# A STUDY OF KNOWLEDGE, ATTITUDE AND PRACTICE TOWARDS CONTRACEPTION AMONG NURSING STAFF IN DISTRICT KOTA BHARU

BY:

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**DISSERTATION SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF MEDICINE (FAMILY MEDICINE)**

**UNIVERSITI SAINS MALAYSIA**

**MAY 2002**

# ACKNOWLEDGEMENTS

I wish to express my sincere thanks and appreciation to the following, without which this dissertation would have not been possible:

School of Medical Sciences, Universiti Sains Malaysia, Kelantan Campus for giving me the incentive grant to help me to complete this study.

Dr. Shaiful Bahari Hj Ismail, my supervisor, as the Head of family Medicine Unit, USM for his guidance, comments and criticisms of the study.

Dr. Sheikh Mohd. Amin Sheikh Mubarak, as a family physician and my previous clinical supervisor for his excellence guidance and advice during the proposal and also piloting of the study.

Dr. Amaludin Ahmad, also my previous supervisor, a lecturer in Family Medicine Unit for his valuable advice and constant guidance during the initial part of the study.

Dr. Nik Noor Azmi Mohd. Yunos, as adjunct lecturer in Family Medicine Unit (USM) for his valuable advice and comments of the study.

Dr. Mary Abraham, the director of Hospital Kota Bharu for allowing me to carry out the pilot studies at Hospital Kota Bharu.

Dr. Hamzah Awang Mat, Medical Officer of Health 1, District Health Office Kota Bharu, for allowing me to conduct the study in government health clinics under his administration.

My colleagues, Dr. Suhaiza and Dr. Noran, Master Students of Community Medicine for their guidance and assistance during data analysis.

All the medical and health officers of the health clinics in Kota Bharu District, for their co-operation, kindness and assistance during the study period. Also to all the nursing staffs, which participate in this study, your co-operation is very much appreciated.

Last but not least, my greatest gratitude to my dear husband, and my sons for the assistance, supports, patient and encouragement throughout this study period.

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## ABBREVIATIONS

| | |
|---|---|
| DMPA | Depot medroxyprogesterone acetate |
| Et al | and the rest |
| FDA | Food and Drugs Administration |
| FFPA | Federation of Family Planning Association |
| FFPAM | Federation of Family Planning Association Malaysia |
| FPA | Family Planning Association |
| HIV | Human immunodeficiency virus |
| IPFA | International Planned Parenthood Federation |
| IUCD | Intrauterine contraceptive device |
| LAM | Lactational amenorrhea method |
| N | Number of respondents |
| NET- EN | Norethisterone enanthate |
| NGOs | Non-government Organisations |
| NPFDB | National Population and Family Development Board |
| SD | Standard deviation |
| SPSS | Statistical Package for Social Science |
| USA | United States of America |
| USM | Universiti Sains Malaysia |
| WHO | World Health Organisation |

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# ABSTRACT

## ABSTRAK

**Tajuk** : Kajian tahap pengetahuan, sikap dan amalan tentang perancang keluarga (kontraseptif) di kalangan kakitangan kejururawatan di klinik-klinik kesihatan di Daerah Kota Bharu.

**Tujuan** : Kajian ini adalah bertujuan untuk mengkaji tahap pengetahuan, sikap dan amalan tentang kontraseptif di kalangan kakitangan kejururawatan di klinik-klinik kesihatan kerajaan di Daerah Kota Bharu.

**Kaedah** : Ini adalah kajian hirisan rentas yang melibatkan 186 kakitangan kejururawatan yang bertugas di klinik-klinik kesihatan kerajaan di Daerah Kota Bharu iaitu jururawat, jururawat masyarakat, penolong jururawat dan bidan kerajaan. Kakitangan kejururawatan ini akan diberi borang soalselidik isi-sendiri yang telah diuji melalui pegawai perubatan yang menjaga klinik. Mereka hendaklah menjawab soalselidik tersebut dan menyerahkannya kepada pegawai perubatan yang menjaga klinik pada hari yang sama atau keesokannya apabila siap.

**Keputusan** : Kesemua responden adalah berbangsa Melayu. Kebanyakan daripada mereka sudah berkahwin dan mempunyai jumlah pendapatan keluarga melebihi RM1,500.00. Jururawat masyarakat adalah yang paling ramai terlibat dalam kajian ini. Lebih daripada separuh responden bekerja lebih dari 10 tahun.

