Attitudes and Practices
KEMAS	Kemajuan Masyarakat
MCH	Maternal and Child Health (Community Development)
NACIWID	National Advisory Council in the Integration of Women in Development
NCWO	National Council of Women's Organization
NFPDB	National Family Planning and Development Board
NPW	National Policy for Women
OC	Oral Contraceptive
OCs	Oral Contraceptives
POP	Progesterone Only Pill
STDs	Sexually Transmitted Diseases
WHO	World Health Organization

"ASPEK-ASPEK FARMAKOEPIDEMIOLOGI UBAT KONTRASEPTIF ORAL DARI KLINIK PERANCANG KELUARGA DI PULAU PINANG"

ABSTRAK

Sejumlah 961 rekod maklumat pesakit perempuan yang mengunakan ubat kontraseptif oral dipilih secara rawak untuk kajian dari salah satu klinik perancang keluarga di Pulau Pinang.

Objektif kajian ini ialah untuk menentukan corak pengunaan kontraseptif oral; untuk menyelidiki keberkesanan ubat, untuk menilai sistem maklumat dan pendidikan yang digunakan dalam program perancang keluarga, untuk memeriksa kepatuhan kepada regim kontraseptif oral dan takat perkhidmatan yang berkualiti.

Maklumat yang dikumpulkan untuk kajian ialah butir-butir peribadi pesakit, sejarah kontrseptif dan perubatannya termasuk kejadian kesan-kesan sampingan dan kesan-kesan buruk, ciri-ciri kepatuhan serta kadar dan sebab perciciran dalam pengunaan ubat kontraseptif oral.

Untuk tujuan analisa, satu perisian komputer telah dibentuk khas dengan mengunakan program Clipper. Ia juga boleh diguna untuk tujuan cabutan rekod maklumat pesakit untuk kegunaan seharian di klinik. Perisian komputer ini sesuai untuk penyelidikan lanjutan program perancang keluarga.

Hasil kajian menunjukan kadar kecicıran tinggi (66%) berdasarkan regim kontraseptif oral dan mereka yang tercicir masih lagi dalam lingkungan umur yang subur (92%). Pelunjuran dan saling kaitan data menunjukkan bahawa mereka yang menguna kontraseptif oral mengalami kesan-kesan sampingan (40%), tidak patuh kepada regim atau telah beberapa kali bersalin (28%) semasa dalam regim ubat. Kadar penguguran anak dalam lingkungan ini juga tinggi (14%). Pada keseluruhannya kajian ini menunjukkan bahawa perkhidmatan-perkhidmatan yang disalurkan menerusi program perancang keluarga boleh diperbaiki.

Berdasar pada keputusan kajian ini satu program kesihatan alternatif bagi wanita telah diwujudkan. Program ini merangkumi penyertaan pesakit, pendidikan semula kakitangan dan penggunaan audio-visual sebagai faktor-faktor penting yang boleh membawa pertukaran proses pengaliran ubat. Ini bertujuan memperbaiki corak pengunaan ubat diklinik. Program ini sedang dilaksanakan.

ABSTRACT

The patient information records of 961 women who were on oral contraceptives, were extracted for a study from the Family Planning Association Kampong Kolam Clinic, a major family planning clinic in Penang. The objectives of the study were :to determine the pattern of oral contraceptive use, to assess the effectiveness of these drug,s to evaluate the information and education systems used by the family planning program, to investigate compliance to the oral contraceptive regime and the extent of quality of care.

The information extracted for the study were patient characteristics, contraceptive history, medical history inclusive of occurrence of side effects and adverse effects, compliance characteristics as well as rates and reasons fordiscontinuation.

For the purpose of the analysis, a computerized system was specially developed using a Clipper system. The computer program developed is also suitable for continuous monitoring of the family planning program for future research purposes. It can also be utilized for quick retrieval of patient information records for day to day use at the clinics.

The results showed a high rate of discontinuation (66%) from the oral contraceptive regime, and that those who discontinued were still in the fertile age group(92%). Extrapolation and interrelation of data showed that those women on the oral contraceptive had experienced side effects (40%), were non-compliant or had had a number of deliveries (28%) during their regime. The number of abortions (14%) amongst this group of women was also high. Overall, the study indicated that the services provided by the family planning program, in particular with the use of oral contraceptives, can be further improved.

Consequently, an alternative women's health program was developed based on information gathered from the study. It looked at patient participation, staff re-education and audio-visual development as major factors to bring about change in the drug delivery process. It is aimed at improving the drug use pattern at the clinic in particular. This program is being implemented.

