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COMPUTERIZATION OF COMPARATIVE STUDY OF FERTILITY AMONG WOMEN OF DIFFERENT GYNEACOLOGICAL BACKGROUND A CASE STUDY OF IYI-ENU HOSPITAL, OGIDI ANAMBRA.

BY

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DEDICATION.

This project is dedication to my beloved mother **Mrs.Dorothy Obiegbuna** and to the mothers all over the world. And to God, the creator of the universe.

ACKNOWLEDGEMENT

I am grateful to God Almighty for giving me the admission into this course and for sustaining, me throughout the period of this program.

My warmest and sincere appreciation goes to my supervisor Mr Ezeako L. N for his guidance throughout the period of this project and especially to the Head of Department, Dr Reju S. A for his hardworking trying to put the department in order. And my lecturers in the department Mr Isah Audu, Mr Badamosi Prince, and other whose their names are not mentioned.

My profound gratitude goes to my dear mother for her motherly advice and financial support even when the going becomes tough. I would also like to express my gratitude to my colleagues Miss Udoka, Mrs Grace and especially Mr Agbese aand Mr Tony Gyipo.

Finally, I wish to thank Dr Christopher Ibegbuna of IYI-ENU Hospital Ogidi Anambra State for his thoughtfulness, guidance and patience for making this project a great success

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OBIEGBUNA C.C

March, 2000

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CERTIFICATION

I certify that this project is an original work of mine.

_____   _____
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ABSTRACT

This project was able to provide results showing that the following factors affected the number of cycles a woman could have before pregnancy based on X^2 test of independence. The factors are:

1. Alcohol
2. Smoking
3. Contraceptives
4. Infections
5. Abortion

However, it could not be established if any of these factors favoured miscarriage once pregnancy is achieved. It can therefore be said that certain exposures are not conducive to woman hoping to become pregnant. Based on these findings therefore, an alternative system that would be more suitable and be able to produce timely results was conceived.

The system proposed in this project work introduces the use of computer for the purpose of processing gynecological works and review documents. The proposed system facilitates the creation of an integrated database that allows a user to record new set of data, up-date exiting data, process data contained in the database, and review documents and generally manage data contained in the database. In order to achieve these, dBase IV programming Language was used to develop the required software.

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CHAPTER ONE

1.0   INTRODUCTION:

Fertility is one of the most important components of demographic change, the others being mortality and migration. Here we examine methods of fertility analysis. We have to define and distinguish between a numbers of terms, which have been used, rather carelessly leading to confusion in the mind of many.

Fertility is the frequency of child bearing among the population. Fertility rates, therefore refers to the relative frequency with which births actually occur within a given population. In a more restricted sense and more commonly, the term fertility refers to the more refined analysis of natality and to certain more or less refined measures of fatality. According to Edward .G. Stockwell, fertility refers to actual birth performance as compared with fecundity which refers to the physiological capacity to reproduce. One's fertility is limited by one's fecundity and is usually far below it. In fecund persons are also described as sterile. The term fecundibility refers to a special aspect of fecundity namely the probability of concerning measured on a monthly basis.

1.1   OBJECTIVES OF STUDY.

This research was designed to obtain information about the knowledge of fertility and practices related to some factors. Emphasis was placed on obtaining information about the following factors.

1.   Smoking
2.   Drinking
3.   Use of contraceptive
4.   Abortion
5.   Miscarriage
6.   Infection

This research therefore, has the following specific objectives to achieve.

1. To test for independence among the factors already mentioned.

2. To determine the rate of pregnancy among the factors on the achievement of pregnancy.

3. To ensure whether the information (data) collected provide sufficient evidence of the factor under consideration.

4. To reduce the complex arithemaatic calculators in terms of using X^2 – test of independence.

5. To help in making an easier, accurate and reliable logical compension between things

6. To ease the cumbersome of inflow and out flow of data and information respectively.

7. To further help in efficient sloring, filing, retrieving of data and information.

1.2 FACTS FINDING TECHNIQUES

The high degree of secrecy in hospital (no doubt) is responsible for non-availability of materials that bothere this topics.

As a result the major methods that were reasonably adopted in the construction of this work has been:-

(a) **QUESTIONNAIRE:-** Questionnaire were distributed to pregnant women in the hospital. The greatest part of it were distributed to married women between the age of 15-44 or 15 – 49.

(b) **INTERVIEWS:-** A lot of interviews were carried out with some staff of IYI-ENU Hospital Ogidi. The greatest part of the interview was conducted with the doctor in charge of the gynecological section of the hospital.

(c) **OBSERVATION:-** Writers observation and her experience as a woman is fully brought to use in the writing of this project.

(d) **RECORD INSPECTION:-** Vital information for this work was obtained from textbooks and other dwersed sources, for the write-up of IYI-ENU Hospital Ogidi as the writes most regular source.

(e) **COURSE WORK:-** Finally all that the author has been able to get in the classroom were put with use to produce this piece of work.

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1.3 JUSTIFICATION OF STUDY

Several researches here been carried out by different people on fertility all over the world because of the importance of children in our various communities and the world at large.

Based on the concept of fertility it is logically stated that without pregnancy, children would not here come with existence. And that these are certain factors that prevent pregnancy from occurring such as abortion, infection, contraception's and so on.

Based on several researches carried out in the localities under study, more has so for been carried out about how many cycles our mothers or pregnant mothers have before achieving pregnancy. And how many menstrual cycles they normally have before pregnancy; in this part of the world. As a result of this, it is of great importance that this research has to be carried out for the benefit of other researchers "the youths of today are the leaders of tomorrow.

The assessment of drinkers, smokers, infected, contraceptors and abortionist in achievement of pregnancy has not been made possible because of improper records or information collected in the course under study and this only cannot help in assessing the impact of abortionist, infected and contraceptors in the emmons, so this research will help to assess the abortionist, infected and contraceptors in the towns where the data were collected.

1.4 SCOPE OF STUDY

This research is limited to one hospital only names IYI-ENU hospital Ogidi the questionnaire was also randomly distributed among the populance.

This study is made to cover all the mothers between the age of 15-44 or 15-49 in line with the above mentioned objectives.

The factors include:-

       i.   Smoking

ii.   Drinking

iii.   Use of contraceptive

iv.   Abortion

v.   Miscarriage

1.5   HYPOTHESIS OF INTEREST

1. To compare performance of smoker and non-smokers.

2. To compare performance of drinkers and non-drinkers

3. To compare performance of ever aborted women and never aborted women.

4. To compare performance of those infected with those non-infected.

5. To compare performance of sexually acture with sexually inacture.

The performance here means

-   Achievement of pregnancy

-   Number of cycle before pregnancy

-   Present of miscarriage.

1.6   MEASURES OF FERTILITY

There are a number of conventional for measuring fertility (child bearing) within a population and these are usually expressed as a ration or rate of the number of births that occur in the population during a specific period usually a year to the size of the population.

1.6.1 CRUDE BIRTH RATE (CBR)

One convenient measures of the fertility experience of ages of the population is the crude birth rate. This is defined as the number of live births per 1000 population. It can also be defined as a ratio of years registered birth (live birth) to the total mid year population multiplied by 1000. It is define symbolically of CBR = $\underline{B}$ x 100

where

$$P$$

B is the number of live birth that occur during a calendar year

P is the mid year population

ADVANTAGES OF CRUDE BIRTH RATE.

1. Easy to calculate

2. It can be explain with ease to a layman

DISADVANTAGES

1. It is affected by the composition of the population with regard to age, sex and marital status. For instance population with unusual concentration of women of child bearing age will likely have higher crude birth rate than other population which may have the same bearing.

2. Since the numerator of a crude birth rate changes the number of persons in the population that is changes the denominator, crude birth rate does not indicate merely the rate of occurrences of birth but misses it up together with changes in the population.

1.6.2 GENERAL FERTILITY RATE (GR)

General fertility rate is the yearly number of lives births per 1000 women of reproductive age usually, considered to be 15-44 r 15-49. It can also be defined as a ratio of total yearly registered birth for the year to the population of women of child bearing age (usually 15-44 or 15-49).

The purpose is to restrict the denominator of the rate of potential mother by excluding all men and large group of women not "exposed to the risk" of child bearing by reason of age.

Symbolically denoted as $\underline{B}$ x 1000 or $\underline{B}$ x k

$$35^w15 \qquad P_i$$

where:

B is the number of live birth registered during the year

35^w15 is the mid year population of women aged 15-44 or 15-49

k is a constant usually 1000

ADVANTAGES OF GENERAL FERTILITY R.

1. It is easy to compute

2. Requires no additional information about birth.

3. Introduces a refinement, which is a step to measuring fertility against the proper portion of the population.

1. It is an inadequate measure of fertility since the denominator is only a rough approximation of women at risk, that is it does not take into consideration (account) the distribution of women with the (15-49) who actually give birth.

2. All unmarried women of child bearing age are included in the numerator.

1.6.3 CHILD WOMEN RATIO

The ratio of child under age 5 to women of child age. His symbolically define as child women ratio denoted as $\underline{P}_{0-4}$ x k where

$$F_{15-49}$$

$\underline{P}_{0-4}$ is the number of children bother sexes under 5 year of age

F_{15-49} is the number of female between ages 15-49 (sometimes 15-44 is used)

K is 1000 (One thousand)

ADVANTAGES

1. It is especially helpful where there is no adequate registration of birth.

2. Even where there is a registration of birth, the data are not published separate for all groups into population whose fertility we may wish to study.

   Child-women ratio can be used to make up for such lack of details in the birth statistics

DISADVANTAGES

1. Child women ratio does not refer directly to any actual number of birth but rather to the census population of children between age 0-4.

   If this children were enumerated directly by age (and this may be questionable) they must be the survival of birth during exactly the 5year period preceeding the census. This child-women ratio is not very précised as an index of fertility.

2. Its evidence is indirect, derived from these group of survival rather than the actual birth and thus it is affected by number of other factors besides fertility alone.

1.6.4 AGE SPECIFIC FERTILITY RATES (ASFR)

The frequency of child bearing various considerable from one age group to another within the reproductive age group. This variation can be measured by computing

the age specific fertility rate. It is defined as the yearly number of live births per 1000 women in each of the seven age group (15-19, 20-24, 25-29, 30-34, 35-39, 40-44, 45-49) usually in 5 year age interval.

It is denoted as $_nf_x = \dfrac{\text{x} \ 1000}{_nW_x}$

where

$_nf_x$ is the age specific fertility rate by women aged

x to x+n years.

$_nW_x$ is the women aged x to x+n at mid year.

$_nB_x$ is the number of live births to women aged x to x+n during the calendar year.

If n=1 then $f_x = \dfrac{B_x}{W_x} \ \text{x} \ 1000$

Aged specific fertility rate is a measure of a current child bearing performance of women. It is not directly influenced by the age or sex composition of the whole population. A set of given age specific fertility rate forms the starting points from which most other important fertility measures can be derived, such as the total fertility rate and the gross reproductive rate.

