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THE FACTORS AFFECTING THE EFFECTIVENESS OF
THE BASAL BODY TEMPERATURE METHOD OF BIRTH
CONTROL OF THE NATURAL FAMILY PLANNING CLINIC
IN PHILLIPS BUKIDNON AND THE SURROUNDING AREAS

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TABLE OF CONTENTS

	Page
ACKNOWLEDGEMENTS	i
TABLE OF CONTENTS	iii
CHAPTER I: INTRODUCTION	1
The Basal Body Temperature Method	
Background of the Study	
History of the Program	
The Goals of the Program	
Financing of the Program	
The Problem of the Program	
The Problem	
Introduction	
The Problem	
Objective of the Study	
Significance of the Study	
Limitation of the Study	
Theoretical Framework	
Basic Assumptions	
The Hypotheses	
Definition of Terms	
CHAPTER II: REVIEW OF RELATED LITERATURE	19
Philippine Literature	
Foreign Literature	
Summary	
CHAPTER III: METHODS AND MATERIALS	26
Methodology	

TABLE OF CONTENTS (Contd.)

	Page
The Study Area	
The Sample and Sampling Technique	
The Data and Method of Collection	
Method of Analysis	
 CHAPTER IV: FINDINGS AND INTERPRETATION OF DATA	31
Socio-Economic Background of Respondents	
Age and Residence	
Religion	
Education	
Occupation of the Wives	
Occupation and Income of Husbands	
Fertility Attitudes	
Mean Number of Children Living	
Additional Children Wanted	
Desired Number of Children	
Ideal Number of Children	
Expected Number of Children	
Comparison	
Use of Family Planning	
Decision Making	
Other Methods Used	
Reasons why Couples used other Methods	
Reasons why no Pregnancies Occurred	
Attitudes in the Practice of the Basal Body Temperature Method of Family Planning	
Reasons for Using BBT	
Most Important Among the Reasons	
Reactions to BBT at First Use and Opinions of Couples on BBT	
Reactions to BBT Now	
Problems while Using BBT	
Reasons why BBT Fails	

TABLE OF CONTENTS (Contd.)

	Page
The Effectiveness of the Method	
BBT Effective or not Effective	
Reasons for Effectiveness or Non-Effectiveness	
Statistical Presentation of the Index of Effectiveness of the BBT Method	
The Measure of Effectiveness Model	
The Findings	
Method Failure	
The Annual Rates by Years of Duration of Practice	
The Fertility Profile of the Women in the Sample	
CHAPTER V: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS	95
Summary	
Conclusions	
Recommendations	
BIBLIOGRAPHY	102

CHAPTER I

INTRODUCTION

The fertility of a population is a result of a conscious and unconscious act of an individual based on the biological and socio-cultural factors. These factors are may be due to strong religious practices, existing value systems, norms regulating family size and family activity.¹

Today one of the most important problems that interests mankind is the limitation of population growth. It is a problem which has a worldwide effect, therefore it demands reflection on the part of all nations, both the developed and the less developed. A rapid population growth hinders a nation's ability to progress and to satisfy the demands of a growing number of people for a better life.

It took all history to produce the one billion population mark in 1840 and less than 50 years to add the second billion and only 35 years to add the third.² Unless there is an effort to change this geometrical course, the world population will have doubled, bringing the number of people to more than 7 billion at the end of the twentieth century.

In the Philippines, growth has been gradual. There were 667,000 Filipinos in 1591. In 1880, the total estimated population was 1.5 million. It became 7.5 million a century later. By the end of World War I, the enumerated population passed the 10 million mark. From then on growth accelerated steadily. Today Filipinos number more than 48 million people.

It took almost 400 years for our population to grow from over a million to 36 million but only 8 years for the 36 million to jump to the 43 million mark.³ The Philippine population now

is growing at an annual rate of 3.01. Since the number of immigrants coming to the Philippines is small, this growth rate would be due to the vital processes of births and deaths. It has become very clear that our population is fast approaching the critical point. Every minute 3 Filipinos are born. Unless our growth rate goes down the next quarter of a century we will see the Philippines teeming with about 111 million inhabitants. These facts support the contention that at present the Filipinos need to limit their population growth.

People all over the world know the relationship between number of people and food supply, even before the time of Malthus and his Population Theories. Varied attempts to control population began a long time before the birth of Christ. Papyrus readings in 1850 B.C. down to 1300 B.C. told of birth control potions made from some seeds, and from crocodile dung, and the abandonment of the aged, infirmed and incurables, and infanticide, possibly to control the number that had to be fed, clothed and sheltered. This was practiced by the Greeks, the Japanese and the pre-Hispanic Filipinos. It was proclaimed in the Philippines in 1250 and observed by the Visayans, that persons shall not have more than two children and poor families who have excess of two in number shall be killed or thrown into swift rivers.⁴ These controls were not only ineffective but proved harmful.

Modern family planning began some 60 years ago in Europe, when it became evident to doctors and welfare workers that spacing pregnancies was necessary for maternal and child health.

The family planning program aims at enriching life, not restricting life, because when one tries to put people against the availability of food he is reducing them to that of an animal. The population problem embraces three areas. It does not only include undue growth rate and material wealth but also cultural resources. Society must do more than feed, clothe and house its people. It must also satisfy man's mental, emotional and spiritual needs and aspirations which make life worth living,

giving it meaning and purpose.

The full solution depends on society's ability to meet man's higher non-material needs in life rather than mere existence. Parents should give their children a chance to live as well as to survive. We are concerned with the quantity of life and the rate at which the quantity is increasing only because we are concerned with the quality of life.

The Basal Body Temperature Method

This method was developed by Dr. Van de Velde in 1928. BBT refers to the temperature of the body at complete rest. The thermometer reading is taken orally or rectally or from the vagina when a woman has just awakened and is still in bed, ideally between 6:00 and 8:00 A.M., since any activity could cause the reading to fluctuate.

The basal body temperature of a woman changes almost regularly as a result of ovulation and menstruation. It remains more or less consistent during her child bearing years from the age she starts menstruating to the time she enters the menopausal stage.

The BBT record (graph) serves as the basis for predicting the safe and unsafe intervals in the menstrual cycle. The body temperature drops below normal (36.7°C or 98.1°F) during and immediately after menstruation. As the egg is released (ovulation) the temperature reaches its lowest reading. After a day or two it rises above normal by about $.03^{\circ}\text{C}$ to 0.5°C or 0.5°F to 1.0°F ., until just before the next menstruation, when it drops below normal again.

A group of scientists from World Health Organization (WHO) have found that the unsafe interval in a regular cycle starts six days before the temperature shifts from below to above normal

and continues into the three days of continued rise in basal body temperature.

In an irregular cycle, the unsafe interval starts 19 days before the end of the shortest menstrual period and ends after the three days of sustained temperature rise.