1.0 INTRODUCTION

1.1 A Demographic Overview

Since Independence the Malaysian Government has had vigorous socio economic programs, launching eight development plans since 1955 (the First and Second Malaya Plans, and the First to Sixth Malaysia Plans). Recent major policy goals has shifted from emphasis on agricultural and rural development to eradicating poverty and narrowing the economic and social gap between ethnic groups without jeopardizing the nations rapid economic growth based largely on enterprise in the manufacturing for export sectors. This new emphasis is guided by the New Economic Policy launched in 1971.

Development has been remarkable with a per capita GDP of about RM4392 in 1990 and a mean monthly household income of RM1254 making Malaysia one of the more affluent countries in the Third World.[1]

Health services at urban areas are well developed. Although basic health services has been extended to the rural and less developed regions, access to service and quality of care in these areas can still give cause for concern.

Health indicators for the country (Table1.1) during the eighties show a rapid decrease in maternal, infant and toddler mortality. Although there has been a decrease in the number of doctors per thousand population and the number of health centres per rural population, there has been an increase in the life expectancy of both males and females.

Secondary school enrollment is more than 75% at the moment, and in 1980 almost half of the women within the study group were in the labor force.[1]

Table 1.1 : Health Service Indicators in Malaysia 1980 and 1989

Indicator	1980[2]	1989[3]
Doctor per 10000 population	2.8	2.6
Dentist per 10000 population	0.5	1.2
Hospital beds per 1000 population	1.7	1.3
Rural population per health center ('000)	25.8	19.7
Rural population per midwife/village clinic	4300	4853
Life expectancy :		
male	66.7	69.5
female	71.6	73.9
Infant mortality (per 1000)	19.7	13.2
Toddler mortality (per 1000)	1.8	1.01
Maternal mortality (per 1000)	0.6	0.2
Crude death rate	4.7	5.3

1.1.1 Population Growth

In line with its social economic growth, the government also developed policies to cover its demographic changes throughout its history.

Population growth in Malaysia can be divided into two distinct phases : the first covering the period up to the Second World War, characterized by large scale immigration of Chinese and Indians; the second, from 1947 to the present, is characterized predominantly by natural increase[4].

The first census in 1911 recorded a population of just over a million for the four Federated States of Perak, Selangor, Negri Sembilan and Pahang. The growth rate only fell to below 2% during the period of 1931 - 1947 in Peninsula Malaysia largely as a result of world wide depression, as seen in Table 1.2 and Table 1.3.

The trend in Peninsular Malaysia is a slowing down of population growth since independence. Sabah and Sarawak on the other hand, have been experiencing high growth rates (Table 1.3).

Table 1.2 : Population of Malaysia 1817 -1990

Year	Penang and Malacca	Federated States	All Peninsular Malaysia	Sabah	Sarawak
1817	60867	---------	---------	----	
1833[4]	120614				
1815[4]	170428				
1860[4]	192039				
1871[4]	210686				
1881[4]	281824				
1891[4]	324173	746297		67062	
1901[4]	339581	1022289		104527	
1911[4]	396328	1442060	2339051	14729	
1921[4]	447906	1785273	2906691	277476	
1939[4]					490585
1947[4]	658677	2868249	4908086		546385
1951[4]					334147
1957[4]	863311	3775268	6278758		
1960[4]				454412	744529
1970[4]	1180492	5354887	8809557	650450	976269
1980[4]	1419400	5670200	10944844	0 11000	1307600
1990[5]			14620000	1473000	1670000

Table 1.3: Rate (per 1000) of population change, Malaysia 1911 - 1980[6]

Year	Malaya 1911-63 Malaysia 1963 onwards	Peninsula Malaysia	Sabah	Sarawak
1911-1921		2.2		
1921-1931		2.6		
1931-1947		1.6		
1947-1957	2.5	2.5	2.5	2.4
1960-1970	2.6	2.5	3.6	2.7
1970-1980	2.4	2.2	3.8	2.6
1980-1990	2.6	2.3	5.7	2.6

Between 1947 and 1980, five distinct periods of natural increase can be observed in Peninsular Malaysia[4] as shown in Table 1.4 :

a During the decade 1947- 1956 the death rate fell sharply while the birth rate tended to increase. The rate of natural increase consequently climbed from less than 20 per thousand to almost 35 per thousand annually;

b Between 1957 and 1964, the crude birth rate (CBR) and crude death rate (CDR) gradually declined. The rate of natural increase remained at about 30 per thousand but tended to decline slightly. This was the turning point in Malaysian demographic trends when both the birth rate and the death rate began to decline.

c Between 1965 and 1970, the decline in the CBR outpaced the decline in the CDR.The rate of natural increase sank to about 25 per thousand a year.

d Between 1970 and 1980, the decline in the birth rate slowed down considerably falling from 32.5 per thousand in 1970 to 30.3 in 1980

e The eighties saw a rapid rise in CBR, probably due to the introduction of the New Population Policy i.e. the 70 million policy. This was followed by a steep decline in 1990 when the CBR dropped to 27.0

1.1.2 Natural increase

The rate of natural increase for Malaysia as a whole declined from about 30 per thousand in the early 1960's to 24 per thousand by 1978. More recently however the downward trend has appeared to reverse itself as the rate of natural increase climbed to 25.8 in 1984 and 26.4 in 1990[5,6,7,8].