Kebanyakan responden mendapat skor tahap pengetahuan yang sederhana dan jururawat mendapat purata skor tahap pengetahuan yang paling tinggi..

Lebih kurang satu pertiga responden sedang mengamalkan mana-mana kaedah kontraseptif dan kebanyakan daripada mereka menyukai pil perancang. Sebanyak 15 % daripada responden mengamalkan kaedah kontraseptif tradisional. Jururawat adalah yang paling ramai mengamalkan kontraseptif. Terdapat perhubungan/ kaitan yang bermakna di antara tahap pengetahuan dan amalan kontraseptif.

Kebanyakan responden mempunyai sikap yang positif terhadap kontraseptif moden. Walau bagaimanapun, sebanyak 10 % daripada responden merasakan bahawa kaedah kontraseptif tradisional adalah berkesan untuk mencegah kehamilan dan patut digalakkan.

Hanya 20.0% daripada responden pernah mendengar/ tahu tentang kontraseptif kecemasan dan jururawat adalah yang paling ramai tahu mengenainya. Di kalangan mereka yang pernah mendengar tentang kontraseptif kecemasan, kebanyakannya mempunyai tahap pengetahuan yang lemah dan hanya 17.1 % pernah mengamalkannya.

**Kesimpulan** : Kejayaan program perancang keluarga adalah bergantung kepada kakitangan kejururawatan ini. Memandangkan tahap pengetahuan mereka masih lagi rendah tetapi mempunyai sikap yang positif terhadap amalan perancang keluarga, langkah pertama yang perlu diambil untuk mencapai kejayaan dalam program ini adalah

dengan membekalkan pengetahuan yang lebih banyak kepada kumpulan sasaran pekerja-pekerja kesihatan ini. Mereka hendaklah diajar dan ditunjukkan teknik/ kaedah yang betul jika sekiranya kejayaan ingin dicapai. Sebahagian daripada cara untuk mempertingkatkan keadaan yang sedia ada ini adalah dengan memperbanyakkan kuliah tentang kontraseptif semasa kursus kejururawatan, kursus-kursus perancang keluarga yang lebih kerap dan menyeluruh kepada semua kakitangan kejururawatan di samping membekalkan kepada mereka panduan klinikal yang terkini.

## ABSTRACT

**Title** : A study of knowledge, attitude and practice towards contraception among nursing staff in district Kota Bharu.

**Aim** : The aim of this study is to asses the knowledge, attitude and practice of contraception among nursing staffs in government health clinics in Kota Bharu District.

**Method** : This study was a cross sectional study involving 186 nursing staffs employed in government health clinics in Kota Bharu that included staff nurses, community nurses, assistant nurses and midwives. These nursing staffs were given pre-tested and pre-structured self-administered questionnaire via the medical officer in charge of the health clinic. They had to complete the questionnaire and returned it on the same day or the next day to the medical officer in charge of the clinic.

**Result** : All of the respondents were Malays. Majority of them were married with total family income of more than RM1500.00. Community nurses were the commonest nursing category involved in this study. More than half of the respondents worked for more than 10 years.

Majority of the respondents had only moderate knowledge score and staff nurses had the highest mean knowledge score.

About one third of the respondents were currently practicing any method of contraception, with majority of them preferred oral contraceptive pills. However, about 15 % of them were practicing traditional methods of contraception. Staff nurses were the commonest nursing staff practicing contraception and there was significant association between level of knowledge and contraceptive practice.

Majority of respondents had good attitude toward modern contraceptive methods. However, about 10% of the respondents felt that traditional methods were effective for preventing pregnancy and should be encouraged.

Only 20.0% of respondents were aware/ had heard of emergency contraception and majority of them were staff nurses. Among those who had heard of emergency contraception, majority of them had poor knowledge and only 17.1% of them had practiced it.

**Conclusion** : The entire family planning programme actually hinges on these nursing staffs. Since their knowledge is still lacking but having positive attitude toward contraception, the first step towards achieving success in the family planning programme lies in imparting more information to this target group of health care workers. They have to be educated and guided in the right direction if any measure of success is to be achieved. Inclusion of more lectures in the nursing syllabus, more frequent and thorough

refresher courses for all these nursing staffs besides providing them with updated clinical guidelines are some of the ways in which the existing situation can be improved.