1.6.5 TOTAL FERTILITY RATE

This is the sum of aged specific fertility rate of a women, as each age from 15-49. In other word, it is the number of children a women would have from age 15-49. If she were to bear children at the penciling age specific rate (or the average number of children a women will have if she experiences a given set of age specific fertility rates throughout her life time) . It is usually derived from actual or assumed age specific fertility rate. It is denoted as;

$$\text{TFR} = n\sum_{X=15}^{49} nfx = n\sum_{x=15}^{49}\left(\dfrac{_nB_x}{_nW_x}\right) \text{ where}$$

The data are grouped into age internal of n years

If n=1 the data are in single years and the summation simply became.

$$\sum^{49} \qquad \sum^{49}$$

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$$TFR = \sum_{X=15} fx = \sum_{x=15} \frac{Bx}{w_x}$$

1.6.6 GROSS REPRODUCTIVE RATE (GRR)

Gross reproductive rate is the average number of daughters a women would have or bear if she experiences a given set of age specific fertility rates throughout the reproductive ages with no allowance for mortality over this period.

1.6.7 NET REPRODUCTION RATE

This is the average number of daughters that a women will bear if she experiences a given set of age specific fertility rates throughout the reproductive age with allowance made for mortality of women over their reproductive years.

1.7 FERTILITY TREND AND DIFFERENTIAL

1.7.1. FERTILITY TREND

It refers to the direction of change in fertility. The changes in fertility may be over time thus facilitating temporal comparisom or it may be in space, thus facilitating spatial comparisom that is comparisom between geographical area or countries about one period at a time. Various indices can be used to describe this trend however, the index used are dictated by available data. The methodology for measuring fertility change is very much the same of high fertility or low fertility rate or proportion the essential difference less in the availability of the basic data which the deciding factor on the choice of an appropriate method for measuring fertility change or trend.

Basically, all studies on fertility change begin with a cross sectional analysis to determine how much year-to-year change they has been in fertility labour. Next longitudinal analysis may be done to determine how much of this fluctuation may be due to changing in life pattern individual cohort.

1.7.2 FERTILITY DIFFFERETIAL

This refers to the variation in fertility level due to some many factors. The differential may be in terms of age, duration of marriage, rural or urban,

occupation, religion, education attendment, we illustrate a few differential. Some of them are:

1. Fertility differential by rural or urban residence urbanization has been seen to be significantly correlated with fertility in the sense that low levels of fertility are often found to be associated with high levels of urbanization.

b. Fertility differential be economic status the influence of the socioeconomic class can be measured by one of a number of indices such as education, occupation income e.t.c. Women who have extended formal education have delay marriage, which does not applied to uneducated women. Again use of various contraceptive is common with educated or well to do people and less common with uneducated and less sophisticated.

c. Fertility differential by type of marriage, basically we have 2 types of marriage monogamy and polygamy. Women in polygamous marriage have low fertility than women in monogamous marriage and this can be explained by the fact that coital frequency of any one wife of a polygamously married man is low than that of monogamously married women.

3. Fertility differential by major ethnic group: Basically we have 3 ethnics group in Nigeria that is Hausas, Ibos and Yoruba's. Each an every one of these ethnic group have quite different fertility level.

1.8 FECUNDITY

Fecundity is another important term. This refers to the capacity to bear children while fertility is the frequency of child bearing among the population.

Fecundity is, therefore a measure of the probability that a women will conceive within a menstrual cycle in the absence of contraceptives.

Another important term of this study is the number of cycles before achieving pregnancy for women of different exposures. It refers to the number of menstrual cycles one had or usually have before achieving pregnancy. Different exposures includes:

(i)   Smoked

(ii)   Ever aborted

(iii)   Sexually active

(iv)   Infected

(v)   Contraception

(vi)   Miscarriage

Some of these exposures mentioned above affect the number of menstrual cycles like smoking and contraception. For instance if contraceptive pill is taken, ovulation usually occur 14 days priors to the first day of the menstrual period may now occur earlier or later. Smoking and contraceptive also increases oestrogen hormone in the body, which prevents one from taken in thereby decreasing progestogen. This is a hormone that cares for pregnancy. The control and cyclic formation of oestrogens and progesterone is unique to the ovary. These hormones plays vital role in preparing the female reproductive tract for the reception of sperm and implantation of a fertilized ovum. However, it is recoginsed and appreciated that many attributes of the female habits are also influenced by these agents.

CHAPTER TWO

2.1 INTRODUCTION

In Nigeria today and many other countries procreation is the source of population growth. Procreation occurs through the phenomenon "Pregnancy" (fertility). There are many factors that affect this phenomenous and some have been grossly misunderstood by many.

2.2 FATORS THAT AFFECT PREGNANCY

2.2.1 SMOKING

In the medical profession I have explained other health hazards associated with smoking. Dr Bode James of Bode James Hospital in Iganmu told "the source" that smoking tobacco has over 70 percent chances of causing chest pain, bronchitis and malnutrition of children in the womb for pregnant mothers who are hooked to smoking. It also causes heart attack, throat and mouth cancer poor circulation of blood to vital organs, which could lead to unexpected death. To the disappointment of Dalhatu and Bode, as well as other medical experts, instead of reducing this trend, Nigeria as pointed out by Dr Thechukwn madu buike, the current health minister, has becomes a haven for all sorts of cigarettes. There are about 25 brands of cigarette brought in from London, Britain and America to Nigeria, perhaps the highest in any part of the world. The minister attributed this to be largeness of the cigarette market in Nigeria, one of the reasons he adduced as to why the decree 20 cannot be enforced in Nigeria.

While Madubuike, pointed out a perceived ambiguity in the decree. Its mobility to explain what a public place is a the reasons that makes it unenforceable, there are other medical experts who, though they acknowledge the health hazards associated with smoking, believe that the law cannot stop anybody from the habit. Cliff Andem, a cardiologist at the Lagos University Teaching Hospital (LUTH) says "majority of people are under tension and need ways out, which smoking does" He however admits that such relief provided by smoking is false because there is no

way you can smoking away your problems, no matter how many sticks of tobacco you smoke"

Experts see the aggressive marketing of cigarette as a continuation or extrusion of the dumping designs of the western world, which finds Nigeria a ready depot. While these experts expected the Nigerian Government to totally ban all forms of advertising of all cigarette, like Britain did, the federal Government early in the decade, merely restricted cigarette adverts on television only to adult belts. This, itself has since been violated, telension stations now even advertise cigarette in the afternoons, accompanied by the surgeon's warning.

"The Federal Ministry of Health warns that tobacco smoking is dangerous to health". Oputa insist that this does not deny the advert the intended authenticity. (Copied from the source June 23 1997 page 46).

There are many drugs that human beings consume because they choose to, and not because they are advised to be doctors. Society in general disapproves, because in most cases there is a recognizable social cost in the more highly ordered socuties this is considered to outweigh the individual benefit, and drugs usage has been declared illegal. In western socuties, the three most commonly used non-therapeutic drugs are caffeine, incite and ethanol, all of which are legally and freely available. There is a much larger number of drugs, which are unduly used, though their manufacture, sale and consumption has been declared illegal in most western countries, except when it is under the control of the medical profession.

Furthermore, the drugs of abuse form an extremely heterogeneous pharmacological group. We can find little in common between say morphine cocaine and barbiturates. What links them together is that people enjoy the sensation that they produce and tend to want to repeat it. It becomes a problem when:

- The want becomes so insistent, that it dominates the life styles of the individual and prevents him or her from living in a way that the rest of society can accept.

- When the habit itself courses actual harm to the individual or the community.

2.2.2 GYNAECOLOGICAL EFFECTS OF SMOKING

It is well established that the life expectation of smoking is shorter than that of non smoking. For example, in a study of British doctors (See Report of Royal College of Physicians (1971), the proportion of heavy smokers dying between the ages of B5 and 65 was estimated to be 40% compared with 15% for non-smokers. Though it has been strenuously avgueds (Eysenk and Eaves 1980) that the association not necessarily a causal one, most of the many studies on this topic have concluded that smoking constitutes a major risk to health much especially to pregnant women. The main health risks are:

i.   Deleterious effects in pregnancy: smoking, particularly during the latter half of pregnancy, significantly reduces birth weight (by about 8% in women who smoke 25 or more cigarette per day during pregnancy and increases perinatal mortality(by an estimated 28% in babies born to mothers who smoke in the lat half of pregnancy). These is evidence that children born to smoking mothers remain back ward in both physical and mental development, for at least 7 years. By 11 years of age, the difference has decreased. These effects of smoking, tough measurable, were much smaller than the effects of other factors, such as social class and birth order. Various other complications of pregnancy are also more common in women who smoke, including spontaneous abortion (increased 30-70% by smoking) premature delivery (increase about 40%) and placent praeria (increased 25-90%). Nicotine is excreted in breast milk in sufficient amounts to cause tachycardia in the infant. (Copied from pharmacology, RANG and DALE 1991).

2.3   DRINKING

When we talk of drinking we must bear in mind that we are talking about those that takes alcohol. Alcoholic drinks are therefore fermented beverages (Drugs used for many purpose, for occasion, for inducing sleep, for inducing cmphoria. Alcoholism is by far the damaged health. There are different patter of alcoholism

in which there are varying degree of psychological and nutritional complications physical decence (inability to abstain) loss of control and episodic use. Drinker may also abuse other drugs such as sedatives, opioids, marihuana and amphetamines.

Different people use alcohol for different reasons, for some it produces euplioria and release emotions, for other it temporarily relieves depression or anxiety while others used it to induce abortion by coming into play with chromic use since drug affect hormone. This increases the production of oestrogens, which lead to menstrual flow thereby hindering pregnancy (Copies from Goodman and Gilman's 1980)

Judged on a molar basis, the consumption of alcohol far exceeds that of any other drug. The alcohol content of various drinks ranges from about 2.5% (weak bear) to about 55% (strong spirits), and the size of the normal measure is sure that a single drink usually contains about 8-12year (0.17-0.26moles) of ethanol. It is by no means unusual to consume 1-2 moles at a sitting, equivalent to about 0.5kg of most other drugs. Its low pharmacological potency is reflected in the range of plasma concentrations needed to produce pharmacological effects: minimal effects occur at about 10mmoles/1 (46mg/100ml), and 10times this concentration may be lethal.

For calculation of alcohol consumption in the community, alcohol intake is often expresses in terms of units. One unit is equal to 8g of alcohol, and is the amount contained in ½ pint of normal strength bear, 1 measure of spirits or 1 standard glass of wine. The changing pattern of ethanol consumption in the UK up to 1986 is shown. The steady increase since the mid- 1950s, particularly in wine and spirit consumption, correlates closely with a reduction in the real cost of alcoholic drinks ever the same period. In Britain, more money is spent on alcoholic drinks than on hospitals.

2.3.1   EFFECTS OF ALCOHOL ON OTHER SYSTEM

The main cardiovascular effect of alcohol is to produce cutaneous vasodilatation, central in origin, which causes a warm feeling but actually increases heat loss.

Alcohol increases salivary and gastric secretion. This is partly a reflex effect produced by the taste and irritant action of ethanol. However, heavy consumption of spirits causes damage directly to the gastric mucous, causing chronic gastritis. Both this and the increased acid secretion are factors in the high incidence of gastric bleeding in alcoholics. Alcohol produces a variety of endocrine effects in particular, it increases the output of adrenal steroid hormones, by stimulating the anterior pituitary gland to secrete ACTH. However, the increase in plasma hydrocortisone usually seen in alcoholics is due partly to inhibition by ethanol of hydrocortisone metabolism in the liver.