Prior to the onset of the fertility decline, the Chinese and Indian had considerably higher fertility rates than the Malays in Peninsula Malaysia. In 1957 the total fertility rates were 6.0 for Malays, 7.1 for Chinese and 4.8 for Indians. However by 1985, the total fertility rate for the Malays was 4.8, the Chinese 2.7 and the Indians 2.9.

Table 1.4 : Crude birth rates, crude death rates and natural increase Peninsular Malaysia 1957 - 1990

Year	Crude birth rate per 1000	Crude death rate per 1000	Rate of natural increase per 1000
1957[9]	46.2	12.4	33.7
1958[9]	43.2	11.0	32.3
1959[9]	42.1	9.7	32.7
1960[9]	40.9	9.5	31.4
1961[10]	41.8	9.2	32.6
1962[10]	40.3	9.3	31.0
1964[10]	39.1	8.0	31.0
1965[10]	36.7	7.9	28.8
1966[10]	37.3	7.6	29.7
1967[10]	35.3	7.5	27.8
1968[10]	35.4	7.6	27.8
1969[10]	33.3	7.3	26.0
1970[10]	32.5	7.0	25.5
1975[7]	30.3	6.2	24.1
1980[7]	30.3	5.5	24.8
1985[7]	31.3	5.3	26.0
1990[8]	27.0	4.9	26.4

In Peninsular Malaysia, the proportion of women in the child bearing age increased from 22 per cent in 1957, to 23.9 per cent in 1970 and to 25 per cent in 1980[6].

1.1.3 Age at First Marriage

Age at first marriage has increased steadily as shown in Table 1.5. The proportion of currently married women in the child bearing ages has also declined for each age group since 1975. The decline was concentrated substantially in the youngest ages (17 to 19 years old), in particular for Malays and Indians. This implies a continuous fertility decline.

Table 1.5 : Median age at first marriage for selected birth cohorts and ethnic groups, Peninsular Malaysia 1980 (Females)[11]

Year of Birth	Malay	Chinese	Indians	Others	Total
1921-1925	17.2	20.1	18.3	20.0	18.3
1936-1930	17.2	20.5	18.4	20.2	18.4
1931-1935	17.4	20.9	18.3	20.2	18.4
1936-1940	17.7	21.9	18.5	20.5	19.0
1941-1945	18.1	22.7	18.8	21.2	19.7
1946-1950	19.0	23.1	19.8	21.7	20.6

1.1.4 Crude Death Rate

The crude death rate in the peninsula declined steadily from 12.4 per thousand population in 1957 to 5.3 per thousand by 1985. In 1957, 75 out of every 1000 live births did not survive to the first birth date but the rate has come down to 14.5

by 1989. Causes of death are now characterized by the pattern prevailing in developed countries. In 1984, the 5 major causes of deaths in government hospitals were heart disease, accidents, diseases of early infancy, cardio-vascular diseases and neoplasm, in that order[21].

1.2 Provision of Family Planning Services

The sharp rise in fertility in the postwar era created an awareness amongst certain sectors of the population of the need for family planning services. The first voluntary Family Planning Association (FPA) was established in 1953 in Selangor. Each of the states had formed voluntary FPAs by 1962. The Federation of Family Planning Associations of Malaysia (FFPAM) was formed in 1958 and became affiliated with the International Planned Parenthood Federation in 1961. The FFPA's function is that of central coordinating and liaison with government and other international bodies.

This voluntary movement has been receiving an annual grant of $RM200,000 from the federal government through the Social Welfare Services Lotteries Board.

The official view on family planning developed only in the early sixties. In November 1964 a special cabinet sub-committee was formed to review population trends and their impact on the country's social and economic development. The report submitted by the committee was accepted by the full cabinet in middle of 1965.

1.2.1 Family Planning Bill 1966

In March 1966 the Family Planning Bill which was presented to Parliament as the Family Planning Act No. 42 of 1966 received royal assent. The National Family Planning Board (NFPB) was established in June 1966, under the Prime Minister's Department, as an interministeral group having statutory power and a certain degree of autonomy. The establishment of the NFPB enabled detailed objectives, programs, plans concerning population and family planning to be developed and executed.