# Chapter 1

# INTRODUCTION

# 1. INTRODUCTION

Each year more than 150 million women become pregnant and more than 15 percent or 23 million women develop complication needing skilled treatment (Craft N, 1997). Over half a million women die each year from causes related to pregnancy and childbirth, mostly in the developing world. Almost all of these deaths are preventable with existing knowledge and technology.

Malaysia, with a population of about 21.6 million has a fairly high crude birth rate of 25.6, infant mortality rate of 9.5, perinatal mortality rate of 9.1 and maternal mortality rate of 0.7. These indices are much more higher in the state of Kelantan than the national average. Kelantan, with a population of about 1.5 million have a crude birthrate of 29.6, infant mortality rate of 9.7 and maternal mortality rate of 0.9 (Laporan Teknikal, 1998).

Reproductive and sexual health care including family planning services and information is recognized as a key intervention for improving the health of women and children. Family planning is one of the most effective ways to ensure that women and children will continue to share good quality of life. Family planning has also been proved to be one of the most effective strategies towards the reduction of maternal death. Family planning can be used for both the spacing and limitation of birth. With family health every member within the family can be developed and utilized for the benefit of society in general. Even in the United States, the hallmark of family planning is the ability to

achieve desired birth spacing and family size. It is known that smaller families and longer birth intervals have contributed to the better health of infants, children and women, and have improved the social and economic role of women. Studies have shown that women who become pregnant while they are still very young have a much higher risk of complications during pregnancy and childbirth than women in their 20's (Maine D, 1981). The same is true for women who become pregnant near the end of their reproductive period (Craft N, 1997).

The spacing of pregnancy is also very important as too close or too far a gap will have an effect on not only to the mother but also the infant. Both short (less than 6 months) and long (longer than 59 months) interpregnancy intervals have been found to increase risk of various adverse maternal and perinatal outcomes (Klebanoff MA, 1999). Women with short interpregnancy intervals are at increased risk of third trimester bleeding, premature rupture of membrane, puerperal endometritis, anaemia and maternal death. Likewise, women with long intervals between pregnancies are associated with higher risk of pre-eclampsia and eclampsia (Agustin Conde et al, 2000). The relation between birth outcomes and short and long interpregnancy intervals have been studied in the United States since 1937. The studies have shown that both short and long interpregnancy intervals were associated with a higher risk of stillbirth, low birth weight, preterm delivery, infant small size for gestational age and neonatal death. Erickson JD et al (1978) reported that Norwegian women with registered births that become pregnant after extremely short or long intervals had smaller infant than those who become pregnant

after an intermediate intervals. Zhu BP et al (1999) found that the optimal interpregnancy interval for preventing adverse perinatal outcomes is 18 to 23 months.

### 1.1 Background and History

In 1916, Margaret Sanger, a public health nurse has initiated the effort to circulate information about and provide access to contraception by opening the first Family Planning Clinic in Brooklyn, New York. During 1920s and 1930s, Sanger continued to promote family planning by opening more clinics and challenging legal restrictions. As a result, physicians gained the right to counsel patients and to prescribe contraceptive methods.

The era of modern contraception began in 1960, when both the birth control pill and intrauterine contraceptive device (IUCD) become available. These effective and convenient contraceptive methods resulted in widespread changes in birth control. Between 1800 and 1900, the family size in the United States declined from 7.0 to 3.5 children, and by 1933, the average family size had declined to 2.3 children (Division of Reproductive Health, 2000). Since 1972, the average family size had leveled off at approximately two children, and the safety, efficacy, diversity, accessibility, and used of contraceptive methods had increased (Forest JD, 1994). Between 1990 and 1994 the global average for contraceptive used by married women of reproductive age rose from 57% to 60% (Josh H, 1997).

The promotion of modern family planning in Malaysia was started with the visits of two pioneer nurses from the United States namely Margaret Sanger and Edith How Martin in 1935–1936. Following their visit, a local physician, Dr. H.E.Doraisamy, set up a committee to promote family planning locally.

After the World War 11, until 1953, individual doctors and nurses in Malaya provided family planning services. In 1953, the first Family Planning Association (FPA) was set up in Selangor to promote and provide family planning services followed by Johore. By 1958, they were joined by the State of Perak and Melaka and in the same year these four States FPAs, formed the Federation of Family Planning Association (FFPA), Peninsular Malaysia. By 1961, all 11 states in Peninsular Malaysia had Family Planning Associations and in 1962, the FFPA became one of the members of International Planned Parenthood Federation (IPPF), a world body promoting family planning in the Third World countries.