Diuresis is a familiar effect of ethanol. It is caused by inhibition of ADH secretion, and tolerance develops rapidly, so that the duiresis is not sustained. There is a similar inhibition of Oxytocin secretion, which can cause postponement of parturition at terms. Attempts have been made to use this effect to delay premature lab our, but the dose needed is large enough to cause obvious drunkenness in the mother. If the baby is born prematurely in spite of the alcohol, it too may be intoxicated at birth, sufficiently for respiration to be depressed. The procedure evidently has serious disadvantages.

Chronic male alcoholics often show signs of feminization, which is associated with a decrease of plasma testosterone rather than increased estrogen. The decrease is thought to be caused by impaired testicular steroid synthesis, but induction of hepatic microtonal enzymes by ethanol, and hence an increased rate of testosterone ministration, also contributes.

2.3.2   EFFECTS OF ALCOHOL ON THE LIVER.

Together with brain damage, liver damage is the most serious long – term consequence of excessive ethanol (alcohol) consumption. In the sequence of effects, increased fat accumulation (fatty liver) progresses to hepatitis (i.e.

inflammation of the liver) and eventually to irreversible hepatic necrosis and fibrosis.

Diversion of portal blood flow around the fibro tic liver often causes esophageal varies to develop, which can bleed suddenly and catastrophically. Increased fat accumulation in the liver occurs, in rats or in man; after a single large dose of ethanol. The mechanism is complex the main factors beings:

- Increase release of fatty acids from adipose tissue, which is the result of me eased stress, causing sympathetic discharge.
- Impaired fatty acid oxidation, because of the metabolic load imposed by the alcohol itself.

With chronic ethanol consumption, many other factors contribute to the liver Damage. One is malnutrition, for an alcoholic may satisfy much of his calorie requirement from alcohol itself. Two hundred grams of alcohol, which is approximately the content of one bottle of whisky, provides about 1400keal, but, unlike a normal diet, it provides no vitamin, amino acids or fatty acids. Thiamine deficiency is an important factor in causing chronic neurological damage. The hepatic changes occurring in alcoholics are partly due to chronic malnutrition, but mainly to the cellular toxicity of alcohol, which promotes inflammatory changes in the liver.

The overall incidence of chronic liver disease seems to be a function of accumulative alcohol consumption, over many years. Thus, overall consumption, expressed as g/kg body weight per day multiplied by years of drinking, provides an accurate predictor of the incidence of cirrhosis.

2.3.3 THE EFFECT OF ALCOHOL ON FOETAL DEVELOPMENT

It was demonstrated convincingly in the early 1970s that ethanol consumption during pregnancy has an adverse effect on foetal development. Foetal alcohol syndrome (FAS) is the term used to describe the effect commonly seen in the children of mothers who drink heavily in pregnancy. (see reviews by clarren and Smith 1978, streissguth etal 1980, ciba foundation symposium 1984). The full

blown picture is relatively uncommon, but it is estimated that smaller degrees of alcohol – related abnormality may occur very frequently. Indeed one survey suggests that alcohol is responsible for about 8% of cases of mild mental retardation the characteristic features of the foetal alcohol syndrome are:

- Abnormal facial development, with wide – set eyes, short palpebral fissures and small cheek bones.
- Reduced cranial circumferences
- Retarded growth
- Mental retardation and behavioral abnormalities, often taking the form of hyperactivity and difficulty with social integration.
- Other anatomical abnormalities, which may be major or minor. (e.g. congenital cardiac abnormalities, malformation of the eyes and ears).

The overall incidence of FAS is estimated at 1-2 per thousand live births. The Incidence correlates strongly with maternal alcohol consumption during pregnancy, being about 19% in mothers who drink (on average) at least 4 units per day during pregnancy. There is no clearly defined threshold amount below, which the risk of FAS disappears. It is unknown whether FAS is associated with steady alcohol consumption or with 'binge' drinking. It is also uncertain whether there is a critical period during pregnancy when alcohol consumption is likely to lead to FAS. One study (Hanson etal. 1978) suggests that FAS incidence correlates most strongly with alcohol consumption very early in pregnancy, even before pregnancy is recognized. If this is cooperated, it means that not only pregnant women, but also women who are likely to become pregnant, must be advised not to drink.

The mechanism by which ethanol produces these effects is unknown, both alcohol and its metabolite, acetaldehyde, inhibit cell division and migration in culture, so it is possible that the same mechanism operates in vivo. From experiments on rats and mice, it is suggested that the effect on facial development may be produced very early in pregnancy (up to 4 weeks in man), while the effect on brain development is produced rather later (up to 10 weeks).

2.4 CONTRACEPTIVES

There are two main types of preparations taken overall on a regular basis to prevent conception:

- Combination o an estrogen with a progestogen
- Progestrogen alone.

COMBINATIONS OF AN OESTROGEN WITH A PROGESTOGEN

The Oestrogen in most combined preparations is ethinyloestradiol, though a few preparations contain mestranol instead. The progestogen may be norethisterone, levonorgestrel, ethynodiol, gestodene, desogestrel or lynoestrenol. The oestrogen content of the pill should be no more that 30-35ug of ethinyloestradiol or its equivalent, and the progestogen content should also be low. This combined pills is taken for 21 consecutive days followed by 7 pill-free days. The mode of action is thought to be as follows:

The oestrogen inhibits, the release of FSH and thus suppresses the development of the ovarian follicle.

The progestogen inhibits the release of LH and thus prevents ovulation, and it also makes the cervical mucus less suitable for the passage of sperm.

Together they alter the endomentrium in such a way as to discourage implantation. They may also interfere with the coordinated contractions of cervix, uterus and fallopian tubes which are thought to be necessary for successful fertilization and implantation. When administration ceases after 21 days it is the withdrawal of the progestogen, which precipitates menstruation.

This form of oral contraception is the most effective available, but there are Drawbacks.

PROGESTOGEN ALONE.

The drugs used are norethisterone, norgestrel, megestrol, levonnorgestrel or ethynodiol. They are taken daily without interruption. Their mode of action is primarily on the cervical mucus, which is made inhospitable to sperm. They probably also hinder implantation through their effect on the endometrium and on the motility and secretions of the fallopian tubes. Inhibition of ovulation is variable and inconsistent. Their contraceptive effect is less reliable that, that of the combination pill and missing a dose may result in conception. There is liable to be break-through bleeding.

An advantage is that they can be taken after parturition, as, unlike oestrogen – containing pills, they do not interfere with lactation.

2.4.1 UNWANTED EFFECTS OF ORAL CONTRACEPTIVES

Unwanted effects are more pronounced with the combined pill, but serious adverse effects are rare. These include the following:

i. The possibility of increased risk of thromboembolism. This is related to the increased coagulability of the blood described above and the main manifestation is deep vein thrombosis, which may result in pulmonary embolism. The hypercoagulability is mainly due to the oestrogen content in the combined pill and is only significant if the dosage is high (e.g. above 50ug for ethrinyl oestradial or 100mg for mestranol). With low oestrogen dosage, the risk is small and is confined to specific subgroups in whom other factors contribute, such as smoking (which can increase the risk substantially) and long continued use of the pill, especially in women over 35 years. There is also reported to be a slightly increased tendency to arteriosclerosis, and hence increased risk of cerebrovascular disease and myocardial infarction. This risk is additive to other risk factors such as smoking, hypertension and age and is now thought to be associated with the progestogen content.

ii.   An impairment of glucose tolerance which may precipitate diabetes in a small number of individuals (such individuals may have had prediclinical diabetes).

iii.   A slight increase in the risk of cervical cancer, from 1 in 1000 women years to 2 in 1000 women years. It appears that oral contraceptives promote, rather than initiate cervical neoplasia.

iv.   Impairment of liver functions, sometimes with mild jaundice in some individuals with a genetic predisposition for this effect. In some cases there is a reduction in drug metabolism capacity and an increased risk of gall bladder disease and hepatic neoplasia.

v.   General symptoms, such as nausea, flushing, dizziness, depression or irritability, in some individuals.

vi.   Skin changes: acne and 1 or an increase in pigmentation may occur.

vii.   An increase in blood pressure. This is normally minimal, but is fairly marked in some individuals.

viii.   A possible increase risk of breast cancer. There is a morass of conflicting evidence on this. In may, 1989, both nature and the British medical journal had articles on the relationship between the contraceptive pill and breast cancer. The report in Nature (Mc Gourty 1989) was headed 'increased cancer risk found', and the editorial in the British Medical journal (Drife 1989) was subtitled 'Evidence is still reassuring'.

ix.   Amenorrhoea of variable duration on cessation of taking the pill. Permanent loss of fertility is rare and normal cycles of menstruation usually commence fairly soon.

2.4.2 BENEFICIAL EFFECTS.

The use of the combined pill halves the prevalence of menorrheoa, irregular periods and intermenstrual bleeding. The incidence of iron-deficiency anemia, of dysmenorrheoa and of premenstrual tension is reduced, as is the incidence of being breast disease, uterine fibroids and functional cysts of the ovaries. There is less

risk of thyroid disease and of cancer of the ovaries and cancer of the endometrium. Two studies have shown a reduction in the occurrence of rheumatoid arthritis and two have not. Amongst the beneficial effects should be included the fact that unwanted pregnancy has been avoided, in the light of the fact that pregnancy caries an overall maternal mortality ranging from 1 in 10,000 in developed countries to 1 in 150 in Africa.

In general, oral contraceptives with low oestrogen content appears to be an effective form of contraception and are reasonably safe in young women who do not smoke.

2.4.3   POST COITAL ORAL CONTRACEPTIVES.

Various regimes using post coital oral contraceptives have been tried. One which has been reported to be effective is the use of two tablets of an oestrogen – progestogen combination with a further two tablets 12 hours later. Another method is to use high doses of oestrogen only for 5 days. Nausea and vomiting are likely to occur (and the pill may be lost).

Drugs in the form of hormones and their analogs have been developed to control human fertility. No contraception appliance is absolutely so it is essential that the woman fully understand the instruction she is given and carries them out faithfully. There are different methods of contraception.

a.   The occlusive rubber cap: There are various types of cap that are inserted into the vagina porn to coitus and removed not less than eight hours afterwards; the diaphragm Dutch cap being most frequently prescribed. It prevents the spermatozoa from entering the cervicalos.

b.   The condom or rubber sheath: This thin rubber apphance (like a finger stall) is worn by the husband. For maximal safety spermicidal jelly is introduced into the vagina as well as being smeared on the outside of the condom. The failure rate when used with spermicidal jelly is 5percent.

c.   The Rhythm method: This method limits coitus to the period no ovum is available for fertilization ten days prior to and five days after menstruation.

The nine days surrounding the days of ovulation are unsafe so coitus must not take place on the five days before, on the day of and on the three days after ovulation, a total of nine days.

d.   Oral contraceptive pills: This provides maximal safety against conception; if the tablets are taken exactly as prescribed the women will very rarely become pregnant. The most commonly type of oral contraceptives is the combination preparation which contain both an oestrogen and progestin. (According to every woman Darek; 1971).

2.5   ABORTION (MISCARRIAGE)

Although, the proper medical term for a miscarriage in the first half of pregnancy is an abortion, to many women the term means that the pregnancy has been ended by a doctor or some other person. Many women prefer to use the term 'miscarriage' for a spontaneous abortion. About one pregnancy in seven ends as a miscarriage, most often between the 6th and 10th week of pregnancy. Miscarriage is less common among women under the age of 25, when 1 in 10 will abort, and becomes more common as a woman grows older. After the age of 35, 1 pregnancy in 5 ends as an abortion.