I. BACKGROUND OF THE STUDY

History of the Program

Work in birth control began in Phillips in 1966, in response to the needs of the families to limit its number of members. Philips Memorial Hospital (PMH) was the center, with the medical and nursing staff, mostly nurses' aides taking active part in the instructional process. PMH serves all employees and dependents both from the Cannery area in Bugo, Cagayan de Oro City and the Camps around the 20,000 hectares of the plantation proper. The estimated population of Phillips today is 8,376 with another 40,000 in the surrounding barrios including those of the town of Libona reached through twenty-three free clinics working on a six-day week schedule.

The Basal Body Temperature Method (BBT) or what is presently referred to as the Symptothermic Method was taught in groups, but getting the elementary facts this way was unsatisfactory to the couples and to the instructor. Finding the right words in dialect for the anatomy of reproduction was also a problem. Teaching the couples to read a thermometer was also very difficult and time consuming, though it was not impossible. It was found that interest increased as couples learned their own chart pattern.

After several years of teaching the charting and human anatomy, socio-economic and eugenic reasons for birth control or spacing were taught through seminars.

Marriage Enrichment Seminars were given by the Columban Team from Ozamis City, and a seminar would be translated into dialect by a volunteer lecturer, mostly from the supervisory personnel of Philippine Packing Corporation. This was very much appreciated by the people.

The need for pre-marriage instruction of the young couple intending to get married was a pressing one and the ideal time to introduce birth spacing. At first the parish priest lacked the interest needed to make the course compulsory among the young, however later, Pre-Marriage Seminars or what is now called as the Pre-Cana Seminars were held for groups of at least 40 young people, not necessarily those planning marriage at the time. Ideally, this was to be followed up by private counselling on a couple to couple basis prior to marriage. At present Pre-Marriage and the Marriage Enrichment Seminars are given to couples contemplating to get married.

In relation to the Temperature Method, nutrition was also taught to inform mothers that among the major causes of failure of the method is the continuation of breast feeding after the appearance of the first menstruation after birth. It was noted that some mothers breastfed as long as two years as a birth control measure and out of economic need.

The program had been carried by Sister Helen Paul, C.S.J., since 1965 and since 1973 by Sister Emilian. With the staff was Dr. Miguel C. Cruz, a retired physician of Phillips Memorial Hospital, who did full-time barrio work (6 days a week). He provided prenatal care for groups, gave lectures and served as consultant for chart interpretation. Three fulltime married women who have used the method for several years did field-work in the assigned camps. They made their rounds of the homes according to the needs of the couples, checked on charts, and through interviews learned if there were problems related to the method or other difficulties

in the family. Besides Dr. Cruz and the three married women there were other married women, who taught in their own barrio in the same manner as the fulltime workers. In this way, there was a constant contact with families regarding problems of all types, not only for the interpretation of charts.

The Goals of the Program

The clinic did not aim at directly curtailing birth rates, but indirectly encouraged couples to understand the implication of high birth rates in relation to health, nutrition and production.

The clinic has the following specific objectives:

1. That Family Planning is a normal and instrumental factor in enhancing the quality of family life and realizing the importance of responsible parenthood.
2. That the marital act should be considered as a willed act; not just a result of instincts and drives, by considering the need for a method which promotes marital harmony, fosters mutual respect and creates a positive outlook on fertility as an opportunity for conscious creation, without mutilation of the body or interference of the normal physiological process through medication, operation or application of mechanical devices.
3. That the marital act should carry with it the characteristics of the presence of love-making and life giving.
4. That each child who come as a consequence of a willed act is not a result of a failure but a result of lovemaking and life giving. Every child therefore is a wanted child and is entitled to parental love from the moment of conception through childhood until the time he matures, ready to face the life of responsible adulthood.

Financing of the Program

Originally the big bulk of the monetary support came from the personal funds of Sister Helen Paul, CSJ. For a brief period, ASI (Asian Social Institute) financed the program in cash and in kind. The support did not last long because of the expectation of ASI to reach a minimum number of acceptors within a certain period of time. This was contrary to the main goal of the program - that of inculcating in the minds of the couples the value of responsible parenthood as an important aspect of Family Planning. Since the process of internalizing of values is a long one, it was felt that the maximum quantity of acceptors was not its main target, rather the emphasis should be on the quality of instruction the staff had, even if there were only a few acceptors.

Later the clinic received clinical supplies and technical assistance from the Philippine Packing Corporation for one of its programs, the Barrio Assistance Program. This however was insufficient to cope with the massive work that lay before the staff. Volunteers worked with the program. The pioneer motivator who was a hospital attendant was paid by Philippine Packing as an attendant but was in fact a 24-hour Family Planning motivator.

At present the personal funds of Sister Emilian, the incumbent hospital administrator, meets the salary needs of the camp and barrio motivators.

The Problem of the Program

Administratively speaking, the program has no problem since the staff worked basically on a voluntary basis. If ever they were among the paid staff they did not mind the meagerness of the pay, such was the dedication they had for their work.

Implicitly, the problem was in the financial aspect. Transportation was necessary. Per diem and other allowances

for the motivators were justifiable benefits for people who worked so hard. When the number of acceptors increase, more people are needed for the follow-up process.

II. THE PROBLEM

Introduction

The Filipino family, aside from having a large desired number of children, also have preferences for a certain number of boys and girls among their children. This fact aggravates the problem of family planning because of the absence of a reliable technique to determine the sex of a child.

The Filipino family also adheres to strict Christian precepts causing restraints in the acceptance of the artificial forms of contraception promoted by various family planning organizations spread all over the country. The problem of family planning therefore is to gain acceptance in the face of the behavior pattern reflected in the folkways and mores of a society and established religious principles.

One of the intriguing aspects of population control is the stand of different religions on family planning. All religions agree on the need for family planning. The authorities of religion usually are not concerned with the concept of family planning itself but rather with the method to be employed. The late Pope Paul VI made the pronouncement allowing only the use of the rhythm method among the Catholics. The rhythm method is natural family planning by referring to the calendar method, the Basal Body Temperature Method (Symptothermic) and the ovulation method.

The Problem

This study therefore would like to discover facts about the rhythm method, especially the Basal Body Temperature Method as promoted in the Philippine Packing Corporation camps and surrounding areas. It would attempt to answer the following questions:

1. How effective is the Basal Body Temperature Method as a means of Family Planning?
2. What are the factors that affect the effectiveness of the Basal Body Temperature Method?
 - 2.1 Does the effectiveness of the method vary between women from the camps, poblaciones and barangays?
 - 2.2 Has religion an influence over the decision of adopting the method?
 - 2.3 Is there a difference in the use - effectiveness of the method-between women of certain educational level, occupation and income?
 - 2.4 Has income of husband to do with the control of family size particularly among the sample population?
 - 2.5 To what extent do husbands' attitudes towards the method affect its success or failure?
3. Why do couples use the Basal Body Temperature Method?
4. Why does the Basal Body Temperature Method fail?
5. What different opinions do couples have regarding the effectiveness or non-effectiveness of the Basal Body Temperature Method as a means of family planning?

Objective of the Study

This study tried to find out the degree of effectiveness of the Basal Body Temperature Method after more than 13 years of existence of the Natural Family Planning Clinic of Phillips Memorial Hospital at Camp Phillips Bukidnon. It attempted to uncover the couple's strongest reasons for adopting the method and the attitudes of couples towards the method in the early stage of their use and their attitudes towards it after a certain length of time.