During the early 1950s to early 1960s, the Malaysian Government did not include family planning in its development plan but allowed this activity to be carried out by the private sector. Before the National Family Planning Board clinic services were operationalized in 1967, the FFPA served as the only source for provision of family planning service and information. However, its activity was limited to urban areas and to those who can afford to pay such services.

In 1965, the government of Malaysia appointed a special cabinet committee to study the need for and the feasibility of a National Family Planning Program. The report of the committee was accepted and the government in 1966 passed an Act that is the Family Planning Act 42. This Act led to the establishment of the National Family Planning Board to oversee the program throughout Malaysia.

In 1970, integration of family planning services into the Rural Health Services in Peninsular Malaysia was started, and the Family Planning Unit to oversee this integration program was set up in the Ministry of Health. The integration program was subsequently extended to Sarawak in 1979 and to Sabah in 1989.

In line with the emerging issues and necessity to provide more comprehensive services for women and to expand the scope of the family planning services of the Ministry of Health, the Family Planning Unit in Ministry of Health was renamed as the Women's Health Unit in October 1995.

Worldwide, the prevalence of contraceptive used was increasing and in many countries, over 75% of couples used effective methods of contraception (World Health Report, 1998). In Eastern Asia, contraceptives were used by an average of 79% of couples. In Malaysia, the prevalence of contraceptive used was also increasing for last 20 years. National Population and Family Development Board (NPFDB) (1999) had reported that there was increasing number of new contraceptive acceptors in this country. In 1970,

there were only 55981 new contraceptive acceptors but in 1980, it increased to 81063 new acceptors. By 1990, it increased further to 84837 new acceptors. New contraceptive acceptors were also increasing in Kelantan for last 30 years. In 1970, there were 1734 new acceptors and in 1990, it increased further to 2867 new contraceptive acceptors. However, since last five years there were reduction in total numbers of new acceptors, whereby there were 3958 new acceptors in 1997, but it dropped to 3950 in 1998 and it dropped further to 3232 new acceptors in 1999.

During 1970s and early 1980s, NPFDB was the most common agency that provided modern contraceptive methods to the acceptors. However, since late 1980s until now, the Ministry of Health through its extensive network of facilities available through out the country had took over the responsibility and provided the most family planning services (64.5%) to the acceptors (Maklumat Perkhidmatan Perancang Keluarga Malaysia, 1999). Most of the new acceptors (65.1%) were young women aged below 30 years and had small family size. From the reported data, it showed that most of them used at least one method of contraception for spacing of the pregnancy.

**1.2 Family planning services in Malaysia.**

In Malaysia family planning services are provided by several agencies such as:

1. Ministry of Health
2. Federation of Family Planning Association Malaysia (FFPAM)

3. National Population and Family Development Board (NPFDB)
4. Ministry of Defense through its various network of hospitals and clinics in the country
5. Hospital Orang Asli
6. University Hospitals
7. Private hospitals and private general practitioners
8. Professional Organizations
9. Non-government Organizations (NGOs)

Family planning services by the Ministry of Health are provided through its extensive network of facilities available throughout the country ranging from the hospitals, health clinics, community clinics and the mobile clinics. Provision of family planning services by the government health facilities took place in 1970, with the integration of the family planning services into the Rural Health Services in Peninsular Malaysia, followed by Sarawak in 1979 and Sabah in 1989. Currently, almost hundred percent of the family planning clinics has been integrated.

As of December 1995, within the Ministry of Health facilities, there were a total of 772 Health Clinics, 1987 Community Clinics and 284 Mobile Clinics providing family planning services.

## 1.3 Methods of Contraception

There are several methods of contraception available in Malaysia. The methods are including natural family planning method or fertility awareness-based method, alternative/traditional method, barrier methods, hormonal methods, intrauterine devices and permanent methods (vasectomy or tubal ligation) (Panduan Perancang Keluarga, Kementerian Kesihatan Malaysia, 1997).