The population and family planning program has become an integral component of the five-year development plans. The three major objectives of the program are :

a to improve the health and welfare of the family through voluntary acceptance of family planning

b to increase per capita income from RM90 to RM1500 by 1985

c to reduce the population growth from about 3 percent in 1966 to 2 percent in 1985.

The First Malaysia Plan (1966-70) was historic in not only stressing the importance of family planning to ensure that nation, social and economic well-being was not jeopardized, but also in establishing a numerical target in population policy with anticipated reduction in population growth rate from 3 percent in 1966 to 2 percent by 1985.

1.2.2. The National Family Planning Board

The National Family Planning Board (now National Population and Family Development Board) as overall coordinator, is responsible for organizing, directing, administering and coordinating family planning and population related activities in the country. Until 1973, the board adopted the contraceptive clinic approach using medical and paramedical personnel in the delivery of services. This was replaced by the multisectoral and multidisciplinary integrated approach with special emphasis on family development and family welfare.

The Board opened its first clinic in 1967 and implemented its program in 5 Phases[6] :

Phase I (1967/1968): dealt with large municipalities that had maternal hospitals, selected rural health centres and pilot study areas.

Phase II (1969) : dealt with small towns and adjoining rural health centres.

Phase III (1970/ 1972) : dealt with the remaining health centers, integrating family planning services with the Ministry of Health's maternal and child health services.

Phase IV (1973/1975) : provided additional coverage in relatively remote rural areas using mobile units, traditional birth attendants as motivators and service providers.

Phase V since (1976) : consolidates and strengthens urban services and completing integration with Ministry of Health clinics by 1996.

The integration program was carried out in 1971 to functionally integrate family planning services into the rural health services of the Ministry of Health, so that family planning can be provided as part and parcel of the total family health package, in order to make family planning more acceptable to people, especially in rural areas. This integrated package health service would include the provision of family planning, nutrition, health services and family development through community oriented activities and services. Through this multidisciplinary approach, family planning clinics and, maternal and child health services all over the country were considerably strengthened. The Board would be able to overcome the constraints of lack of trained personnel, facilities and resources in the implementation of the third and fourth phases of the National Programe[6].

Funding for family planning programs during this period was substantial, with the World Bank contributing $US42 million between 1973 and 1982.

In addition there were loans from the UN fund for population activities[12].

1.2.3 Long-term Objectives of NFPBD

Contraceptive service delivery is presently provided by :

a the Board and the FPA in urban areas, and

b the Ministry of Health through the maternal and child health systems of the rural health centres in rural areas

The long-term objectives of the National Family Planning program as stipulated in the Outline Perspective Plan was to reduce the crude birth rate from 37.3 per thousand population in 1966 to 26.0 per thousand population in 1985. Table 1.6 shows the plans made to achieve this and the results of the Malaysia Plans, providing a measure of the programme's effectiveness.

The program has achieved more than a million acceptors to its credit[34]. Number of new acceptors rose steadily from 1971 to 1979. Subsequently a marked decline set in, attributed to the increasing roles played by non-program sectors and the changes in program thrust. There had been a steady increase in the number of doctors in the country, larger numbers going into private practice and offering contraceptives to more affluent populations as shown in Table 1.7.

Table 1.6 : Targeted and actual crude birth rates and number of new acceptors, Peninsular Malaysia, 1966 - 1985[6,2]

Period	Birth Rate		New Acceptors	
	Targeted	Actual	Targeted	Actual
First Malaysia Plan (1966 - 1970)	37.2- 35.0	32.5	343350	273720
Second Malaysia Plan (1971 - 1975)	32.5-35.0	30.0	535000	433300
Third Malaysia Plan (1976 - 1980)	30.0-28.2	30.3	817963	538761
Fourth Malaysia Plan (1981 - 1985)	30.3-26.0	30.6	731950	500000

Table 1.7 : Percentage of doctors in the public and private sector, Malaysia 1980 - 1989[13]

Sector	Year							
	1980	1981	1982	1983	1984	1985	1986	1989
Public	53.4	50.4	48.0	45.7	45.7	45.1	41.6	42.3
Private	46.6	49.6	52.0	54.3	54.3	54.9	58.4	57.7

Oral contraceptives remained the main stay of the program, although its proportionate share has declined from 90 percent in the early years of the program to 70 percent in the late 1980s and early 1990s.