The degree of effectiveness of the method was measured by comparing the fertility of women at certain age specific fertility groups, based on different variables such as education and religion of the husband and the wife, the number of children at the time of adopting the method, place of residence, occupation and income of both husband and wife, the ideal, desired and expected number of children, as well as the actual number of children they possessed. The fertility taken into account as principal indicator of effectiveness or non-effectiveness were those that took place after the couple had adopted the Basal Body Temperature Method.

The study investigated why some couples continued using the method while others stopped using the method or used other methods in between. Difficulties met by couples using the method and the reasons why the method failed were also considered.

Finally, the investigator in this study endeavored to interpret the effectiveness of the method by distinguishing "method failures" from "user failures."

The major focus of this study is on factors or conditions which make PBT effective, less effective or not effective at all.

Significance of the Study

Because of the belief that most of the mechanical and artificial devices are manufactured for people whose activity, physical conditions and cultural backgrounds are far different from the Filipino woman, it is necessary to examine the effectiveness of a natural family planning method, one of which is the Basal Body Temperature Method.

Family planning is undoubtedly accepted and considered very important. Different people accept different methods, but most often, one will hear of an acceptor complaining of side-effects and eventually stop practising it. A considerable number, with burdens on their conscience due to religious reasons, do not adopt any method at all.

Recommendation to the proper channels of the government of findings which indicate effectiveness of the method is an immediate necessity. Such action is of benefit to those who are afraid of its rate of failure. It is equally imperative also to disseminate the causes of its ineffectiveness so that these said causes be remedied if not corrected.

The reliability of the BBT method will help those who cannot possibly plan their family because of fear of side effects and encumbrances of conscience.

Limitation of the Study

The 10 percent sample of the study is representative and yields comprehensive but not exhaustive results. This is so because the researcher had not had time for a close follow-up of changes which would explain the effectiveness of the method as could be done in a long range prospective study. Since there is no control group in this study, bases for comparison would come solely from the few studies which deals with the reliability and acceptability as a method of the Basal Body Temperature Method.

The sampling procedure employed no substitution, a fact that resulted in the decrease of the sample size due to migration, death and error in the filing process. Among the file of BBT users, were non-BBT users. Names of those who attended the seminars and tried to learn the techniques of the BBT method but did not really use the method at all were also included.

The answers of the wives were supposed to be independent from those of the husbands, however it should be an accepted fact that the vital answers of husbands were more or less influenced by the wives or vice-versa due to some unavoidable circumstances in the course of the interview.

The attitudinal aspects which the researcher regarded as those that would explain the psychological reasons for effectiveness or non-effectiveness were inadequately quantified.

III. THEORETICAL FRAMEWORK

The BBT received widespread response in Camp Phillips as well as the surrounding camps and barangays since its organization in 1966. The main framework of this study is based on the problem as to how effective is a natural family planning method like the Basal Body Temperature method. If it is effective what are the variables that make it most effective; if it is not how could it be made more effective?

Basic Assumptions

It is evident that actual fertility differs greatly between population groups having different cultural values and between groups who may have the same cultural background but are different in socio-economic status. A report given by Kiser and Whelpton in their preliminary survey of the Indianapolis Study found differential in fertility based on religion, number of children and education.⁵ The report stated that substantial differences

in size of completed family were found between Protestant and Catholic couples, and that the proportion of couples with 5 or more children also decreased as the level of educational attainment increased.

Concepcion in her dissertation revealed that Manila women who had gone to college had about a third less the number of children on the average than persons with no schooling. She said that occupation has brought out the direct relationship between the number of children a Manila woman brings into the world and the type of job her husband maintains at the time of the survey.⁶

The Hypotheses

The aforementioned statements served as the background of the essence of this study which are as follows:

1. If the couples practicing the Basal Body Temperature Method adopted it because of religion, then responses which would imply that BBT is the method that the church approves or because of conscience, will come out with considerably high percentage compared to other reasons.
2. Since residence, education and occupation are factors of fertility differentials and this study had a sample with education, occupation and income that are different among those from the company camps, town centers or poblaciones and barangays, then it is expected that the Basal Body Temperature Method will have relative effects. This would be due to the aspirations, desired number of children, and the concept of economic contentment of the elements of the sample.
3. Couples who are familiar with the Basal Body Temperature

Method in all its strong and weak points could space and plan their family well, if the method is an effective method.

Definition of Terms

The following terms are defined in relation to the ideas implied in this study to facilitate understanding.

Ovulation.

This is the period when the ovum or the egg cell escapes from the ovary.

Menstruation.

This denotes the blood-stained discharges from the woman which recur approximately every month from puberty to menopausal age.

Menstrual cycle.

This refers to the number of days counting from the first day of one menstruation to the last day before the next menstruation.

Family planning.

The rational, voluntary control of family life including human reproduction.

Conception.

This is the time when the sperm cell from the male's body unites with the ovum.

Fecundity.

This is the ability to reproduce.

Fertility.

This term refers to the actual reproductive performance by a woman or a group of women.

Fertility value.

This is related to an individual's concept of the family size, preference of the sex of offspring and attitude towards marriage and sex.

Fertile period.

This refers to the days shortly before and shortly after ovulation.

Safe period.

A series of infertile days on which the sex relationship maybe used by husband and wife without danger of conception.

Additional children.

The number of children wanted after an achieved fertility.

Desired number of children.

This is the number of children wanted at the onset of marriage, a number that which would not obstruct the users attaining a comfortable living.

Ideal number of children.

The number of children a couple should have considering the situation of the woman. (Operational definition).

The number of children a couple could satisfactorily provide for in terms of the basic social, material and emotional needs. (Conceptual definition).

Expected number of children.

The number of children a couple could have responding

completely to their physiological capabilities.

Rhythm method.

The method which requires the couple to abstain from sexual intercourse each month during the woman's fertile period.

Ovulation method.

This is a new method which is based on observing the mucus secretions to determine the safe and unsafe days of a woman's cycle.

Basal body temperature method.

This is a method of calculating the fertile period, shortening the length of abstinence period, by taking the woman's temperature daily, either with an oral or anal thermometer, preferably upon waking up in the morning before the start of any activity.

Calendar method.

This is a method of calculating the fertile period by counting on a calendar, the safe days before ovulation, the fertile days surrounding ovulation and the safe days after ovulation.

Method failure.

This refers to all pregnancies about which intentions, the couple did not notify the clinic personnel or any identifiable person beforehand. (Operational definition).

The term refers to the pregnancies which occur despite the continuous and efficient use of a certain method. (Conceptual definition).

User failure.

This applies to all pregnancies which resulted because the couple "took a chance", misread the temperature chart", or misinterpreted temperature rises (as in the case of BBT). (Operational definition).

The term refers to the pregnancies which result because of the irregular and incorrect use of the method. (Conceptual definition).

Planned pregnancy.

This takes into account a pregnancy occurring as a

result of the stopping of the method in order to conceive.