Natural family planning /fertility awareness-based method means abstinence from sexual intercourse during fertile periods to prevent pregnancy. This include the rhythm method (the calendar method), mucus method, basal body temperature method, symptothermal method or combination of all this. This method has no systemic or long-term effects. However, women should be advised that the timing of their fertile period could be highly unpredictable, even if their cycles are usually regular. The timing is even less predictable for women with irregular menstrual cycles. The fertile period occurred during a broad range of days in the menstrual cycle. On every day between days six and twenty-one, women had at minimum a 10 percent probability of being in their fertile period. Only about 30 percent of women had their fertile period entirely within the days of the menstrual cycle identified by the clinical guidelines, which is between days 10 and 17 and only 10 percent of women ovulate exactly 14 days before the next menses. Most women reach their fertile period earlier and others much later (Allen J W et al, 2000).

Even though, it is the third most popular contraceptive method used among all the three ethnic groups in Malaysia (Rohani AR, 1988), some couples find that abstinence during fertile period is difficult to practice consistently as it produce undesirable level of tension in their relationship.

Alternative/traditional methods include coitus interruption and lactational amenorrhea method (LAM). Coitus interruption or male withdrawal is the oldest method of reversible contraception. It defines as withdrawal of penis in time before ejaculation to ensure that all sperms are deposited outside the vagina. It is a simple method, moderately effective, widely acceptable to large numbers of well-adjusted and motivated couples and not requiring any professional supervision. It is the commonest traditional method used among all the three ethnic groups in Malaysia (Rohani AR, 1988).

Lactational amenorrhea method (LAM) is a contraceptive method that relies on, or uses, the state of infertility, which results from intensive breast-feeding patterns. This natural contraceptive effect of breast-feeding has actually been known for hundreds of years. There are three criteria that enable the women to determine their risk of pregnancy during the natural state of infertility associated with breastfeeding. The criteria are:

1) A breastfeeding woman must be without menses since delivery, a state known as lactational amenorrhea
2) A woman must fully breastfeed without regular supplementation and
3) A woman must be less than six months post partum.

When these criteria are met, LAM can be more than 98 percent effective in preventing pregnancy (Laukaran VH et al, 1996). Rebecca R et al (1996) also noted that LAM was 99% effective when used correctly. However, it should be noted that lactational amenorrhea alone does not confer the same level of protection from pregnancy as does LAM. This is because the risk of ovulation prior to menses return is increased gradually over time. Studies have shown that during the first year post partum, the rate of pregnancy before the return of menses in lactating women was about 3% (Rebecca R et al, 1996).

Barrier methods mean contraceptive techniques that prevent sperm in the ejaculate from entering either the vagina or the cervical os, by either mechanical or chemical means, or both. Barrier methods create a barrier that prevents sperm from reaching the ovum. It is one of the oldest methods used to prevent pregnancy and to prevent the sexual transmission of diseases. The mechanical types/methods available are condoms for male and diaphragm, cervical cap, sponge and female condoms for female. Condoms are the second most popular method used in Malaysia (Rohani AR, 1988).

Example of chemical barrier is spermicide, which is a chemical agent that can inactivate sperms in the vagina before they can move into the upper genital tract. The spermicidal agents used in all currently marketed spermicides are surfactants-surface-active compounds that can destroy sperm-cell membranes. These barrier methods are safe and fairly effective if used consistently and correctly. It also can be used as a backup method.

Hormonal methods are the most popular contraceptive methods used worldwide. Ludwig Haberlandt, a physiologist at the University of Innsbruck, first proposed the term 'hormonal sterilization' in 1921. He suggested that extracts of ovaries could be used as oral contraceptives. However, the used of sex hormones to control reproduction was hindered by the difficulty in obtaining extracts from animals. The first oral contraceptive, Enovid was marketed in the USA in 1960. Since then, many different steroidal contraceptives have been developed, progressively containing lower doses of both estrogen and progestogen/progestin. More than 200 million women have used these preparations worldwide since 1960. By 1965, the pill had become the most popular birth control method used in the United States.

There are several types of hormonal contraception available in Malaysia. These include:

1) Oral contraceptives, which include combined oral contraceptive pills, progestogen only pills and postcoital contraceptive pills
2) Injectables
3) Implants and
4) Others

Combined oral contraceptives have served millions of women over the past 40 years with the advantage of high degree of contraceptive efficacy, rapid reversibility and additional non-contraceptive health benefits including decreased menstrual cramps, protection against ovarian and endometrial cancers, ectopic pregnancy and pelvic inflammatory

diseases (Sylvia et al 1999). Combined oral contraceptives pills contain two hormones, an estrogen and a progestin that come in packets of either 21 or 28 pills. The 21-pill pack contains only active pills and requires women to take a seven day break in between packs. The 28-pill pack contains 21 active pills and 7 inactive or hormone free pills. There are three types of combined pills, which are monophasic pills, where the hormone content is constant in all 21 active pills, biphasic pills and triphasic pills, where the ratio of estrogen to progestin varies among the active pills.