Most cases of miscarriage are due to the fact that the fetus has not formed properly, and Nature is getting rid of it. In a few cases a miscarriage follows a severe fever, particularly a viral infection, or because of some abnormality of the uterus, particularly a cervix which is 'incompetent', as we shall discuss later. Miscarriage are not caused by fatigue, shock, excessive sexual intercourse, a extroverted uterus or an improper diet.

The commonest cause of bleeding in early pregnancy is abortion which can be define as the interruption of pregnancy before the 28th week of gestation after.

2.6   INFECTION

This is the incidence of disease(s) that can be transmitted directly from one person to another like sexual transmitted disease or transmitted indirectly through contaminated water, food or other agent. It can be regarded as infection disease or contagious disease. Vital infection such as vulval warts caused due to sphiolis or gonorrherea ever suffered may spread extensively I the vulval region during pregnancy. Acute

infections by their effect and possible the high temperature, acute infections disease may cause abortion, premature labour

and still birth (Prosser, 1973). There are other infections that are not infections and yet they affect pregnancy such as:

2.6.1 HEART DISEASE.

Better nutrition and better hygiene have reduced the number of pregnant women who have rheumatic heart disease, but some of them and women who have congenital heart lesions become pregnant.

CHAPTER THREE

3.0   DESIGN OF A NEW SYSTEM

3.1   INTRODUCTION TO THE PROPOSED SYSTEM.

The proposed system is going to be more accurate and faster than the existing system. In this chapter, system analysis and design is discussed. The chapter focuses on the identification and definition of problems of the present system, feasibility and investigation.

System analysis is defined as the methods of determining how best to use computers with other resources to perform tasks which meet the information need of an organization. System analysis was initially developed as a specialized branch of organization and method (OSM) which is a general approach to solving procedural problem.

Organization and method on the other hand can be defined as the systematic analysis of selected procedural problems in order to produce alternatives which will be more suitable technically and economically from the foregoing definitions, one can then liken system analysis and deign to a problem solving process which is concerned with analyzing work methods and procedures in order to simplify work and workflow.

The process of system analysis consists of a series of steps, which are referred to as system life cycle. The system life cycle are as follows:-

  i. Problem definition

  ii. Feasibility study

  iii. Investigation and fact finding;

  iv. Analysis

  v. System Design.

For the purpose of this project work, the design stage will be concerned with the full description of the new system, System requirements and system specification. Specifically the design of the new system will be divided into the following components:

a.   Output specification;

b.   Input specification;

c.   File; and

d.   Procedures.

3.11   THE CURRENT SYSTEM.

At this juncture it is pertinent to discuss the steps involved in the preparation and Review of the factors affecting pregnancy; in order to establish the strength and weaknesses of the existing system.

      The steps involved are enumerated below:

1.   Data collection: The data required for the computation of the factors affecting pregnancy are collected from individuals and hospitals. For the purpose of pregnancy review, the hospitals also collect information on factors affecting their pregnancy and what likely causes miscarriage.

2.   Computation of factors: Data collected from individual and hospitals are used for computation to determine whether the data obtained provided sufficient evidence of dependence on attributes under study.

This is obtained by using statistical test called chi-square test. Item be denoted as X^2. This can be defined as a measure of the discrepancy existing between the observed and expected frequencies supplied by the statistic X^2 (read chi-square).

The expected frequencies is obtained by multiplying the row and column of the information (data) gotten and divided by total. It is denoted as $\underline{R \times C}$ where R is

the total   T

number of rows and C the total number of column. While T is the grand total. The observed data and the estimated expected value in each cell of contingency table are compared using the statistics X^2. It is denoted as $X^2 = \dfrac{\sum(0-E)2}{E}$

Where O is the observed, E is the expected values and the degree of freedom V is estimated using (R-1) (C-1).

After the computation of X^2, test of hypothesis is set up. There is Ho that is null hypothesis and H_1 that is alternative hypothesis. Where H_0 and H_1 always depicts that the attributes under study are independent and dependent respectively. At 0.05 level of significant designated as X. At this point decision is taken based on the degree of freedom.

Decision rule: Reject H_0 if $X^2_c > X^2_c$ base on (R-1)(c-1) df otherwise accept Ho where X_c is X^2 calculated, X^2_t is X^2 tabulated.

3.12 REQUIREMENT SPECIFICATION.

The basic aim of an analyst is to come up with requirement specification for a System. To this end a description of what the system is required to do ands how the system should be designed and implemented is given. The new system proposed in this project work is expected to be able to prepare and produce result of factors affecting pregnancy and store data required for the periodic review of pregnancy, factors affecting them and causes of miscarriage with great accuracy and reliability.

In view of the above expectations, the requirement specification for the new system are stated below:

A. HARDWARE:
    i.   IBM Compatible PC

    ii.   Main memory:32MHZ.

    iii.   Disk Drive: One floppy disk drive for 3 ½ inch diskette/one

    iv.   Display: Monochrome/co lour (CD Drive)

    v.   Printer – Laser jet printer

    vi.   Stabilizer: 250V

    vii.   UPS: 500V

B. SOFTWARE
    i.   Disk Operating System (DOS): MS DOS 6.0

    ii.   DBMS Package: Dbase iv

    iii.   Wind 98/99.

3.13   OUTPUT SPECIFICATION

The kind of output required from a system to a great extent determines the type of Input for the system. Hence, it is relevant to consider what is required from the system before determining how to produce it, In order to determine the output requirements, it is necessary to consider the form, types volumes and frequency of reports and documents.

As earlier indicated, the main concern of this work is the computation of factors affecting pregnancy and the review of pregnancy factors and causes of miscarriage. For this reason, there is need to produce hardcopies of this computations.

INPUT SPECIFICATION.

The type of input required is greatly influenced by the need of output. Hence, in determining the input for this project work, the following were taken into consideration.

        a.   Data collection and validation

        b.   Type of input media;

        c.   Volume of input documents, and

        d.   Design of input layout.

3.2   IMPROVED SYSTEM

To meet the customers demands and also to compete favorably in the business,
A company may initiate a systems development project for a number of reasons:

        a.   Increasing competition- For example, a competitor's new computerized system might provide faster and better customer service, forcing a company to keep pace in order to remain competitive.

        b.   The desire to make more effective use of information managers seek more information or a more useful structure for information, so they can make better business decisions.

c. Organizational growth: Companies experiencing growth required expansion and more powerful system to meet the needs of increasing sales, bookkeeping requirements and customer service.

d. Problems with the existing system – errors, delays, system inefficiencies and the desire to increase profits or reduce costs by eliminating these deficiencies, constitute a major impetus for system development.

e. The desire to exploit new opportunities – New markets, new production facilities, and new ways to achieve competitive advantage through the use of information systems are examples of new opportunities that often in improved system.

f. A charge in the market or external environment. The changing needs of customers, suppliers and governmental laws and regulations can be obtained in improved system.

3.3 METHOD OF OPERATION IN A COMPUTERISED SYSTEM

There are different method of operation in a computerized system. For the purpose of this project, only few will be discussed. There are scheduling, scheduled management, setup time, manual intervention and in balance between processor.

SCHEDULING

i. Most installations keep registers or sign-up sheets to keep reservation scheme

Users come to sign-up for allocating machine time. Later, the sheet would be cross –checked to find out a convenient free time to allocate to user who would want to sign up for it. Depending on the installation or enterprise, allotted machine usage times were evenly allocated to users.

THE INTERACTIVE SYSTEM

ii.   The user/programmer runs program or interacts with the computer directly

Via a console/keyboard/display terminal, to request the execution of a job or to carry out a transaction. The user also receives instantaneous response from the computer.

MULTI – PROGRAMMING SYSTEM

iii.   An independent dimension specifies whether the system employs mult-programming or not. With multi – programming, the processor is made busy much as possible by making it work more than one job/program at a time. Several programs are loaded into computer primary memory, and the processor switches rapidly among them in the hope that they provide work for most of the equipment that can be run simultaneously. The supervisor of the program allocates work to different units by keeping the list of processes that are ready for execution on each of the units. When a unit completes a process, the supervisor can check its lists for fresh work. In the case of a I/O units, an indication by an interrupt concludes the examination of the process. The interrupt signals to the CPU to stop processing the current program temporarily and allocate more work to the I/O unit if there is any. In the case of CPU. Completion is flagged when the CPU program executes the last job or requests I/O buffers that are not yet available.

3.4   ADVANTAGES OF A COMPUTER BASED SYSTEM

1.   Computer allows the keeping of much more detailed records and the information can be much more up to date, and readily retrievable. Such records makes far more accurate computing, improves the management overall control and assist the auditor in the resting.

2. Computer has a repetitive ability in a way that a person does not. Thus if a computer makes a calculation correctly the first time, it will continue to do so.

3. Computer has such greater mathematical ability than human beings.

4. Computer can make regular reconciliation of sales controls to sale subsidiary ledger.

5. A normal part of a computer reporting procedures will be the use of reflection and exception reports. Rejection reports will indicate the reasons why the computer program (via its programme control) has rejected certain input data. Exception reports will indicate any item which are outside pre-determined limits.

6. The auditor can use sophisticated techniques to assist in his audit testing. For example, he may use test packs of artificial data to determine whether the charts programme controls are working effectively; (compliance testing).

3.5 COLLECTION AND REPRESENTATION OF DATA

3.6.1 Source of Data

There are two types of sources of data namely,

i. *Primary Data:*This refers to the statistical material which the investigator originates for the purpose of the inquiry in hand.

ii. *Secondary Data:* The term Secondary data on the other hand refers to that statistical material which is not originated by the investigator himself, but which he obtains from someone else's records. Thus, if instead of obtaining our data from the workers themselves we get them from the records of the trade Union or from some other source, the data will be called secondary data.

3.6.2 DIFFERENCE BETWEEN PRIMARY AND SECONDARY DATA.

The difference between primary and secondary data is largely of one degree. Data which are primary in the hands of one person may be

secondary in data, the methods of collecting the statistical material used in this research was primary methods.

Primary Methods

For obtaining the primary information the investigator may adopt any one of the following methods;

      i.   Direct personal observation

      ii.   Indirect personal interview

      iii.   Information from correspondent

      iv.   Questionnaires to be filled by the respondent.

Information used in this research was strictly based on the questionnaires to be filled by the respondent.

The source of all data collected for this study was from the Lyi-Enu Hospital Ogidi, Anambra State and through distribution of questionnaire. And data collected through randomly distribution of questionnaire to the respondent.

DATA ON PERFORMANCE OF SMO0KING AND NON-SMOKING COUPLE

	SMOKER	NON-SMOKER
Presence Of Pregnancy	47	55
Absence of pregnancy	52	55

Number of menstrual cycle before achieving pregnancy

Non of cycle	Smoker	Non Smoker
1 - 3	6	15
4 - 6	1	7
7 - 9	12	2
10 - 12	4	13
Above 12	2	16

	Smoker	Non – Smoker
Presence of Miscarriage	28	21
Absence of Miscarriage	35	12

	Drinkers	Non - Drinkers
Presence Of Pregnancy	10	13
Absence of pregnancy	17	23

Number of menstrual cycle before achieving pregnancy

Non of cycle	Smoker	Non Smoker
1 - 3	14	15
4 - 6	8	15
7 - 9	2	8
10 - 12	1	11
Above 12	3	10

	Drinker	Non -Drinker
Presence of Miscarriage	9	22
Absence of Miscarriage	23	45

DATA ON PERFORMANCE OF INFECTED AND NON- INFECTED COUPLES.