1.3 The New Population Policy - 70 million by 2100

The implementation of the National Family Planning and Development Board (NFPDB) programs, in conjunction with rapid and unprecedented social and economic development, has brought about a continual decline in the country's birth rate. The diffusion in contraception knowledge and its widespread practice has resulted in the decline in marital fertility, which was a major factor in contributing to the reduction in crude birth rate[14]. Official demographic projection in 1984 was that the population would stabilise at 39 million by the year 2150 if current fertility trends continued[15].

Nevertheless, a new population policy was announced in the mid-term review of the Fourth Malaysia Plan (1981-1985). The government announced that the

country's demographic trends should change and the country could aim for a larger population of 70 million people by the year 2100. The rationale for this new policy is clear from the following statement :

> ".....Malaysia's population is relatively small and the nation has the capacity to generate the wealth that will support a much larger population. The domestic market is also relatively small and this has also put constraints on the development of industries. Recognizing that a large population constitutes an important human resource to create a large consumer base with increasing purchasing power to generate and support industrial growth to productive exploitation of national resources.
>
> Malaysia could, therefore, plan for a larger population which could ultimately reach 70 million. The experience of some countries of similar size to Malaysia has shown that a large population is not necessarily a liability if the population is provided with the skills that can be effectively and productively utilized for national development." [16]

Although it was no longer the aim of the government to achieve a reduction in population growth rate to 2 percent by 1985, the total fertility rate in Malaysia is targeted to decline by 0.1 child every 5 years until the population reached replacement level[15].

To achieve a stable population of 70 million by the year 2100, the total fertility rate is expected to decline from 4.0 in 1980 to 3.6 in 1990, to 3.5 by 2000 and finally reaching the replacement level of 2.05 by 2070.

1.3.1 Impact of the New Population Policy on Women

The policy proposed to slow down the rate of fertility decline mainly by encouraging more women to marry and have children. Concern was expressed by the ad hoc Committee on Population Issues that only 69 percent of women of 15 years and above were married and that this proportion was slowly decreasing.

The strategy proposed by the committee was the promotion of a national family development program aiming at strengthening the family and encouraging greater stability through fewer divorces, earlier age of marriages, more marriages and support services such as family counseling. Incentives for child bearing were also recommended and instituted.

Although the impact of population growth on development was to be closely coordinated through specific policies in sectors such as economic development, manpower, social welfare, food and agriculture, energy and environment, women were not mentioned as a sector requiring special attention. In fact, according to this document, women were required to be economically productive and rear and manage a larger family at the same time[17].

1.4 The Status of Women and Women's health

1.4.1 Population

Women comprise nearly 50 percent of the population of Malaysia, although the state of Penang has always had a higher ratio of women to men (Table 1.8). This

ratio was the highest in the early 80's with the state's industrialization policy pulling in masses of young women from the mainland to work in their factories.

Over the last decade, distribution of population in Penang shown a marked shift from Georgetown to Bayan Lepas and Paya Terubong, both new townships on the island. Mainland townships like Bukit Mertajam in Sebarang Perai Utara also show large growths in population (Table 1.9). The pull of Bayan Lepas and Bukit Mertajam is the rapid industrialisation of these areas, offering jobs and new satelite townships. These industrial townships would have large amounts of young women, in active reproductive age groups, in need of quality and effective health care facilities.

Table 1.8 : Population In Malaysia and Penang 1991[18,19]

	Male	Female
Malaysia	8,861,126	8,705,858
Penang	525,994	539,081

Table 1.9 : Breakdown of population in Penang by administrative districts [18,19]

Administrative District	1980 Total	1991 Male	1991 Female	1991 Total
S.P.Tengah	161975	117440	118879	236319
S.P.Utara	199449	112341	113428	225769
S.P.Selatan	71558	420134	42555	462689
Timur Laut				
Paya Terubong	73125	52474	56252	108726
Bkt P. Terubong	2796	829	899	1728
Bkt Ayer Itam	34580	13282	14293	27575
Batu Feringgi	238250	18648	19622	38270
Georgetown	76390	105173	107232	212405
Barat Daya	35411	60123	63064	123187
Bayan Lepas		34791	37265	72056

1.4.2 Infant and Maternal Mortality

Table 1.10 : Infant and Maternal Mortality 1970 - 1990[5,9,10]