Progestogen only pills contain only progestin and no estrogen. They are especially suitable for women who breastfeed since this type of pill does not affect milk supply and quality, women at risk of cardiovascular diseases and women who smoke (Ali Kubba et al, 2000).

Pill is the best-known modern method and the commonest contraceptive method used in Malaysia (Maklumat Perkhidmatan Perancang Keluarga Malaysia, 1999). Rohani AR (1988) found in her survey that 80% of currently married women had ever heard of any method of contraception and oral contraceptive pill was the best known modern method among all the three ethnic groups which was 98.6% among the Chinese, 97.2% among the Malays and 93.6% among the Indians.

Postcoital contraceptive pills are intended for emergency use and must be taken within 72 hours of a single episode of unprotected coitus and repeated exactly 12 hours later to

prevent pregnancy. This method is indicated in women who exposed to unexpected and/or unprotected sexual intercourse, such as cases of rape. Worldwide, this emergency postcoital contraception has been used extensively for over two decades (Randy EW, 2000). The options currently available include progestin alone (levonorgestrel, 750 microgram (prostinor)), an estrogen-progestin combination, which comprises of combination of 100-microgram-ethinyl oestradiol and 500-microgram levonorgestrel, which is called Yuzpe regimen.

The pregnancy rate in those treated varies from 1 percent to 4 percent, depending on the stage in the cycle when coitus occurred. It is also depends on the timing of pill used. A recent analysis of the timing of pill use suggests an inverse linear relationship between efficacy and the time from intercourse to treatment. The earlier the pills were used, the more effective they were during the 72-hour period studied. Delaying the first dose by 12 hours increased the odds of pregnancy by almost 50 percent (Piaggio G et al, 1999).

This method only allows maximum of four sexual intercourses in a month. Other types of postcoital contraception are by using a copper-containing intrauterine device that can be inserted within five days of unexpected and/or unprotected sexual intercourse, high dose of ethinyl estradiol, Danazol, given in three doses, each of 400mg, given every 12 hours and mifepristone (RU 486), a steroid derivative of norethisterone that works by competitive inhibition of progesterone. Anti-progesterone properties of mifepristone

make it an effective early medical abortifacient. There is no absolute contraindication to emergency contraception other than pregnancy.

Injectables contain progestin and are administered at interval of one, two and three months depend on the type of injectables used. Injectable forms of hormonal contraception are considered safe, very effective, simple to use and easy to administer. Injectables are among the most effective reversible contraceptives available, with a failure rate of less than one percent after a year of use. It is particularly suited to the needs of young women, providing very high efficacy rate and fewer complications. The disadvantages include irregular bleeding, weight gain and delayed return to fertility. Injectable contraceptives work in several ways to prevent pregnancy. The primary action is the inhibition of ovulation. Besides that, it also increases the viscosity or thickness of the cervical mucus, making it less permeable to sperm penetration to the uterine cavity.

Some of the common injectables include:

a) DMPA (Depot medroxyprogesterone acetate) – it is the only injectable contraceptive available in the United States (Kaunitz AM, 1994). It is also the longest acting injectable, administered as an intramuscular injection every three months at a dose of 150mg.

b) NET-EN (Norethisterone enanthate) – another progestin-only injectable contraceptive, which is now, recommended for use as an intramuscular injection at the dose of 200mg two monthly.

c) Combined injectables, which contain low dose of depot progestogen and a natural estrogen to ensure good cycle control. This combined progestin-estradiol product has to be administered monthly.

Another type of hormonal contraception is implant. Implant system is an effective, long acting, reversible, low dose progestogen-only product. It is suitable for use in family planning programs along with other currently available contraceptive preparations and devices. It is an alternative to the irreversible method of sterilization.