	Infected	Non – Infected
Presence Of Pregnancy	21	9
Absence of pregnancy	35	22

Number of menstrual cycle before achieving pregnancy

Non of cycle	Infected	Non- Infected
1 - 3	15	15
4 - 6	18	8
7 - 9	6	1
10 - 12	5	1
Above 12	10	3

	Infected	Non -Infected
Presence of Miscarriage	18	10
Absence of Miscarriage	32	20

DATA ON PERFORMANCE OF EVER ABORTED AND NEVER ABORTED COUPLES.

	Aborted	Non -Aborted
Presence Of Pregnancy	11	25
Absence of pregnancy	23	31

Number of menstrual cycle before achieving pregnancy

Non of cycle	Ever Aborted	Never Aborted
1 - 3	15	19
4 - 6	18	13
7 - 9	6	7
10 - 12	5	0
Above 12	10	12

	Ever Aborted	Never Aborted
Presence of Miscarriage	11	17
Absence of Miscarriage	23	45

DATA ON PERFORMANCE OF CONTRACEPTION AND NON – CONTRACEPTION COUPLES.

	Contraception	Non-Contraception
Presence Of Pregnancy	8	16
Absence of pregnancy	22	30

Number of menstrual cycle before achieving pregnancy

Non of cycle	Contraception	Non-Contraception
1 - 3	13	3
4 - 6	7	10
7 - 9	1	2
10 - 12	1	0
Above 12	3	0

	Infected	Non -Infected
Presence of Miscarriage	8	11
Absence of Miscarriage	21	20

CHAPTER FOUR

4.0   PROGRAM DEVELOPMENT

4.1   GENERAL DESCRIPTION

The program was written using DATABASE iv Dbase iv from Ashton Tate, is leading database program.   It can create simple database application such as keeping names, addresses, inventory record and calculation.   It can be used also to create complex applications mathematical calculations and general ledger.

Dbase iv is a relational Database, the database file is organized in the form of table made of rows of records.   Each record is made up of field, All corresponding fields must have the same structure and must contain the same information.   Five different types of fields can be created.   CHARCTER, NUMERIC, DATE, LOGICAL AND MEMO.   To create a database file, you must first define its structure using a menu.   Once the database file structure is defined, you enter data into the database file via a data entry form.   Many commands are provided to manipulate the records in the data files.   You can add delete, browse, and search, select, or print records in database files.

One can also use dBase commands (called dot commands) directly without using the menu facilities provided by Assistant; Database files can be sorted physically or index files can be created to present different sequences without actually sorting the database. dBase IV, provides facilities to generate report and mailing labels from database files.   These reports formatting facilities are menu- drive and are relatively easy to use.   Records can be grouped, totaled, and sub-totaled.   One can generate form letters and merge letters with extracted information from database files.

Dbase iv, offers a programming language that enable the user to construct his/her own database applications.   A large number of built in functions are provided, including mathematical functions, string manipulation functions, data type conversion functions and time and date functions.   The programming language

includes commands to perform conditional branching, looping, calculations, sort record, format input screens, output reports.

A screen design facility is provided for you to custom design your input and output screens to perform error checking. Multiple databases can also be linked (joined) to form a larger database. Dbase iv also provides a local Area Network operating mode, permitting multiple users to access the same data base on a local Area Network.

4.2   PROGRAMMNG WITH DATA Dbase IV

Programming can be define as an act of writing program. A program is a set or Sequence of instructions which informs a computer of the steps required for achieving a define task. A dBase program is a set of dBase iv commands designed to perform a particular task. These commands are stored in a file know in dBase iv as command file. A COMMAND FILE can be created with the text editing program, that is a part of dBase iv or with a word processing program in a non-document mode.

However, the instruction in a command file are accessed in Batch processing mode. Batch processing involves executing the whole program at any time.

4.3   PROGRAM DEVELOPMENT

As earlier mentioned, the program was written using dbase iv. The name that was given to the program is fertility. PRG. The entire program is in MODULAR PROGRAMMING.

Modular programming entails designing your database management program around several small sub-programs or procedures. A sub-program is a complete and independent program, which can be used (involved or called) by the main program or other sub-programs. Modular programming technique has an advantage of being able to reduce the complexity of a problem.

This is because modules are generally small and easy to create. It gives room for programs to be developed and tested in modules.

In dBase iv, there is main program which contains a call to a sub-program. The call is made by the Do statement followed by the file name (fertility pry) of the sub-program. (i.e. Do file name). However, the sub-program must contain a RETURN statement, which transfers control back to the ceiling program. In transfer control between the ceiling program and called program. Dbase iv plus has facilities for transferring memory variable from one program to another.

4.4   PROGRAM DESCRIPTION

The main program is made up of eight options which are:

Drink.prg

Abort3.prg

Contra.prg

Infect.prg

Smoker.prg

Abort2.prg

Ndrink.prg

Report.prg

Exit Program.

The above options are the sub-program in the menu program, which would be executed when the option is chosen from the menu.

4.4.1   REPORT .PRG.

When this option is chosen, the program will execute a sub programs called:

redrink .prg

reabort3 .prg

recontra .prg

reinfect .prg

resmoker .prg

rendrink .prg

reabort2 .prg

Exit to main.

This procedure will enable the user to open a fresh program from the main program. Depending on the program the user wants to view say Drink .prg. The user will first TYPE DO redrink .prg and press enter key, after some minutes the main drink program will appear showing all the contents of the program. This procedure is applicable to the sub-programs in the main program.

4.4.2 EXIT TO MAIN

By choosing this option from the menu, the program will first go to EXIT to program and the quit.

4.5 OPERATION GUIDE

This is just a guide to aid a non computer literate to understand and operate the program. The guide is quite explicit. The name given to the program file is fertility.prg. The entire program is menu driven. When the system is put on, in an attempt to run the program, an inscription will be shown on the screen. This welcomes the user to the computer center of IYI-ENU hospital Ogidi asking you to enter the password and the user's id. This prevents an unauthorized user from making use of the system. The main program menu .prg is made up of eight options which have being mentioned before.

To run program, at the Dos (disk Operating System) Prompt, change directory to dbase sub-directory or set Dos path to the dbase directory if it is not already set in your AUTOEXEC. BAT file.

(A) At the Dos prompt, TYPE DBASE and press the ENTER KEY wait for some few seconds, dbase iv will be logded and present you with the dos prompt. Insert disk in either A or B and change default to the drive where your program reside by typing the following command at the dos prompt.

(B) At the dos prompt

TYPE DO fertility and press ENTER KEY. DBase iv will execute the program file called fertility programm during the execution, the program will clear the screen, and request the user to enter his/her password or user's ID. After you have entered your password and user's ld, press enter. The password and the user;s ld provides security against unthorised user's. The enter password will be validated. If it is not authentic, an error message will be displayed at the bottom of the screen informing the user that the entered password is not gamine. The program will allow the user to have three mials, at the end of the third trial, if the gamine PASSWORD and USER"S – ID are not entered to the system, the program running will be terminated and passes return to DOS. On the other hand, if the PASSWORD and USERS ID are validated and genuine, the program will present you with the options as listed earlier. Them if the users wants to view each program like say Abort3. Prg.

TYPE DO Reabort3. Prg and press the enter key, wait for some few seconds, the contents of abort3.prg will appear and likewise others.

CHAPTER FIVE

CONCLUSION/RECOMMENDATION

5.1   CONCLUSION

The aim of developing a computer-based system of Iyi-Enu Hospital has been Achieved.   Though the work was not easy for the fact that nothing good comes easy. The writer found it a little bit difficult in data collection because of the secret nature of hospital work and handing of information by the patients.

The little collected data were put into use for the development of a program (software) which handles the hospital job. The programs are easy to handle by the computer specialist and non-computer specialist.   This is so because the description of the program is highly explicit with which a fairly computer literate personnel can read and easily understand.   Hence a good manipulation of the program. The program will in the largest extent enhance the work of the doctors, mostly the gynecologists.

At the final analysis, the program was able to provide results showing that the following factors affected the number of cycles a woman could have before pregnancy based on X2 test of independence.

        i.   Alcohol

        ii.   Smoking

        iii.   Contraceptives

        iv.   Infection.

However, it could not be established if any of these factors favoured miscarriage once pregnancy is achieved. It can therefore be concluded that certain exposures are not conducive to women hoping to become pregnant.

5.2   RECOMMENDATION

To ensure an effective data processing using computer, it is worth while to

Recommend an inbuilt computer center in the hospital. A computer center is an organizational unit that provides storage and processing functions, including all necessary auxiliary services.

There are a number of hardware that are required in the computer center for an efficient manipulation of computer, and this have being made mentioned at chapter 3 of this project.

This recommendation are also considered necessary:

1. That women should pay attention to their moral life so as not to have any

    Course to do undertake illegal abortion but should there be any reason for legal abortion, the services of the qualified medical personnel should be sought.

2. That women should avoid smoking in order to reduced the agony they

    Experienced in long waiting for pregnancy. Infarct couples should avoid unhealthy practices and exposures, which impinge on their chances of achieving pregnancy.

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```
clear
close all
set talk off
set status off
set confirm on
set score off
set bell off
store space(2) to mdrink1,mndrink1,mdrink2,mndrink2,mdrink3,mndrink3
@1,15 say "TABLE OF OBSERVED AND EXPECTED FREQUENCIES ON THE"
@2,15 say " No OF CYCLES BEFORE PREG. & ALCOHOLISM IN WOMEN"
@3,15 say "-------------------------------------------------"
@4,10  say "
@05,10 say "| No. of Cycle |  Drinker  |  Non Drinker |  Total      |"
@06,10 say "
@07,10 say "| 1 - 3 "
@07,26 say "|"
@07,28 get mdrink1 pict "99"
@07,42 say "|"
@07,44 get mndrink1 pict "99"
@07,58 say "|"
@07,74 say "|"
@08,10 say "
@09,10 say "| 4 - 6 "
@09,26 say "|"
@09,28 get mdrink2 pict "99"
@09,42 say "|"
@09,44 get mndrink2 pict "99"
@09,58 say "|"
@09,74 say "|"
@10,10 say "
@11,10 say "| 7 - Above"
@11,26 say "|"
@11,28 get mdrink3 pict "99"
@11,42 say "|"
@11,44 get mndrink3 pict "99"
@11,58 say "|"
@11,74 say "|"
@12,10 say "
@13,10 say "| Total     |         |          |       |"
@14,10 say "
read
rTotal1 = val(mdrink1)+val(mndrink1)
rTotal2 = val(mdrink2)+val(mndrink2)
rTotal3 = val(mdrink3)+val(mndrink3)
cTotal1 = val(mdrink1)+val(mdrink2)+val(mdrink3)
cTotal2 = val(mndrink1)+val(mndrink2)+val(mndrink3)
cTotal3 = rTotal1+rTotal2+rTotal3
mexp1=(cTotal1*rTotal1)/cTotal3
mnexp1=(cTotal2*rTotal1)/cTotal3
mexp2=(cTotal1*rTotal2)/cTotal3
mnexp2=(cTotal2*rTotal2)/cTotal3
mexp3=(cTotal1*rTotal3)/cTotal3
mnexp3=(cTotal2*rTotal3)/cTotal3
@07,32 say "("+str(mexp1,5,2)+ " )"
```