Theoretic effectiveness.

This is an effectiveness which takes into account only those pregnancies occurring while the technique is being followed regularly and correctly.

Extended use effectiveness.

This pertains to the non-occurrence of pregnancies while a specific family planning technique is being used regularly or irregularly, or even if it is discontinued for reasons other than a planned pregnancy.

Classical use effectiveness.

This concerns the non-occurrence of pregnancies while a method is used regularly although not necessarily correctly.

FOOTNOTES

1. Economic Bulletin from Asia and the Far East, the Role of Incentives of Family Planning, Vol. XXIV, No. 1, June, 1973.
2. John D. Rockefeller, "Toward the Enrichment of Life, "Family Planning Programs on International Survey, ws. Bernard Berelson (New York, 1969), pp. 1-11.
3. Lydia Querolgico Lague and M. M. de Leon, Textbook on Family Planning (Rex Printing Co., Inc., 84 Florentino St. Quezon City, 1974), p. 9.
4. Ibid., p. 59.
5. Clyde V. Kiser and P.K. Whelpton, "Social and Psychological Factors Affecting Fertility: Variations in the Size of Completed Families of 6,551 Native White Couples in Indianapolis, Milbank Memorial Fund Quarterly, Vol. 22, No. 1, 1944.
6. Mercedes B. Concepcion, Fertility Differences Among Married Women in the Philippines (Chicago, Illinois, 1963), p. 37-60.

CHAPTER II

REVIEW OF RELATED LITERATURE

Philippine Literature

Findings about the effectiveness of the rhythm method were scarce. Nevertheless, in the chapter on Differential Fertility of Madigan's book Births and Deaths in Cagayan de Oro, it was summed up that culture conditioning, such as traditional values and outlook of Filipino culture, still seemed to favor large families despite statements by women that they preferred to have fewer children.¹

The working paper of the Area Fertility Studies reported that 12.2 percent of the family planning acceptors of the country switched from first method used to other methods. Sixty-one percent of those who shifted did so because of side effects. The data indicated that those women changed their methods principally from the pill to sterilization, rhythm or condom.²

Lugue and Dr. Leon in their book Textbook on Family Planning described the different methods, and their effectiveness and side effects.³

In the preliminary report of the study "Female Work Participation in the Philippines," it was stated that working women on the whole have lower fertility and the differential is smaller in urban areas, lower in poblaciones and practically more in the rural areas. It was further stated that fertility may be closely related with the perceived cost and benefits of children than with desire or need for work.⁴

Foreign Literature

The Indianapolis study aimed to learn about the social and

psychological correlates of two phenomena: family planning and the size of planned families. The specific aim of the study was to test 23 hypotheses, most of which were concerned with relations given to social and psychological factors in both the practice of contraception and size of planned families. Religion was one of the most important independent variables in the 1955 study. It was found that Catholic wives expected to have more children than Protestant wives because they were less favorable towards contraception and were likely to use less effective methods like the rhythm method.⁵

Peter A. Lachenbruch in his "Frequency and Timing of Intercourse: Its Relation to the Probability of Conception," said that the probability of conception in a given month is of interest for several reasons. A couple wishing to have a child may desire to know how long they might expect to have to wait before conception and other couples who do not wish to have a child and for religious reasons practice periodic abstinence may desire to know the chances of avoiding pregnancy for a year or so.⁶

The paper of Jack P. Reynolds, entitled "Making Family Planning Evaluation Relevant," stressed some useful criteria in evaluation and presented some helpful information.⁷

Edward Phlman and K. Seshagiri Rao, in their publication, "Children, Teachers and Parents View Birth Planning," which is a preliminary report to the central Family Planning Institute and Carolina Population Center, assured that preselection of the sex of a child would lead to fewer births because parents get what they want and then they would stop.⁸

Laing in his "The Relationship Between Attitudes and Behavior: The Case of Family Planning," found a substantial degree of association between demographic variables, such as number of living children, interval since last birth and experience with contraception but only a slight correlation between social measures like education, occupation and acceptance.⁹

The fertility values of Hindus and Muslims were compared basing on their family structure, exposure to family planning programme and methods and the attitudinal and behavioral conformity in the acceptance of family planning in Siddh's book entitled Family Planning Religious Factor.¹⁰

The Infertile Period: Principles and Practice, deals with application and psychological and theological aspects of the different National Family Planning Methods such as the Calendar method, the ovulation method and the temperature method.¹¹

According to the June 1977 issue of the International Family Planning Digest, a U.S. study conducted by the Wayne State University School of Medicine and a British Study conducted by Jessop Hospital for women in Sheffield found that the BBT Method was unreliable since it failed to pinpoint the ovulation of one-fifth of the U.S. women sample and one-fourth of the British women sample.¹²

Data from five Korean KAP Surveys of currently married women analyzed urban-rural differences in ideal family size and ideal number of sons controlling for number of living children and number of living sons. It also attempted to evaluate the impact of the national family planning program on the fertility, family planning practice and family size values of the rural population by examining the findings on urban-rural differentials.¹³

Studies conducted to measure Use-Effectiveness of different techniques of periodic continence calculated on the basis of the Pearl Formula showed that in the BBT Method among the highest failure rates (pregnancies per 100 women years) was 19.5 out of 296 women and 19.3 out of 255 women as found in the study of Bantzer, in the United States in 1967 and by Marshall of Great Britain respectively. The lowest rate of 0.7 out of 180 women was reported by the Rotzen Study of West Germany in 1968. This article mentioned about the different measures of the effectiveness of the rhythm method which includes theoretical effectiveness, classical use-effectiveness and the extended use-effectiveness.¹⁴

An efficient approach to the measurement of effectiveness than percentages of success and failures is the pregnancy rate per 100 years of exposure developed by Raymond Pearl in the early 1930's.¹⁵

According to Robert G. Potter and Roger C. Avery, use-effectiveness of contraception has two basic dimensions: continuation and effectiveness. A perfectly effective contraceptive can offer but limited protection if practiced only for a shorter period. Use-effectiveness is conventionally assessed by means of a multiple decrement life-table methodology.¹⁶

Summary

The articles and studies reviewed helped the researcher to determine the variables to effective family planning and the way to deal with these variables. The Indianapolis Study treated the religious aspects in relation to a woman's choice of family planning method. Psychological considerations as well as values and attitudinal considerations were adeptly discussed in the works of Laing, Madigan and Siddh. Articles regarding the physiological problems which are directly related to the success and failure of the Basal Body Temperature Method suggested that problems of this sort arise due to the difficulty of determining ovulation and the timing of sexual relations, therefore increasing the probability of conception.

Aside from the existing number of children, the attitudes on ideal family size or ideal number of sons or daughters are also factors in the decision to adopt family planning for the purpose of terminating pregnancies or just for the purpose of spacing births.

However, despite these socio-psychological factors which suggest the ineffectiveness of a family planning method, (not

only the Basal Body Temperature Method), there is a way of closer introspection of the success of a Family Planning Program. This is to relate effectiveness to program goals as mentioned in Jack P. Reynolds' article.