Implant is inserted subdermally in the first seven days of menstrual cycle and once in place, it requires no further attention by the user. However, it must be inserted or removed by a specially trained health professional. The mode of actions includes inhibition of ovulation, suppression of endometrium and increases the viscosity or thickness of the cervical mucus. The effectiveness of this method is comparable to combined oral contraceptive pills and intrauterine devices. Amenorrhoea is common after insertion of implants, reported by 20% of users at any time in the first two years (Ali Kubba et al, 2000). Implant can be removed by a trained health professional at any time with rapid return to fertility. Currently, there are two types of implants available. First, a six-rod levonorgestrel subdermal implant (Norplant), which gives contraceptive protection last for five years and second, a single, matchstick sized etonorgestrel implant (Implanon), which gives contraceptive protection up to three years.

Since past 15 years, methods involving steroid hormones have dominated new developments in contraception. There are few newer developments in hormonal contraception. This includes new delivery systems such as hormone containing/releasing intrauterine device, better progestogen and lower dose of estrogen. The first hormone containing/releasing intrauterine device is progestasert, which is a T-shape device that contains 38mg progesterone in a permeable membrane. The rate of progesterone release is constant at 65mcg per day for a period of one year. Later, a better and longer acting device, levonorgestrel releasing device is created. This device gives contraceptive protection lasts for five years. A recent advance of oral pill is a combined oral contraceptive containing only 15 microgram ethinyloestradiol and 60 microgram gestodene instead of 25 or 30 microgram ethinyloestradiol and has short pill-free interval, which is four days.

The most exciting development in the past 20 years has been the discovery of compounds that antagonize the action of progesterone, which is necessary for the establishment and maintenance of pregnancy. The first antagonist of progesterone (mifepristone) is highly effective as an emergency contraception after unprotected sexual intercourse to interrupt pregnancy. Other new developments are progesterone vaginal rings, levonorgestrel vaginal rings, combined estrogen-progestogen vaginal rings and combined norelgestromin-ethinyloestradiol patch.

Intrauterine contraceptive device (IUCD) is a small plastic device that comes in different size and shape. It is inserted into the uterus through the cervix by a trained health professional at any time convenient to the user, normally within first seven days after normal menses, or within first seven days post-abortion, or six to eight weeks post-delivery, or within five days of unprotected sexual intercourse. Grimes D et al (2000) noted that insertion of an IUCD immediately after abortion; either induced or spontaneous abortion was both safe and practical. O'Hanley K et al (1992) also found that insertion of an IUCD in the postplacental and immediate postpartum periods was convenient, efficient, safe and having low incidence of infection.

IUCD life span range from one to five years depends on the type being used. There are two types of IUCD available in Malaysia, which are non-hormonal and hormonal IUCD. Non-hormonal IUCD is more popular as compare to hormonal IUCD because it is cheaper and easily available. Few examples of non-hormonal IUCD are multiload Copper 250 (ML Cu-250), multiload Copper 375 (ML Cu375), Nova T, Cu Nova T, Tcu-200, Tcu-200B, Tcu220C, Tcu-380A and Lippes loop. Multiload Copper 250, which has a life span of three years, is widely used in Government Health Clinics in Malaysia. Examples of hormonal IUCD are levonorgestrel (LNG-20) intrauterine system (Minera/Levonova) and Progestasert intrauterine contraceptive system. IUCD is highly effective, safe and coitally independent.

Sterilization is one of the contraceptive options available to couple that have decided to end childbearing. This method remains the most popular method in couple age over 35 years in many developed country. It is a very highly effective method of contraception and does not affect sexual activity, change sexual desire, performance or satisfaction or production of male and female hormones.

Female sterilization or fallopian tube ligation and male sterilization or vasectomy is both highly effective and convenient method for couples seeking permanent protection from pregnancy. Both are surgical procedure, and therefore require professional personnel, equipment and back-up facilities. This surgical contraception is a permanent contraceptive method. Therefore, adequate counseling that includes cultural and religious consideration need to be given to each couple. This can reduce fear, controversy and prejudice that may be associated with this method. The consent of both partners should also be obtained.

Vasectomy is a simple operation that makes it impossible for a man to make his partner pregnant. During a vasectomy, a man's two tubes or sperm ducts are cut and blocked, so that no sperm will be in his semen. Vasectomy is one of the few methods that allow man to take personal responsibility for contraception.

Female sterilization is the most widely used permanent family planning method in the world. Even in Malaysia, tubal ligation is the second most familiar method known by all

the three ethnic groups (Rohani AR, 1988). It is an effective single-act permanent operation that used to end a woman's ability to become pregnant by blocking or occluding the fallopian tubes (also called uterine tubes or oviducts), so that the egg and sperm cannot meet.