```
@07,48 say "("+str(mnexp1,5,2)+ " )"
@07,62 say rTotal1 pict "999"
@09,32 say "("+str(mexp2,5,2)+ " )"
@09,48 say "("+str(mnexp2,5,2)+ " )"
@09,62 say rTotal2 pict "999"
@11,32 say "("+str(mexp3,5,2)+ " )"
@11,48 say "("+str(mnexp3,5,2)+ " )"
@11,62 say rTotal3 pict "999"
@13,27 say cTotal1 pict "999"
@13,44 say cTotal2 pict "999"
@13,62 say cTotal3 pict "999"
X1=(((val(mdrink1)-mexp1)**2)/mexp1)
X2=(((val(mdrink2)-mexp2)**2)/mexp2)
X3=(((val(mdrink3)-mexp3)**2)/mexp3)
Xn1=(((val(mndrink1)-mnexp1)**2)/mnexp1)
Xn2=(((val(mndrink2)-mnexp2)**2)/mnexp2)
Xn3=(((val(mndrink3)-mnexp3)**2)/mnexp3)
mtest=(X1+X2+X3+Xn1+Xn2+Xn3)
@15,26 say "TEST OF HYPOTHESIS"
@17,05 say "Ho: No of cycles before pregnancy and alcoholism in women are independent"
@18,05 say "H1: No of cycles before pregnancy and alcoholism in women are dependent"
@19,05 say "X= at 0.05"
@20,05 say "Tabulated Value = 5.193"
@21,05 say "Calculated Value =" +str(mtest,8,5)
if mtest < 5.193
   @23,05 say "We accept Ho and conclude that number of cycles before"
   @24,05 say "pregnancy and alchoholism in women are independent."
endif
if mtest > 5.193
   @23,05 say "We reject Ho and conclude that number of cycles before"
   @24,05 say "pregnancy and alchoholism in women are dependent."
endif
USE DRINK
append blank
repl drink1 with mdrink1,ndrink1 with mndrink1
repl drink2 with mdrink2,ndrink2 with mndrink2
repl drink3 with mdrink3,ndrink3 with mndrink3
repl mrtotal1 with rtotal1
repl mrtotal2 with rtotal2
repl mrtotal3 with rtotal3
repl mctotal1 with ctotal1
repl mctotal2 with ctotal2
repl mctotal3 with ctotal3
repl exp1 with mexp1, nexp1 with mnexp1
repl exp2 with mexp2, nexp2 with mnexp1
repl exp3 with mexp3, nexp3 with mnexp1
clear
close all
set talk off
set status off
set confirm on
set score off
set bell off
store space(2) to mdrink1,mndrink1,mdrink2,mndrink2,mdrink3,mndrink3
```

```
@1,15 say "TABLE OF OBSERVED AND EXPECTED FREQUENCIES ON THE"
@2,15 say "     ABORTION AND MISCARRIAGE"
@3,15 say "---------------------------------------------"
@                4              ,              0              2      s             a
"
  ─┐"
@05,02 say "|                    | Ever Aborted  | Never Aborted  |   Total      |"
@                0              6              ,              0              2      s             a
"
  ─┤"
@07,02 say "|  Presence of Miscarriage"
@07,29 say "| "
@07,31 get mdrink1 pict "99"
@07,45 say "| "
@07,47 get mndrink1 pict "99"
@07,61 say "| "·
@07,77 say "| "
@                0              8              ,              0              2      s             a
"
  ─┤"   ?
@09,02 say "|  Absence of Miscarriage"
@09,29 say "| "
@09,31 get mdrink2 pict "99"
@09,45 say "| "
@09,47 get mndrink2 pict "99"
@09,61 say "| "
@09,77 say "| "
@                1              0              ,              0              2      s             a
"
  ─┤"
@11,02 say "|  Total            |               |               |      |"
@                1              2              ,              0              2      s             a
"
  ─┘"
read
rTotal1 = val(mdrink1)+val(mndrink1)
rTotal2 = val(mdrink2)+val(mndrink2)
cTotal1 = val(mdrink1)+val(mdrink2)
cTotal2 = val(mndrink1)+val(mndrink2)
cTotal3 = rTotal1+rTotal2
mexp1=(cTotal1*rTotal1)/cTotal3
mnexp1=(cTotal2*rTotal1)/cTotal3
mexp2=(cTotal1*rTotal2)/cTotal3
mnexp2=(cTotal2*rTotal2)/cTotal3
@07,35 say "("+str(mexp1,5,2)+ " )"
@07,51 say "("+str(mnexp1,5,2)+ " )"
@07,65 say rTotal1 pict "999"
@09,35 say "("+str(mexp2,5,2)+ " )"
@09,51 say "("+str(mnexp2,5,2)+ " )"
@09,65 say rTotal2 pict "999"
@11,30 say cTotal1 pict "999"
@11,47 say cTotal2 pict "999"
@11,65 say cTotal3 pict "999"
X1=(((val(mdrink1)-mexp1)**2)/mexp1)
```

```
X2=(((val(mdrink2)-mexp2)**2)/mexp2)
Xn1=(((val(mndrink1)-mnexp1)**2)/mnexp1)
Xn2=(((val(mndrink2)-mnexp2)**2)/mnexp2)
mtest=(X1+X2+Xn1+Xn2)
@15,26 say "TEST OF HYPOTHESIS"
@17,05 say "Ho: Abortion and Miscarriage are independent"
@18,05 say "H1: Abortion and Miscarriage are dependent"
@19,05 say "X= at 0.05"
@20,05 say "Tabulated Value = 3.841"
@21,05 say "Calculated Value =" +str(mtest,8,5)
if mtest < 3.841
  @23,05 say "We accept Ho and conclude that"
  @24,05 say "Abortion and miscarriage are independent."
endif
if mtest > 3.841
  @23,05 say "We reject Ho and conclude that"
  @24,05 say "Abortion and miscarriage are independent."
endif
USE abort3
append blank
repl drink1 with mdrink1,ndrink1 with mndrink1
repl drink2 with mdrink2,ndrink2 with mndrink2
repl mrtotal1 with rtotal1
repl mrtotal2 with rtotal2
repl mctotal1 with ctotal1
repl mctotal2 with ctotal2
repl mctotal3 with ctotal3
repl exp1 with mexp1, nexp1 with mnexp1
repl exp2 with mexp2, nexp2 with mnexp1
clear
close all
set talk off
set status off
set confirm on
set score off
set bell off
store space(2) to mcontra1,mncontra1,mcontra2,mncontra2,mcontra3,mncontra3
@1,15 say "TABLE OF OBSERVED AND EXPECTED FREQUENCIES ON THE"
@2,15 say "CONTRACEPTION AND ACHIEVEMENT OF PREGNANCY"
@3,15 say "------------------------------------------------"
@05,02 say "| Contraceptors | Non contraceptor | Total |"
@07,02 say "| Pregnancy"
@07,29 say "|"
@07,31 get mcontra1 pict "99"
@07,45 say "|"
@07,47 get mncontra1 pict "99"
@07,62 say "|"
@07,78 say "|"
```

```
@          0          8         ,          0          2    s          a
"├───────────────────────────────────┼───────────────────────┼──────────────────

──────┤ "
@09,02 say "│  Absence of Pregnancy  "
@09,29 say "│ "
@09,31 get mcontra2 pict "99"
@09,45 say "│ "
@09,47 get mncontra2 pict "99"
@09,62 say "│ "
@09,78 say "│ "
@          1          0         ,          0          2    s          a
"├───────────────────────────────────┼───────────────────────┼──────────────────

──────┤ "
@11,02 say "│  Total·              │         │   ·      │        │"
@          1          2         ,          0          2    s          a
"└───────────────────────────────────┴───────────────────────┴──────────────────

──────┘ "  ;
read
rTotal1 = val(mcontra1)+val(mncontra1)
rTotal2 = val(mcontra2)+val(mncontra2)
cTotal1 = val(mcontra1)+val(mcontra2)
cTotal2 = val(mncontra1)+val(mncontra2)
cTotal3 = rTotal1+rTotal2
mexp1=(cTotal1*rTotal1)/cTotal3
mnexp1=(cTotal2*rTotal1)/cTotal3
mexp2=(cTotal1*rTotal2)/cTotal3
mnexp2=(cTotal2*rTotal2)/cTotal3
@07,35 say "("+str(mexp1,5,2)+ " )"
@07,51 say "("+str(mnexp1,5,2)+ " )"
@07,65 say rTotal1 pict "999"
@09,35 say "("+str(mexp2,5,2)+ " )"
@09,51 say "("+str(mnexp2,5,2)+ " )"
@09,65 say rTotal2 pict "999"
@11,30 say cTotal1 pict "999"
@11,47 say cTotal2 pict· "999"
@11,65 say cTotal3 pict "999"
X1=(((val(mcontra1)-mexp1)**2)/mexp1)
X2=(((val(mcontra2)-mexp2)**2)/mexp2)
Xn1=(((val(mncontra1)-mnexp1)**2)/mnexp1)
Xn2=(((val(mncontra2)-mnexp2)**2)/mnexp2)
mtest=(X1+X2+Xn1+Xn2)
@15,26 say "TEST OF HYPOTHESIS"
@17,05 say "Ho: contraception and pregnancy are independent"
@18,05 say "H1: contraception and pregnancy are dependent"
@19,05 say "X= at 0.05"
@20,05 say "Tabulated Value = 3.841"
@21,05 say "Calculated Value =" +str(mtest,8,5)
if mtest < 3.841
  @23,05 say "We accept Ho and conclude that"
  @24,05 say "contraception and Pregnancy are independent."
endif
if mtest > 3.841
  @23,05 say "We reject Ho and conclude that"
  @24,05 say "contraion and Pregnancy dependent."
```

```
endif
USE contrace
append blank
repl contra1 with mcontra1,ncontra1 with mncontra1
repl contra2 with mcontra2,ncontra2 with mncontra2
repl mrtotal1 with rtotal1
repl mrtotal2 with rtotal2
repl mctotal1 with ctotal1
repl mctotal2 with ctotal2
repl mctotal3 with ctotal3
repl exp1 with mexp1, nexp1 with mnexp1
repl exp2 with mexp2, nexp2 with mnexp1
clear
close all
set talk off
set status off
set confirm on
set score off
set bell off
store space(2) to mdrink1,mndrink1,mdrink2,mndrink2,mdrink3,mndrink3
@1,15 say "TABLE OF OBSERVED AND EXPECTED FREQUENCIES ON THE"
@2,15 say "     MISCARRIAGE  AND ALCOHOLISM  IN WOMEN"
@3,15 say "----------------------------------------------------"
@4,02 say "┌──────────────────┬─────────┬─────────────┬────────┐"
@05,02 say "│                  │ Drinker │ Non Drinker │  Total │"
@06,02 say "├──────────────────┼─────────┼─────────────┼────────┤"
@07,02 say "│ Presence of Miscarriage"
@07,29 say "│"
@07,31 get mdrink1 pict "99"
@07,45 say "│"
@07,47 get mndrink1 pict "99"
@07,61 say "│"
@07,77 say "│"
@08,02 say "├──────────────────┼─────────┼─────────────┼────────┤"
@09,02 say "│ Absence of Miscarriage"
@09,29 say "│"
@09,31 get mdrink2 pict "99"
@09,45 say "│"
@09,47 get mndrink2 pict "99"
@09,61 say "│"
@09,77 say "│"
@10,02 say "├──────────────────┼─────────┼─────────────┼────────┤"
@11,02 say "│ Total            │         │             │        │"
@12,02 say "└──────────────────┴─────────┴─────────────┴────────┘"
```