It is evident that considering the variables which determine a method's effectiveness, any method could reach a certain degree of effectiveness by what is known as theoretic effectiveness, extended use-effectiveness or the classical use-effectiveness.

The Pearl Index enlightened the researcher on the fact that the occurrence of pregnancies during the use of a method is the best indicator of a method failure and the Life Table approach of estimating effectiveness suggested a more specific means by taking into account not only the number of pregnancies but when particularly did the pregnancy occur.

FOOTNOTES

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3. Op. cit., pp. 95-129.
4. Alejandro N. Herrin, Female Work Participation and Fertility in the Philippines - A Preliminary Report in a Methodological Sub-Phase of an Exploratory Study (Cagayan de Oro: RIMCU, Xavier University, January 31, 1978), p. 36.
5. Clyde V. Kiser, (ed), The Indianapolis Study with Social and Psychological Factors Affecting Fertility (New Jersey: Princeton University Press, 1962), p. 78.
6. Peter A. Lachenbruch, Population Studies, A Journal of Demography Vol. XXI, No. 1, July 1967. The Population Investigation Committee (London: London School of Economics, Haughton St., Aldwycs, 1974).
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8. Edward Pehlman and K. Seshagiri Rao, "Children, Teachers and Parents View Birth Planning," A Preliminary Report of the Central Family Planning Institute and Carolina Population Center, Series No. 14, p.57.

9. John A. Baing, "The Relationship Between Attitudes and Behavior: The Case of Family Planning" Further Sociological Contribution to Family Planning Research (ed), Donald Bogue (Illinois: University of Chicago Press, 1972), pp. 223-251.
10. Kaushal K. Siddh, Family Planning: Religious Factor (New Delhi: Ahimav, 1974), pp. 193-226.
11. John Marshall, The Infertile Period: Principles and Practice (Baltimore: Helicon Press, 1963), p. 22.
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13. John Stoeckel, "Differentials in Fertility, Family Planning Practice and Family Size Values in South Korea, 1965-1971, Studies in Family Planning, Vol. 6, Nov., 1975.
14. Population Report, Series, No. 1, June, 1974 p. 11.
15. Christopher Teitze, "The Use Effectiveness of Contraceptive Methods" in Clyde Kiser (ed.), Research in Family Planning (Princeton University Press, 1962), pp. 357-69.
16. Robert G. Potter and Roger C. Avery, "Use-Effectiveness of Contraception." Measuring Effect of Family Planning Programs on Fertility (ed.) C. Chandrasekaran and Albert I. Hermalin, (Published for the Development Centre of the OECD, Paris), pp. 133-142.

CHAPTER III

METHODS AND MATERIALS

Methodology

The best way to conduct such a study is by conducting a prospective study. The control over the experimental factor, i.e., the Basal Temperature Method is much more rigorous and tight since subjects are carefully screened and followed day to day. Method failures are much more distinguished from user failures ("took chance," "misread temperature chart," "mis-interpreted temperature rise," etc.).

However, a prospective study of the natural Family Planning Clinic would require at least several years of study (which the writer cannot put in) and would demand much larger outlay of funds than the writer can afford. It is her intention therefore to examine the experience of the National Family Planning Clinic of Phillips with the Basal Body Temperature (symptothermic) Method, retrospectively for two reasons: a) to see how useful this methodology can be for a more economical kind of study of temperature rhythm than a prospective approach and b) to determine to the extent possible how effective the basal temperature method seemed to have been among the practitioners of this clinic over the past ten years. Due to financial constraints, the study limited itself therefore to a retrospective analysis of the experience of a ten per cent sample of practitioners, namely, the 253 couples drawn from the complete card files of practitioners (wives).

Admittedly, this approach will obtain less accurate results than a prospective approach. The problem will be to separate "method failures" from "user failures" and both of these failures would be based on the number of children deliberately planned before conception. As a methodology, the writer proposed to

classify as failures all pregnancies the intention about which the couple did not notify the clinic, nurse, motivator or doctor or some identifiable person beforehand. The word of the couple will on principle be taken at face value, for it is unlikely that the doctors, nurses or other clinical personnel kept records of such notification. If they said that they did not notify anybody, or if they notified only after the conception occurred, then the case will be counted as failure, and an attempt will be made to further classify it into either user or method failure. However, method failures are generally rare so that when in doubt failures are classified as user failures.

The Study Area

Camp Phillips, a company camp in Manolo Fortich Bukidnon, serves as the center of all camps of the Philippine Packing Corporation. The offices of the different departments of the Plantation Section of the company are found here.

Philippine Packing Corporation provides its employees with housing facilities. It is grouped in 3 centralized camps located in Manolo Fortich, excluding that which is found in Bugo, Cagayan de Oro City which is the Cannery Section. There are also 3 centralized camps in the town of Libona, Bukidnon. Each of these centralized company camps is equipped with electric facilities and good water system. Most of the families enjoy the convenience of electrical appliances. Each camp has a school, a plaza, a church, a social or recreation hall and a cooperative store. A sub-office of the personnel department is also found in each camp to ease the channeling of management and administrative measures which directly concern the camp situation. Matters like camp beautification, cleanliness, socials and athletics are coordinated through the sub-office.

Phillips Memorial Hospital which serves all the camps is found in Phillips. Since this is the only hospital in the towns of Libona and Manolo Fortich, Bukidnon, it also serves the surrounding barrios. It is through the barrier clinics of Phillips Memorial Hospital that knowledge about BBT were disseminated throughout the camps and barrios of both towns.

Manolo Fortich has 22 barrios widely scattered within an area of 447.2 sq. km. It has a population of 31,784 people according to the 1975 census.

Similarly, the town of Libona has 19 barrios sporadically situated in an area of 322.9 sq. km. and a population of 16,481.

The Sample and Sampling Technique

From the complete card files of practitioners (wives), from 1969 up to 1978 by camps, towns and barangays, a ten percent sample was selected by picking every 10th card after a random start. 253 couples were picked (husbands were also to be interviewed). Out of these 253 couples only 150 couples were considered as the sample. The decrease was due to the fact that from 253 couples picked, 66 outmigrated, 14 were unknown to the people of the area, 6 were not using BBT at the time of the survey, 7 had died, 3 were separated, 2 were widowed, 4 were not interviewed because they were not available after three calls and 1 was single but learned to use BBT.

A couple was said to have outmigrated when they transferred to a place outside the sample area or transferred to a place within the sample area for a period of 6 months or more but the characteristics of the area of destination is different from the characteristics of the area of origin, for example, a couple from a barangay (according to the file) transferred to a camp or a poblacion or in other similar cases.

Those separated, widowed and single were excluded. Both parties had to be interviewed because the attitude of the husband is as important as the wife in determining the failure or success of a family planning method.

The Data and Method of Collection

The data principally came from personal interviews using two types of prepared structured interview schedules. One was for all women practising the Basal Body Temperature who were included in the sample, and the other was for all the husbands of the women in the sample. The information gathered concerned the socio-economic background of the couples, fertility history of the women, fertility attitudes of the women and the husbands, the conditions under which BBT was used and the different attitudes of the couples towards BBT as a family planning method.