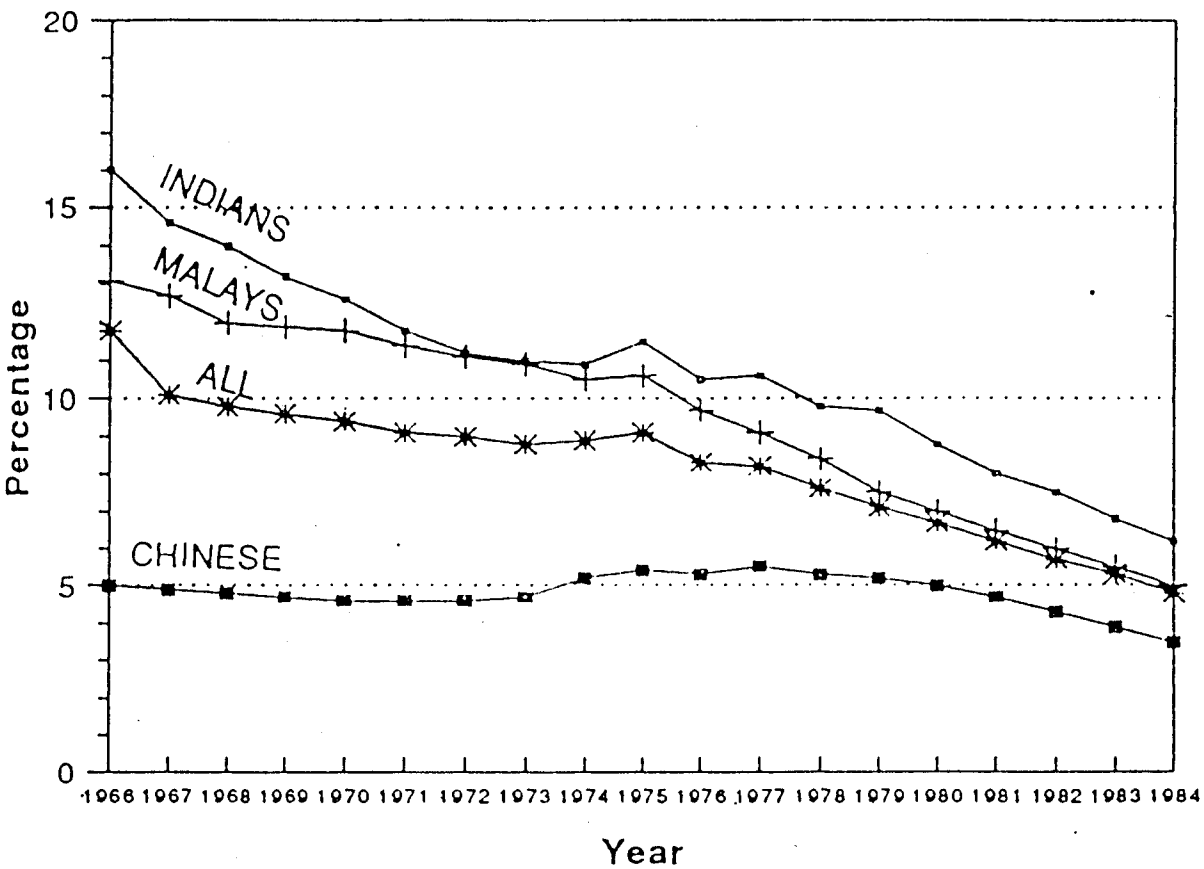
	Infant Mortality				Maternal Mortality			
	1970	1980	1985	1990	1970	1980	1985	1990
Malaysia	39.4	23.9	16.5	13.2	t.m.	0.60	0.30	0.19
Penang	38.0	20.2	13.8	10.2	0.72	0.40	0.30	0.16

Both maternal and infant mortality has fallen steadily through the years Table 1.10) due partially to the good public health services and infrastructure both left as a colonial legacy and a present government policy. Maternal mortality for the state of Penang in 1980 was 0.4 compared to 0.6 for Malaysia for that same year, that is, Penang had a lower maternal mortality. The case is similar for infant mortality, that is 20.2 in 1980 for Penang while the country showed 23.9 and 10.2 in 1990 for Penang while the country showed 13.2. (Malaysia has been praised by organiations such as WHO and UNICEF for its excellent progress towards achieving the goals of primary health care.) This is also a reflection of the efforts made by the government to ensure better health care for women and children. Another reason for the lowering of maternal mortality is the increasing age at first marriage of the women and subsequently, her older age when having her first child.

Figure 1.1 showes that the percentage of teenage births (high risk pregnancy) has decreased from 12 percent in 1966, to 5 percent in 1984[7].

During the period 1967 to 1969, Ariffin and Thamboo (1973) noted that the chief causes of deaths of women in pregnancy in hospitals in Malaysia was haemorrhage (43 percent), followed by toxemia (13 percent) and infection (5-10 percent)[20].