```
read
rTotal1 = val(mdrink1)+val(mndrink1)
rTotal2 = val(mdrink2)+val(mndrink2)
cTotal1 = val(mdrink1)+val(mdrink2)
cTotal2 = val(mndrink1)+val(mndrink2)
cTotal3 = rTotal1+rTotal2
mexp1=(cTotal1*rTotal1)/cTotal3
mnexp1=(cTotal2*rTotal1)/cTotal3
mexp2=(cTotal1*rTotal2)/cTotal3
mnexp2=(cTotal2*rTotal2)/cTotal3
@07,35 say "("+str(mexp1,5,2)+ " )"
@07,51 say "("+str(mnexp1,5,2)+ " )"
@07,65 say rTotal1 pict "999"
@09,35 say "("+str(mexp2,5,2)+ " )"
@09,51 say "("+str(mnexp2,5,2)+ " )"
@09,65 say rTotal2 pict "999"
@11,30 say cTotal1 pict "999"
@11,47 say cTotal2 pict "999"
@11,65 say cTotal3 pict "999"
X1=(((val(mdrink1)-mexp1)**2)/mexp1)
X2=(((val(mdrink2)-mexp2)**2)/mexp2)
Xn1=(((val(mndrink1)-mnexp1)**2)/mnexp1)
Xn2=(((val(mndrink2)-mnexp2)**2)/mnexp2)
mtest=(X1+X2+Xn1+Xn2)
@15,26 say "TEST OF HYPOTHESIS"
@17,05 say "Ho: No of cycles before pregnancy and alcoholism in women are independent"
@18,05 say "H1: No of cycles before pregnancy and alcoholism in women are dependent"
@19,05 say "X= at 0.05"
@20,05 say "Tabulated Value = 5.193"
@21,05 say "Calculated Value =" +str(mtest,8,5)
if mtest < 5.841
   @23,05 say "We accept Ho and conclude that"
   @24,05 say "Miscarriage and Alcoholism are independent."
endif
if mtest > 5.841
   @23,05 say "We reject Ho and conclude that"
   @24,05 say "Miscarriage and Alcoholism are dependent."
endif
USE NDRINK
append blank
repl drink1 with mdrink1,ndrink1 with mndrink1
repl drink2 with mdrink2,ndrink2 with mndrink2
repl mrtotal1 with rtotal1
repl mrtotal2 with rtotal2
repl mctotal1 with ctotal1
repl mctotal2 with ctotal2
repl mctotal3 with ctotal3
repl exp1 with mexp1, nexp1 with mnexp1
repl exp2 with mexp2, nexp2 with mnexp1
clear
close all
set talk off
set status off
set confirm on
```

```
set score off
set bell off
store space(2) to mabort1,mnabort1,mabort2,mnabort2,mabort3,mnabort3
@1,15 say "TABLE OF OBSERVED AND EXPECTED FREQUENCIES ON THE"
@2,15 say " ABORTED AND ACHIEVEMENT OF PREGNANCY"
@3,15 say "----------------------------------------------------"
@4,02 say "┌───────────────────┬─────────────┬─────────────┬───────────────┐"
@05,02 say "│                   │ Ever Aborted │ Never Aborted │   Total       │"
@06,02 say "├───────────────────┼─────────────┼─────────────┼───────────────┤"
@07,02 say "│        Pregnancy"
@07,29 say "│"
@07,31 get mabort1 pict "99"
@07,45 say "│"
@07,47 get mnabort1 pict "99"
@07,61 say "│"
@07,77 say "│"
@08,02 say "├───────────────────┼─────────────┼─────────────┼───────────────┤"
@09,02 say "│   Absence of Pregnancy   "
@09,29 say "│"
@09,31 get mabort2 pict "99"
@09,45 say "│"
@09,47 get mnabort2 pict "99"
@09,61 say "│"
@09,77 say "│"
@10,02 say "├───────────────────┼─────────────┼─────────────┼───────────────┤"
@11,02 say "│   Total           │             │             │               │"
@12,02 say "└───────────────────┴─────────────┴─────────────┴───────────────┘"
read
rTotal1 = val(mabort1)+val(mnabort1)
rTotal2 = val(mabort2)+val(mnabort2)
cTotal1 = val(mabort1)+val(mabort2)
cTotal2 = val(mnabort1)+val(mnabort2)
cTotal3 = rTotal1+rTotal2
mexp1=(cTotal1*rTotal1)/cTotal3
mnexp1=(cTotal2*rTotal1)/cTotal3
mexp2=(cTotal1*rTotal2)/cTotal3
mnexp2=(cTotal2*rTotal2)/cTotal3
@07,35 say "("+str(mexp1,5,2)+ " )"
@07,51 say "("+str(mnexp1,5,2)+ " )"
@07,65 say rTotal1 pict "999"
@09,35 say "("+str(mexp2,5,2)+ " )"
@09,51 say "("+str(mnexp2,5,2)+ " )"
@09,65 say rTotal2 pict "999"
@11,30 say cTotal1 pict "999"
```

```
@11,47 say cTotal2 pict "999"
@11,65 say cTotal3 pict "999"
X1=(((val(mabort1)-mexp1)**2)/mexp1)
X2=(((val(mabort2)-mexp2)**2)/mexp2)
Xn1=(((val(mnabort1)-mnexp1)**2)/mnexp1)
Xn2=(((val(mnabort2)-mnexp2)**2)/mnexp2)
mtest=(X1+X2+Xn1+Xn2)
@15,26 say "TEST OF HYPOTHESIS"
@17,05 say "Ho: Abortion and pregnancy are independent"
@18,05 say "H1: Abortion and pregnancy are dependent"
@19,05 say "X= at 0.05"
@20,05 say "Tabulated Value = 3.841"
@21,05 say "Calculated Value =" +str(mtest,8,5)
if mtest < 3.841
   @23,05 say "We accept Ho and conclude that"
   @24,05 say "Abortion and Pregnancy are independent."
endif
if mtest > 3.841
   @23,05 say "We reject Ho and conclude that"
   @24,05 say "Abortion and Pregnancy dependent."
endif
USE aborted
append blank
repl abort1 with mabort1,nabort1 with mnabort1
repl abort2 with mabort2,nabort2 with mnabort2
repl mrtotal1 with rtotal1
repl mrtotal2 with rtotal2
repl mctotal1 with ctotal1
repl mctotal2 with ctotal2
repl mctotal3 with ctotal3
repl exp1 with mexp1, nexp1 with mnexp1
repl exp2 with mexp2, nexp2 with mnexp1
clear
close all
set talk off
set status off
set confirm on
set score off
set bell off
store space(2) to minfect1,mninfect1,minfect2,mninfect2,minfect3,mninfect3
@1,15 say "TABLE OF OBSERVED AND EXPECTED FREQUENCIES ON THE"
@2,15 say " INFECTED AND ACHIEVEMENT OF PREGNANCY"
@3,15 say "--------------------------------------------------"
@                    4              ,              0         2    s              a
"
@05,02 say "|                  |  Infected  | Non Infected  |  Total    |"
@                    0              6              ,              0         2    s              a
"
@07,02 say "|       Pregnancy"
@07,29 say "|"|":
@07,31 get minfect1 pict "99"
@07,45 say "|"
```

```
@07,47 get mninfect1 pict "99"
@07,61 say " | "
@07,77 say " | "
@                 0          8        ,          0          2    s            a
"  |_____|_____|_____|_____
  ___|  "
@09,02 say " |  Absence of Pregnancy  "
@09,29 say " | "
@09,31 get minfect2 pict "99"
@09,45 say " | "
@09,47 get mninfect2 pict "99"
@09,61 say " | "
@09,77 say " | "
@                 1          0        ,          0          2    s            a
"  |_____|_____|_____|_____
  ___|  "
@11,02 say " |  Total    '        |  ·      |         |      | "          ·
@                 1    .     2      ,    .     0          2    s            a
"  |_____|_____|_____|_____
  ___|  "
read         ?
rTotal1 = val(minfect1)+val(mninfect1)
rTotal2 = val(minfect2)+val(mninfect2)
cTotal1 = val(minfect1)+val(minfect2)
cTotal2 = val(mninfect1)+val(mninfect2)
cTotal3 = rTotal1+rTotal2
mexp1=(cTotal1*rTotal1)/cTotal3
mnexp1=(cTotal2*rTotal1)/cTotal3
mexp2=(cTotal1*rTotal2)/cTotal3
mnexp2=(cTotal2*rTotal2)/cTotal3
@07,35 say "("+str(mexp1,5,2)+ " )"
@07,51 say "("+str(mnexp1,5,2)+ " )"
@07,65 say rTotal1 pict "999"
@09,35 say "("+str(mexp2,5,2)+ " )"
@09,51 say "("+str(mnexp2,5,2)+ " )"
@09,65 say rTotal2 pict "999"
@11,30 say cTotal1 pict "999"
@11,47 say cTotal2 pict "999"
@11,65 say cTotal3 pict "999"
X1=(((val(minfect1)-mexp1)**2)/mexp1)
X2=(((val(minfect2)-mexp2)**2)/mexp2)
Xn1=(((val(mninfect1)-mnexp1)**2)/mnexp1)
Xn2=(((val(mninfect2)-mnexp2)**2)/mnexp2)
mtest=(X1+X2+Xn1+Xn2)
@15,26 say "TEST OF HYPOTHESIS"
@17,05 say "Ho: Infection in mothers does not influence miscarriage during pregnancy"
@18,05 say "H1: Infection in mothers do influence miscarriage during pregnancy"
@19,05 say "X= at 0.05"
@20,05 say "Tabulated Value = 3.841"
@21,05 say "Calculated Value =" +str(mtest,8,5)
if mtest < 3.841
   @23,05 say "We accept Ho and conclude that infection in mothers "
   @24,05 say " does not influence miscarriage during Pregnancy."
endif
```