The interviews were done by three interviewers, each of whom had similar assignments based on the number of respondents, distance as well as topography of the areas where the respondents lived. The couples were interviewed separately to avoid the bias in the answers resulting from a spouse being influenced by the other.

Two supervising interviewers and the principal investigator edited the forms in the field, back-checked and helped the interviewers in problems met in the field.

Method of Analysis

The Pearl Index of Effectiveness is a convenient and appropriate method of presenting effectiveness in terms of women-years of exposure ratio in a retrospective study. However it does not enable one to compare persons with different lengths of exposure. An even more serious drawback of the Pearl method is its failure to allow for selection as time goes on. The researcher wanted to present not only the success or failure of the woman in terms of the length of exposure

but also the probability of success or failure in each of the year of the total length of duration within which the method was practiced. Therefore the actual computation of the index of effectiveness was derived from the Life Table **Analysis of Effectiveness** as presented by Robert Potter and Roger C. Avery which is the approach best fitted for a prospective study. The multidecrement approach was used to examine and compute method failure and user failure (pregnancies not planned for). Probabilities of failure were computed for each of these by length of method use.

CHAPTER IV

FINDINGS AND INTERPRETATION OF DATA

A. Socio-Economic Background of Respondents

Age and residence. During the interview the place where respondents lived were classified into three categories namely: Company Camp, Poblacion and Barangay. Due to the very small number of respondents who resided in the poblacions of the towns being studied, the writer decided to combine the residents of the Company camps and poblacions in the subsequent analysis. There were 94 couple respondents from the company camps and 6 couple respondents from the poblacions, which meant that there were 100 couple respondents belonging to the Company Camp - Poblacion category. There were 50 couple respondents who came from the barangays, thus 67 percent of the couple respondents were from the Camps and poblacions and 33 percent came from the barangays.

Of those living in the company camps and poblacions, women 35-39 years of age constituted the largest portion, i.e., 26 percent of the total respondents coming from these areas. The younger age group of women between 20-24 constituted the least percentage of 4 percent and 2 percent respectively.

The barangay sample showed higher concentration of ages between 35-39 and 40-44, comprising 23 percent and 24 percent respectively. Similarly the youngest and the oldest age-groups were the ones least represented.

Among the husbands those between the ages of 40-44 which comprise 26 percent of those from the company camps and the poblacion, and those between the ages of 35-39 which is 20

Table 1-a. Residence of Women Respondent by Age

Age	Company Camp & Poblacion		Barangay		Total	
	No.	Percent	No.	Percent	No.	Percent
20-24	4	04.00	1	02.00	5	03.00
25-29	15	15.00	9	18.00	24	16.00
30-34	14	14.00	11	22.00	25	17.00
35-39	26	26.00	9	18.00	35	23.00
40-44	23	23.00	13	26.00	36	24.00
45-49	13	13.00	3	06.00	16	11.00
50-54	5	05.00	4	18.00	9	06.00
Total	100	100.00	50	100.00	150	100.00

Table 1-b. Residence of Husband Respondent by Age

Age	Company Camp & Poblacion		Barangay		Total	
	No.	Percent	No.	Percent	No.	Percent
20-24	1	01.00	0	00.00	1	1.00
25-29	11	11.00	4	08.00	15	10.00
30-34	18	18.00	9	18.00	27	18.00
35-39	12	12.00	10	20.00	22	15.00
40-44	26	26.00	9	18.00	35	23.00
45-49	16	16.00	8	16.00	24	16.00
50-54	16	16.00	10	20.00	26	17.00
Total	100	100.00	50	100.00	150	100.00

percent of the barangay respondents constituted the highest concentration. Husbands from the barangays between age 20-24 were not represented probably because those in that age groups were most likely to be husbands of women between 15-20, who were not inclined to space or plan their families.

Religion. Among the respondents of this survey 93 percent of the couples coming from all the sample areas stated that they were Catholics and 7 percent said they were non-Catholics.

Education. Education is an important factor which can influence attitudes about family planning as well as actual fertility. Overall only one percent of the women had no schooling. Twenty percent finished primary level, and 31 percent had gone through the elementary level. These two groups combined formed the largest proportion in the sample. Nineteen percent had some high school education and 12 percent graduated from high school. Of another 15 percent of the sample, 4 percent had some college education and 11 percent finished college. One percent had post-graduate degree.

The husband's education, especially when he had the initiative in decision making about the size of the family can also have a strong influence on fertility behavior. As reported by the respondents, the largest percentage of husbands completed elementary school (31 percent), while the second largest category was those who had some high school (18 percent), followed by those who had primary level of education (16 percent) and those who graduated from high school (15 percent). Ten percent had some college education and 5 percent graduated from college. Fifty one percent of the women belong to the primary level and elementary level category while only 47 percent of the husbands belong to this category. Husbands and wives were similarly distributed among those who had some high school education and those who graduated from it (32 percent for husbands and 31

Table 2. Religion of Husband and Wife Respondents by Residence

Residence	Catholics				Non-Catholics				Total			
	Husband		Wife		Husband		Wife		Husband		Wife	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Company Camps & Poblacion	98	98.00	98	98.00	2	2.00	2	2.00	100	100	100	100
Barangay	41	82.00	42	84.00	9	18.00	8	16.00	50	100	50	100
Total	139	93.00	140	93.00	10	7.00	10	7.00	150	100	150	100

Table 3. Percent Distribution of Educational Level of Respondents by Residence

Educational Level	Company Camps & Poblacions				Barangays				Total			
	Husband		Wife		Husband		Wife		Husband		Wife	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
No Schooling	1	01.00	1	01.00	1	02.00	0	00.00	2	02.00	1	01.00
Primary Level	12	12.00	15	15.00	12	24.00	16	32.00	24	16.00	31	20.00
Elementary Level	28	28.00	27	27.00	19	38.00	20	40.00	47	31.00	47	31.00
Some High School	16	16.00	20	20.00	11	22.00	9	18.00	27	18.00	29	19.00
High School Graduate	19	19.00	16	16.00	4	08.00	2	04.00	23	15.00	18	12.00
Some College	14	14.00	4	04.00	2	04.00	16	04.00	16	10.00	6	04.00
College Graduate	7	07.00	15	15.00	1	02.00	1	02.00	8	05.00	16	11.00
Post Graduate	2	02.00	1	01.00	0	0.00	0	10.00	2	02.00	1	01.00
No Response	1	01.00	1	01.00	0	0.00	0	0.00	1	01.00	1	01.00
Total	100	100.00	100	100.00	50	100.00	50	100.00	150	100.00	150	100.00

percent for wives). There was the same percentage distribution among those who had some college education and those who finished college (15 percent for both husbands and wives), but only 5 percent of the husbands graduated from college while 11 percent of the wives finished college. Only one percent of the sample represented the post-graduated level which was equal for husbands and wives. This indicated that in the sample there was a more or less equal distribution in terms of education and educational opportunities among husbands and wives.