Fig 1.1: Percentage teenage births to all births by ethnicity Peninsular Malaysia, 1966-84[21]



1.4.3 Births Attended by Health Personal

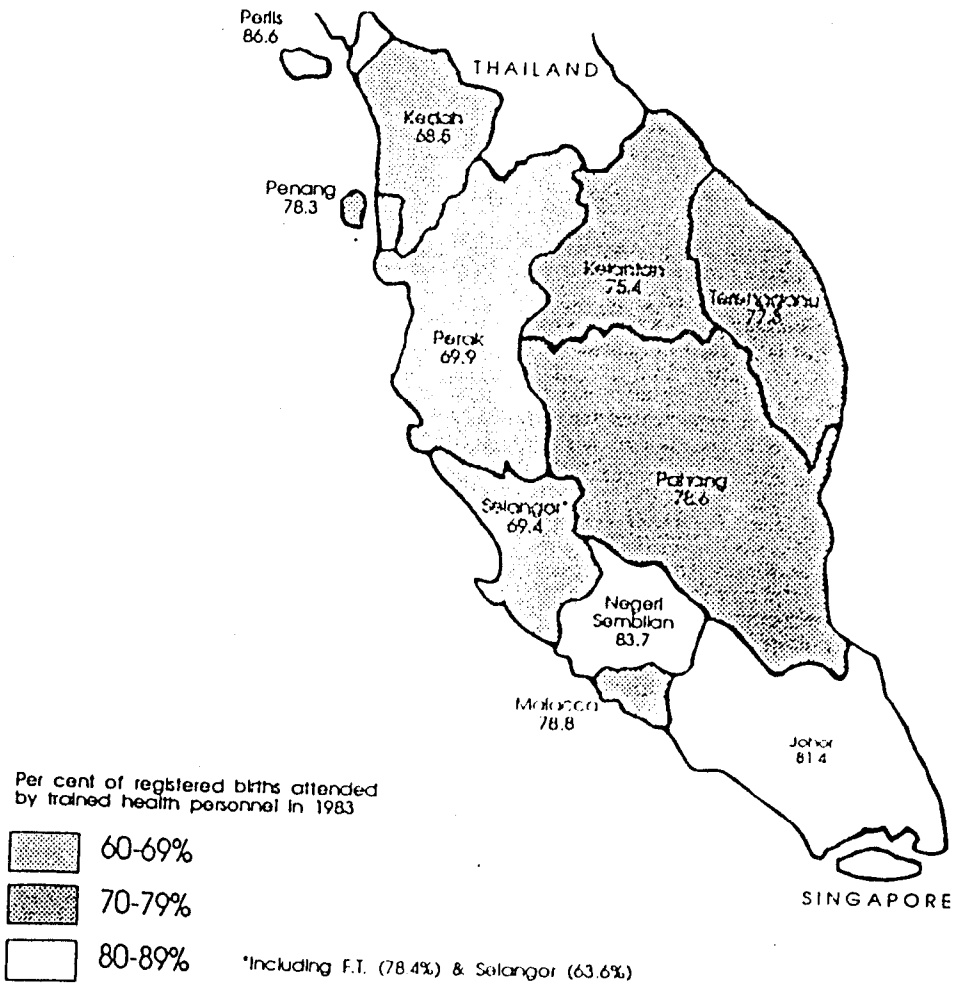
The percentage of births attended by trained health personnel for Peninsular Malaysia in 1983 is considered high (73 percent) for a developing country[21]. Fig 1.2 shows that Penang has one of the highest percentage of births attended by health personnel, a reflection on the availability of relatively good health care

services for women in the state. (The doctor to patient ratio for the state is 1:1815 in 1990 as compared to the overall country ratio of 1:2560 in that same year)

1.4.4 Cancers in Women

Although there is no cancer registry in Malaysia, a comparison of the studies of Marsden ATH[22], Armstrong RW and Ahluwalia HS[23], Lim HH[24], and Chong SM[25], show that the two most important cancers are those of the uterine cervix and the breast. Together they form almost one-third of all malignancies in women.

Fig 1.2: Percent of Registered Births Attended by Trained Health Personnel according to Geographical Location in Peninsular Malaysia, 1983[21]



1.4.5 Status of Abortion in Malaysia

Previously the law on abortion in Malaysia set out in Sections 312-316 and 512 of the Penal code, permitted abortion only when the woman's life is endangered by the pregnancy. An amended statute was enforced in May 1989, (Federated Malay States Cap. 45 section 312 Exception May 1989) and provides that an abortion would not be an offence if :

- a medical practitioner registered under the Medical Act undertakes the procedure, and
- such practitioner is of the opinion, formed in good faith, that the continuance of the pregnancy would involve greater risk to the life of the pregnant woman or injury to her mental or physical health than if it were terminated

The 1966 West Malaysian Family survey revealed that at least one percent of the women interviewed admitted to having one induced abortion during their reproductive life.