```
if mtest > 3.841
    @23,05 say "We reject Ho and conclude that infection in mothers "
    @24,05 say "influence miscarriage during Pregnancy."
endif
USE infected
append blank
repl infect1 with minfect1,ninfect1 with mninfect1
repl infect2 with minfect2,ninfect2 with mninfect2
repl mrtotal1 with rtotal1
repl mrtotal2 with rtotal2
repl mctotal1 with ctotal1
repl mctotal2 with ctotal2
repl mctotal3 with ctotal3
repl exp1 with mexp1, nexp1 with mnexp1
repl exp2 with mexp2, nexp2 with mnexp1
clear
close all
set talk off
set status off
set confirm on
set score off
set bell off
store space(2) to mabort1,mnabort1,mabort2,mnabort2,mabort3,mnabort3
@1,10 say "
@02,10 say "| No. of Cycle  | Ever Aborted  |Never Aborted  |  Total      |"
@03,10 say "
@04,10 say "| 1 - 3 "
@04,26 say "|"
@04,28 get mabort1 pict "99"
@04,42 say "|"
@04,44 get mnabort1 pict "99"
@04,58 say "|"
@04,74 say "|"
@05,10 say "
@06,10 say "| 4 - 6 "
@06,26 say "|"
@06,28 get mabort2 pict "99"
@06,42 say "|"
@06,44 get mnabort2 pict "99"
@06,58 say "|"
@06,74 say "|"
@07,10 say "
@08,10 say "| 7 - Above 12"
@08,26 say "|"
@08,28 get mabort3 pict "99"
@08,42 say "|"
@08,44 get mnabort3 pict "99"
@08,58 say "|"
@08,74 say "|"
@09,10 say "
@10,10 say "| Total      |        |       |     |"
@11,10 say "
read
rTotal1 = val(mabort1)+val(mnabort1)
```

```
rTotal2 = val(mabort2)+val(mnabort2)
rTotal3 = val(mabort3)+val(mnabort3)
cTotal1 = val(mabort1)+val(mabort2)+val(mabort3)
cTotal2 = val(mnabort1)+val(mnabort2)+val(mnabort3)
cTotal3 = rTotal1+rTotal2+rTotal3
mexp1=(cTotal1*rTotal1)/cTotal3
mnexp1=(cTotal2*rTotal1)/cTotal3
mexp2=(cTotal1*rTotal2)/cTotal3
mnexp2=(cTotal2*rTotal2)/cTotal3
mexp3=(cTotal1*rTotal3)/cTotal3
mnexp3=(cTotal2*rTotal3)/cTotal3
@04,32 say "("+str(mexp1,5,2)+ " )"
@04,48 say "("+str(mnexp1,5,2)+ " )"
@04,62 say rTotal1 pict "999"
@06,32 say "("+str(mexp2,5,2)+ " )"
@06,48 say "("+str(mnexp2,5,2)+ " )"
@06,62 say rTotal2 pict "999"
@08,32 say "("+str(mexp3,5,2)+ " )"
@08,48 say "("+str(mnexp3,5,2)+ " )"
@08,62 say rTotal3 pict "999"
@10,27 say cTotal1 pict "999"
@10,44 say cTotal2 pict "999"
@10,62 say cTotal3 pict "999"
X1=(((val(mabort1)-mexp1)**2)/mexp1)
X2=(((val(mabort2)-mexp2)**2)/mexp2)
X3=(((val(mabort3)-mexp3)**2)/mexp3)
Xn1=(((val(mnabort1)-mnexp1)**2)/mnexp1)
Xn2=(((val(mnabort2)-mnexp2)**2)/mnexp2)
Xn3=(((val(mnabort3)-mnexp3)**2)/mnexp3)
mtest=(X1+X2+X3+Xn1+Xn2+Xn3)
@12,26 say "TEST OF HYPOTHESIS"
@15,05 say "Ho: Data provide sufficient evidence that abortion does not affect number"
@16,05 say "of cycle before achieving pregnancy"
@17,05 say "H1: Data provide sufficient evidence that abortion do affect number"
@18,05 say "of cycle before achieving pregnancy"
@19,05 say "X= at 0.05."
@20,05 say "Tabulated Value = 5.193"
@21,05 say "Calculated Value =" +str(mtest,8,5)
if mtest < 5.991
  @22,05 say "We accept Ho and conclude that data provive sufficient evidence the abortion"
  @23,05 say "does not affect no of cycle before achieving pregnancy."
endif
if mtest > 5.991
  @22,05 say "We reject Ho and conclude that data provive sufficient evidence the abortion"
  @23,05 say "does not affect no of cycle before achieving pregnancy."
endif
USE aborted2
append blank
repl abort1 with mabort1,nabort1 with mnabort1
repl abort2 with mabort2,nabort2 with mnabort2
repl abort3 with mabort3,nabort3 with mnabort3
repl mrtotal1 with rtotal1
repl mrtotal2 with rtotal2
repl mrtotal3 with rtotal3
```

```
repl mctotal1 with ctotal1
repl mctotal2 with ctotal2
repl mctotal3 with ctotal3
repl exp1 with mexp1, nexp1 with mnexp1
repl exp2 with mexp2, nexp2 with mnexp1
repl exp3 with mexp3, nexp3 with mnexp1
clear
close all
set talk off
set status off
set confirm on
set score off
set bell off
store space(2) to msmoker1,mnsmoker1,msmoker2,mnsmoker2,msmoker3,mnsmoker3
@1,15 say "TABLE OF OBSERVED AND EXPECTED FREQUENCIES ON THE"
@2,15 say " SMOKERS AND NON SMOKERS IN PREGNANCY"
@3,15 say "---------------------------------------------------"
@4,02 say "┌─────────────────┬──────────┬──────────────┬────────┬───┐"
@05,02 say "│                 │  Smoker  │  Non Smoker  │ Total  │"
@06,02 say "├─────────────────┼──────────┼──────────────┼────────┼───┤"
@07,02 say "│  Presence of Miscarriage"
@07,29 say "│"
@07,31 get msmoker1 pict "99"
@07,45 say "│"
@07,47 get mnsmoker1 pict "99"
@07,61 say "│"
@07,77 say "│"
@08,02 say "├─────────────────┼──────────┼──────────────┼────────┼───┤"
@09,02 say "│  Absence of Miscarriage"
@09,29 say "│"
@09,31 get msmoker2 pict "99"
@09,45 say "│"
@09,47 get mnsmoker2 pict "99"
@09,61 say "│"
@09,77 say "│"
@10,02 say "├─────────────────┼──────────┼──────────────┼────────┼───┤"
@11,02 say "│  Total          │          │              │        │"
@12,02 say "└─────────────────┴──────────┴──────────────┴────────┴───┘"
read
rTotal1 = val(msmoker1)+val(mnsmoker1)
rTotal2 = val(msmoker2)+val(mnsmoker2)
cTotal1 = val(msmoker1)+val(msmoker2)
cTotal2 = val(mnsmoker1)+val(mnsmoker2)
cTotal3 = rTotal1+rTotal2
```

```
mexp1=(cTotal1*rTotal1)/cTotal3
mnexp1=(cTotal2*rTotal1)/cTotal3
mexp2=(cTotal1*rTotal2)/cTotal3
mnexp2=(cTotal2*rTotal2)/cTotal3
@07,35 say "("+str(mexp1,5,2)+ " )"
@07,51 say "("+str(mnexp1,5,2)+ " )"
@07,65 say rTotal1 pict "999"
@09,35 say "("+str(mexp2,5,2)+ " )"
@09,51 say "("+str(mnexp2,5,2)+ " )"
@09,65 say rTotal2 pict "999"
@11,30 say cTotal1 pict "999"
@11,47 say cTotal2 pict "999"
@11,65 say cTotal3 pict "999"
X1=(((val(msmoker1)-mexp1)**2)/mexp1)
X2=(((val(msmoker2)-mexp2)**2)/mexp2)
Xn1=(((val(mnsmoker1)-mnexp1)**2)/mnexp1)
Xn2=(((val(mnsmoker2)-mnexp2)**2)/mnexp2)
mtest=(X1+X2+Xn1+Xn2)
@15,26 say "TEST OF HYPOTHESIS"
@17,05 say "Ho: Miscarriage and Smoking are independent"
@18,05 say "H1: Miscarriage and Smoking are dependent"
@19,05 say "X= at 0.05"
@20,05 say "Tabulated Value = 5.193"
@21,05 say "Calculated Value =" +str(mtest,8,5)
if mtest < 5.841
   @23,05 say "We accept Ho and conclude that"
   @24,05 say "Miscarriage and Smoking are independent."
endif
if mtest > 5.841
   @23,05 say "We reject Ho and conclude that"
   @24,05 say "Miscarriage and Smoking are dependent."
endif
USE smoker
append blank
repl smoker1 with msmoker1,nsmoker1 with mnsmoker1
repl smoker2 with msmoker2,nsmoker2 with mnsmoker2
repl mrtotal1 with rtotal1
repl mrtotal2 with rtotal2
repl mctotal1 with ctotal1
repl mctotal2 with ctotal2
repl mctotal3 with ctotal3
repl exp1 with mexp1, nexp1 with mnexp1
repl exp2 with mexp2, nexp2 with mnexp1
clear
close all
set talk off
set safety off
set status off
set confirm on
set score off
set bell off
use drink
set device to file "tt.txt"
@1,15 say "TABLE OF OBSERVED AND EXPECTED FREQUENCIES ON THE"
```

TABLE OF OBSERVED AND EXPECTED FREQUENCIES ON THE
No OF CYCLES BEFORE PREG. & ALCOHOLISM IN WOMEN
- -

No. of Cycle	Drinker	Non Drinker	Total
1 - 3	6 (9.33)	15 (19.67)	29
4 - 6	8 (7.40)	15 (19.67)	23
7 - Above	12 (11.26)	29 (19.67)	35
Total	28	59	87

TEST OF HYPOTHESIS

Ho: No of cycles before pregnancy and alcoholism in women are independent
H1: No of cycles before pregnancy and alcoholism in women are dependent
X= at 0.05
Tabulated Value = 5.193
Calculated Value = 7.92875

We reject Ho and conclude that number of cycles before
pregnancy and alchoholism in women are dependent.

TABLE OF OBSERVED AND EXPECTED FREQUENCIES ON THE
ABORTION AND MISCARRIAGE

	Ever Aborted	Never Aborted	Total
Presence of Miscarriage	11 (9.92)	17 (18.08)	28
Absence of Miscarriage	23 (24.08)	45 (18.08)	68
Total	34	62	96

TEST OF HYPOTHESIS

Ho: No of cycles before pregnancy and alcoholism in women are independent
H1: No of cycles before pregnancy and alcoholism in women are dependent
X= at 0.05
Tabulated Value = 5.193
Calculated Value =40.31274

We reject Ho and conclude that number of cycles before
pregnancy and alchoholism in women are dependent.

TABLE OF OBSERVED AND EXPECTED FREQUENCIES ON
CONTRACEPTIONS AND ACHIEVEMENT OF PREGNANCY

	Contraceptors	Non Contraceptor	Total
Presence of Pregnancy	8 (9.47)	16 (14.53)	24
Absence of Pregnancy	22 (20.53)	30 (14.53)	52
Total	30	46	76

TEST OF HYPOTHESIS

Ho: contraception and pregnancy are independent
H1: contraception and pregnancy are dependent
X= at 0.05
Tabulated Value = 3.841
Calculated Value =16.95297

We reject Ho and conclude that
contraception and Pregnancy dependent.

TABLE OF OBSERVED AND EXPECTED FREQUENCIES ON THE
Drinker and Non Drinker

	Drinker	Non Drinker	Total
Presence of Miscarriage	9 (10.02)	22 (20.98)	31
Absence of Miscarriage	23 (21.98)	45 (20.98)	68
Total	32	67	99

TEST OF HYPOTHESIS

Ho: No of cycles before pregnancy and alcoholism in women are independent
H1: No of cycles before pregnancy and alcoholism in women are dependent
X= at 0.05
Tabulated Value = 5.193
Calculated Value =27.70125

We reject Ho and conclude that
Miscarriage and Alcoholism are dependent.