Occupation of the wives. Employment of women is one factor which influences their expectations for their children, the ideal number of children and the actual number born. The proportion of women employed in a population is closely related to the fertility behavior.

During the survey, respondents were asked whether they had any employment other than housework during the preceding five years. Women who were employed during the time in question comprised 52 percent while 48 percent were not employed. Among the 52 percent employed most of them either worked away from their residence or near their residence but a few worked within their residence. The reason for the high activity outside the home was that most of the women came from the camps and poblaciones. These women were employed by the Philippine Packing Corporation as laborers and some were employed in offices. Those coming from the barangays were also employed as laborers in the nearby company camps or to do some jobs in other people's farms, like planting tomatoes or simply harvesting and planting for those persons who owned small tracts of land.

Only one woman worked within the residence from among those living in camps and poblaciones while there were 7 from the barangays. The reason for this is that the probable self-

employment would be to own some small scale business. It is prohibited within the company camps to engage in business like running a sari-sari store or opening a dressshop and the like, whereas those coming from the barangays were free to do so.

Table 4-a Employment of Women Respondents in the Past Five Years by Residence

Residence	Not Employed		Employed		Total	
	No.	%	No.	%	No.	%
Company Camps						
& Poblacion	48	48.00	52	52.00	100	100.00
Barangays	24	48.00	26	52.00	50	100.00
Total	72	48.00	78	52.00	150	100.00

Occupation and income of husbands. The relationship between fertility and husband's occupation is not as direct as that between a wife's employment per se and fertility, but the husband's occupation is related to such social and economic characteristics as education and standard of living, thus the husband's occupation cannot be disregarded.

On the whole the Philippine Packing employees distributed among the supervisory level, technical level and the laborer level constituted the largest occupational category. Farmers formed the biggest percentage from those coming from the barangays. The data show that the majority of the respondents were gainfully employed.

Table 4-b. Percent Distribution of Women Employed Away from Residence, Near Residence, Within Residence or Within Residence by Place of Residence

Age	Company Camps and Poblacions				B a r a n g a y s									
	Away		Near		Within		Away		Near		Within			
20-24	0	00.00	0	00.00	0	00.00	0	00.00	0	00.00	0	00.00	7	00.00
25-29	1	08.00	1	08.00	0	00.00	0	00.00	0	00.00	0	00.00	3	43.00
30-34	2	17.00	3	25.00	0	00.00	3	50.00	1	25.00	1	25.00	0	00.00
35-39	1	08.00	5	42.00	0	00.00	1	17.00	1	25.00	1	25.00	1	14.00
40-44	5	42.00	1	08.00	1	100.00	1	17.00	1	25.00	1	25.00	1	14.00
45-49	2	17.00	2	17.00	0	00.00	0	00.00	0	00.00	0	00.00	2	29.00
50-54	1	08.00	0	00.00	0	00.00	1	17.00	1	25.00	1	25.00	0	00.00
Total	12	100.00	12	100.00	1	100.00	6	100.00	4	100.00	7	100.00	7	100.00

Table 5. Percent Distribution of Husband by Occupation and Residence

Major Occupation Classification	Place of Residence					
	Company Camps & Poblacions		Barangay		Total	
Professional Technical & Related Workers	8	08.00	1	00.00	9	06.00
Clerical Workers	4	16.00	0	00.00	4	03.00
Sales Workers	2	02.00	4	08.00	6	04.00
Farmers, Plantation Workers, Transient Farm Workers	27	27.00	21	42.00	48	32.00
Foremen, PPC supervisors	34	34.00	5	10.00	39	26.00
Workers in transport & communication, drivers, conductors	11	11.00	7	14.00	18	12.00
Mechanics, Machinists, Welders	3	3.00	8	16.00	11	7.00
NEC (Not Elsewhere Classified)	2	2.00	3	06.00	3	3.00
NAP	9	9.00	1	02.00	10	7.00
Total	100	100.00	50	100.00	150	100.00

The income of husbands was considered in terms of their ages, since there was an age pattern wherein couples tend to adopt family planning as seen in Table 1-b. The ages between 30 to 40 were the ages which indicated the strongest tendency to plan families. From this age group there were 48 husbands

within the age of 30 to 39 and 84 husbands within the age of over 40, a total of 134 of the 150 husbands interviewed, which was 88 percent of the total husband respondents. From among those husbands who were between the ages of 30-39, 23 percent had an income of ₱6,001 to ₱8,000, 21 percent had an income of ₱2,000 to ₱4,000, and another 13 percent with an income of ₱10,000 to ₱12,000. Eight percent had an income of more than ₱12,000. Only 6 percent represented those whose income level was less than ₱2,000.

For husbands 40 and over, 6 percent had an income of less than ₱2,000. A total of 52 percent had an income between ₱8,000 up to ₱14,000 and the last 14 percent had an income of more than ₱14,000 a year.

B. Fertility Attitudes

Mean number of children living. Not all children who are born remain alive. Some of the pregnancies were terminated due to infant mortality and abortion. This study only took account on the number of children living because this has the strongest influence on whether the couple should have additional children or not. Table 6-a shows that the mean number of living children of the women coming from the company camps and poblacions was 5.25. These women had a mean age of 35.4, and median age of 38.3.

Among the barangay women, the mean number of living children was 6.14. These women had a mean age of 35 and an average age of 37.2. It is also shown that Company Camp and Poblacion women within the ages of 20-24 already had 2.75 (about 3) children each. From ages 35-44 they had about 6 children each. At ages 45-49 these women had an average of 7 children, and by the time they were supposed to end their fertility activity they had 8 children each.

Table 6. Percent Distribution of Husband by Income and Age

Income Level	Age				Total
	15-29	30-39	40+	Total	
Less than ₱ 2,000	1 06.00	3 06.00	6 07.00	10 07.00	
₱ 2,001 - ₱ 4,000	1 06.00	6 13.00	10 12.00	17 11.00	
₱ 4,001 - ₱ 6,000	8 50.00	10 21.00	22 25.00	40 27.00	
₱ 6,001 - ₱ 8,000	3 19.00	11 23.00	13 15.00	27 18.00	
₱ 8,001 - ₱10,000	2 13.00	8 16.00	7 08.00	17 11.00	
₱10,001 - ₱12,000	1 06.00	6 13.00	10 12.00	17 11.00	
₱12,001 - ₱14,000	0 00.00	1 02.00	5 06.00	6 04.00	
₱14,001 +	0 00.00	3 06.00	12 14.00	15 10.00	
NR (No response)	0 00.00	0 00.00	1 01.00	1 01.00	
Total	16 100.00	48 100.00	86 100.00	150 100.00	

The typical barangay women did not start planning their families until they were 25 years old, whereas the women from the company camps and poblacions started as early as the age of 20. As could be seen the barangay women had more children than the women coming from the company camps and the poblacion.