The 1974 Malaysian Fertility and Family survey noted that 2.5 percent of respondents reported ending unwanted pregnancies[26].

The maternal health and early pregnancy wastage in Peninsular Malaysia study, conducted in 1977 disclosed that approximately 7.6 percent of young women (between the ages of 15-19) have had induced abortions[27].

Thus incidence of induced abortion is high, although hidden, and this will be of great relevance when considering both future sexuality and reproductive health education and services for the women of Malaysia.

1.4.6 Life Expectancy

Table 1.11: Life expectancy of women in Malaysia (1957 - 1990)[28]

Year	1957	1970	1980	1990
Life expectancy in years	58.2	68.2	70.5	73.9

The life expectancy of women in Malaysia has also increases from 58.2 years in 1957, to 73.9 years in 1990, i.e. over a period of 32 years. This again reflects better living and health conditions for women in Malaysia.

1.4.7 Labour Force Participation Rate

As a result of the increased educational status of women, a larger proportion is entering the labor force (Table 1.12). This is also a result of the ongoing efforts by women's groups in the country to raise the status of women, culminating in the present government policy for the incorporation of more women into the labour force.

Table 1.12: Women's Labour Force Participation in Malaysia

Year	1970	1990
Labour Force Participation (%)	37.2	46.7

The trends towards a larger number of women entering the employment sector is further reflected in the employment trends for the years 1970 and 1990 where the employment of women increased from 31 percent to 35 percent, while that of men decreased from 69 percent to 65 percent for the same period of time.

Unfortunately, the overall female employment remained low largely attributed to the lack of appropriate skills and competing demands at home.

1.4.8 Female education status

Female admission into universities constituted about 44 per cent of total intake during the Fifth Malaysia Plan period.

Table 13 : Education Level Percentage enrolment of female students according to level and stream of education 1970 - 1990[2]

Level of education	1970	1980	1990
Primary	46.8	48.6	48.6
Secondary	40.6	47.6	50.5
Post secondary	42.6	45.5	59.3
University	29.1	35.5	44.3
Polytechniques	13.2	21.5	25.2
Teacher Training	41.9	48.3	56.1
Mara Institute of education	32.4	42.9	45.8
TAR College	23.5	33.9	37.2
StreamsArts	47.4	61.0	64.8
Science	24.5	36.3	44.7
Vocational	24.2	30.4	22.0
Technical	4.3	27.1	35.9

Although the above figures are impressive in terms of the achievements of women in general, little has been planned for the development of better, gender-oriented health care services for women. Government health care services for women has focused primarily on maternal health and reproductive health.

1.5 Government Policies and Institutions for Women

The government created a number of institutions to integrate women into the mainstream of development. The National Advisory Council on the Integration of Women in Development (NACIWID) was set up in the Prime Minister's Department in 1976 to translate the world plan on women and development into a national context. In 1983, a Secretariat for Women's Affairs, HAWA, was established to monitor and evaluate services for women provided by the public and private sectors. HAWA also functions as secretariat for NACIWID

To further facilitate the involvement of women in economic activities, Kemajuan Masyarakat (KEMAS), a government organization for community development, was set up. This was followed by the establishment of Amanah Ikhtiar Malaysia, a non government trust agency which, although the agency was not wholly organized by or for women, found that the majority of the clientele of the AIM's credit scheme were women, who were better debt payers.

Six years later, in 1989, when it became obvious that women had to be actively involved in the development of the nation, a National Policy for Women (NPW) was formulated. Its overall objectives are :

- to ensure equitable sharing in the acquisition of resources and information as well as access to opportunities and benefits of development, for both men and women, and

- to integrate women in all sectors of national development in line with their abilities in order to improve the quality of life, irradiate poverty, abolish ignorance and illiteracy, and ensure a peaceful and prosperous nation.

HAWA was given the task to formulate a plan of action in order to put into effect the various recommendations of the NPW. The government has set aside an allocation of RM20 million in the Sixth Plan to support programs and projects to be implemented by HAWA.

Following the announcement of the NPW, the National Council of Women's Organizations (NCWO), the largest mainstream federation of women's Organizations in the country, developed a national plan on women in 1991[29].

This document strives to formulate an action plan on health for women with the formation of a commission on health. This action plan calls for the establishment of a National Health Plan within the framework of the Health Ministry and also hopes to lobby for gender sensitizing programs on women's health and their special needs.

The document identifies the need for the establishment of support groups on reproductive health services and informed choice as one of the needs in the area of women's health. However, this specific need has not been given high priority.