### 1.4 Justification for the study

Over the past 30 years, there had been significant advances in the development of new contraceptive technologies, including transitions from high-dose to low-dose oestrogen combined oral contraceptives and from inert to copper and levonorgestrel releasing intrauterine devices. Advances in scientific knowledge, research and development in recent decades had resulted in an increasingly wider choice of new contraceptive methods and improvements in the safety and effectiveness of existing methods. However, the full ranges of modern family planning methods still remain unavailable to at least 350 million couples worldwide, many of whom wish to space or prevent another pregnancy. Even when family planning methods were accessible and individuals wished to space or limit births, family planning services were often under-used. Many factors contributed to the gap between accesses to, and used of the family planning services. These included medical barriers, socio cultural, administrative/bureaucratic, physical and religious barriers (Reproductive Health and Research, WHO).

The medical barriers were including inappropriate medical contraindications to certain contraceptive methods, inappropriate pre-requisite test and eligibility criteria, limits on which provider could provide services, provider bias and regulatory barriers. One of the reasons for these barriers was lack of knowledge or technical competence among the staffs. The staffs may not fully train, partially trained or not trained at all.

In view of these medical barriers, I conducted this study to assess the knowledge, attitude and practice of those nursing staffs as they were directly involved in family planning programme at primary care level.

# Chapter 2

# OBJECTIVES

# 2. OBJECTIVES

## 2.1 General Objectives

1. To assess the knowledge of the nursing staffs in the government health clinics in Kota Bharu about various contraceptive methods.
2. To study the practice and attitude towards various contraceptive methods among those nursing staffs.
3. To assess the awareness and knowledge of those nursing staffs regarding emergency contraception.

## 2.2 Specific Objectives

1. To assess the knowledge of various categories of the nursing staffs, which are staff nurses, assistant nurses, community nurses and midwives regarding various methods of contraception.
2. To determine the percentage of married nursing staffs who practice any contraceptive methods.
3. To study the types of contraceptive methods used among married nursing staffs.
4. To study the relationship between knowledge of contraception and practice of any contraceptive methods.
5. To evaluate the practice of giving advice regarding contraceptive methods among nursing staffs.
6. To assess the attitude of the nursing staffs regarding modern and traditional method of contraception for spacing and preventing pregnancy.
7. To study the relationship between attitude of the nursing staff and practice of any contraceptive methods.
8. To determine the percentage of nursing staff who know or ever heard of emergency contraception and the relation with job category.
9. To evaluate the knowledge of the nursing staffs who know/ever heard of emergency contraception.

# Chapter 3

# STUDY AREA

## 3. STUDY AREA

This study was conducted in all government health clinics and community clinics in Kota Bharu District. Kota Bharu District constitutes a 406 $km^2$ area with 455,599 people (projected population base on 1991 census); comprising one third of Kelantan state population. With regards to health facilities, Kota Bharu District has 10 government health clinics, one urban health clinic and 31 community clinics. Kota Bharu Hospital and University Hospital ( Hospital Universiti Sains Malaysia) are the referral centres for all this health clinics. Other agencies also provided health care services including family planning such as private clinics, private hospitals (Kota Bharu Medical Centre and Perdana Specialist Centre), private pharmacies, National Population and Family Development Board (NPFDB) and few non-government organisations (NGOs).

There are 10 government health clinics, one urban clinic and 31 community clinics involve in this study. The health clinics involve in this study are Klinik Kesihatan Ketereh, Klinik Kesihatan Lundang Paku, Klinik Kesihatan Perol, Klinik Kesihatan Peringat, Klinik Kesihatan Wakaf Che Yeh, Klinik Kesihatan Kubang Kerian, Klinik Kesihatan Kedai Lalat, Poliklinik Penambang, Klinik Kesihatan Badang, Klinik Kesihatan Pengkalan Chepa and Klinik Kesihatan Bandar Kota Bharu. Medical and health officer and/or medical officer managed the large health clinic and community nurse and/or midwife managed the small community clinic. However, medical and health officers supervised the management of all the community clinics in their area.

There are 186 nursing staffs including staff nurses, assistant nurses, community nurses and midwifes working in all the health clinics and community clinics in Kota Bharu District. All the large health clinics and small community clinics provide out patient services and maternal and child health services including family planning.