Table 6-a. Mean Number of Children Living by Age and Residence of Women Respondents

Age of Women	Company Camps & Pobl.		Barangays	
	No. of Women	Mean Number of Children	No. of Women	Mean Number of Children
20-24	4	2.75	-	-
25-29	15	3.20	10	3.30
30-34	14	4.07	11	5.36
35-39	26	6.38	9	5.77
40-44	23	6.04	13	7.92
45-49	13	6.53	3	8.00
50-54	5	7.80	4	6.50
All Ages	100	5.25	50	6.14

Company Camp and Poblacions:

Mean Age = 35.4
Median Age = 38.5

Barangay:

Mean Age = 35
Median Age = 37.2

The data on number of living children of husbands reflected the same patterns as that of the women. Table 6-b shows that there were no husbands under ages 20-24. It would be presumed that some of the husbands are one age group lower or higher. In

the Philippines husbands are generally older than the wives. This fact is also manifested in their mean ages and median ages. The mean age of women coming from the company camp-poblacion and the Barangay category was 35. The mean ages of husbands of the mentioned categories were 39.7 and 39.4 respectively. The median age of the husbands coming from the company camps and poblacions was 42.03 and those coming from the barangays was 41.5. The barangay husbands were slightly younger than those coming from the company camps and poblacions, but the number of their living children was a little more than those coming from the company camps and poblacions.

Table 6-b. Mean Number of Children Living by Age and Residence

Age of Husbands *	Company Camps & Pobl.		Barangays	
	No. of Husbands	Mean Number of Children	No. of Husbands	Mean Number of Children
20-24	-	-	-	-
25-29	11	3.00	4	3.00
30-34	18	3.94	8	3.75
35-39	10	4.90	10	5.60
40-44	27	5.96	10	7.10
45-49	15	6.93	9	7.11
50-54	10	7.00	4	7.50
55+	6	7.50	5	6.60
All Ages	100	5.60	50	5.80

* There are no husbands age 20-24.

Additional children wanted. Couples adopt family planning not because they want to stop child-bearing absolutely but more because they want to lengthen the interval of pregnancy. All the respondents, both husbands and wives were asked the question: "Do you want additional children?" Those who answered "yes" to the question were also asked how many of the additional children wanted were boys and how many girls. Only 24 percent of the women from the company camps and poblacions and 14 percent of the respondents coming from the barangays responded that they still wanted additional children.

The data in Tables 7-a and 7-b show that the desire for additional children is strongly associated with the respondent's age and number of living children. The majority of the younger women indicated a desire to continue building their families whereas a few of the older women did.

Table 7-a shows that the proportion of women wishing additional children declines with each successive age groups in both categories. Women from the camps and poblacions expressed a slightly greater preference for boys than girls, while the barangay women wanted more girls than boys among the additional children. This expressed sex preferences for children may not be due to the fact that company camp and poblacion women really liked boys rather than girls or that the barangay women really preferred boys rather than girls. This expressed preferences were influenced by the number of living boys and living girls the couple had.

However the prominent desire for girls among the barangay women could also be explained by the fact that these women consider girls to be important because they could help with the household chores. Barangay women either go out to the farm to help their husbands or look for income-generating activities outside the home to help meet their daily needs. That is why they felt that there should be some girls among their children.

Table 7-a. Mean Number of Additional Children Wanted by Age and Residence of Women

Age	Company Camps and Poblacions						B a r a n g a y s					
	No. of Respondents	Number Wanting Children	Percent of Women Wanting Children	Mean No. of Additional Children Wanted	Mean No. of Additional Boys Wanted	Mean No. of Additional Girls Wanted	No. of Respondents	Number Wanting Children	Percent of Women Wanting Children	Mean No. of Additional Children Wanted	Mean No. of Additional Boys Wanted	Mean No. of Additional Girls Wanted
20-24	4	3	75.00	1.33	0.66	0.67	-	-	-	-	-	-
25-29	15	6	40.00	2.00	1.16	0.83	10	4	40.00	1.50	0.50	1.00
30-34	14	7	50.00	2.28	0.71	1.57	11	2	18.00	1.00	0.00	1.00
35-39	26	7	27.00	1.43	0.71	0.72	9	1	11.00	1.00	0.00	1.00
40-44	23	1	04.00	1.00	1.00	0.00	13	0	00.00	0.00	0.00	0.00
45-49	13	0	00.00	0.00	0.00	0.00	3	0	00.00	0.00	0.00	0.00
50-54	5	0	00.00	0.00	00.0	0.00	4	0	00.00	0.00	0.00	0.00
55+	-	-	-	-	-	-	-	-	-	-	-	-
Total	100	24	24.00	1.15	0.60	0.55	50	7	14.00	0.50	0.07	0.43

Table 7-b. Mean Number of Additional Children by Age and Residence of Husband Respondents

* Age	Company Camps and Poblacions						B a r a n g a y s					
	No. of Respondents	Number Wanting Children	Percent of Women Wanting Children	Mean No. of Additional Children Wanted	Mean No. of Additional Boys Wanted	Mean No. of Additional Girls Wanted	No. of Respondents	Number Wanting Children	Percent of Women Wanting Children	Mean No. of Additional Children Wanted	Mean No. of Additional Boys Wanted	Mean No. of Additional Girls Wanted
20-24	-	-	-	-	-	-	-	-	-	-	-	-
25-29	11	7	54.00	2.16	1.33	0.83	4	100.00	1.25	0.50	0.75	
30-34	18	8	44.00	1.50	0.75	0.75	8	38.00	1.67	0.33	1.34	
35-39	10	4	40.00	1.75	1.00	0.75	10	10.00	1.00	1.00	0.00	
40-44	27	3	11.00	2.00	1.33	0.67	10	20.00	2.00	1.50	0.50	
45-49	15	1	06.00	2.00	2.00	0.00	9	00.00	0.00	0.00	0.00	
50-54	10	1	10.00	1.00	1.00	0.00	4	00.00	0.00	0.00	0.00	
55+	6	0	00.00	0.00	0.00	0.00	5	20.00	5.00	3.00	2.00	
Total	100	24	24.00	1.49	1.05	0.44	50	00.22	1.56	0.90	0.66	

* There are no husbands age 20-24 in the sample

Twenty percent of the husbands of the company camps and poblacions category and 11 percent of the husbands from the barangays answered the question: "Do you want additional children?" positively.

There were as many husbands as there were wives who wanted additional children among those coming from the company camps and poblacions while there were more husbands than wives coming from the barangays who wanted additional children. Generally speaking those husbands belonging to the lower age groups wanted additional children more than those who belong to the older age groups with an exception among husbands aged 55 and over in the barangay category. Since there was only one respondent of the 5 who belong to this age bracket who said he wanted additional children, it would seem reasonable to assume that this person had no child yet or he had an extremely high desired number of children which was still unachieved.

With regards to sex preferences of additional children, the husbands of both categories preferred additional boys to girls.

When the difference of company camp-poblacion couples and barangay couples were examined by number of living children, the largest proportion who claim that they wanted no more children was still to be found among rural couples. This was because the rural couples had larger families than those coming from the camps and poblacions, not because they want more children but because they are less effective in limiting their fertility and/or of a high desired number of children of rural couples.

As could be seen from the data in Table 7-c, the wives from the company camps and poblacions who had 5 children already wanted 3.50 children more and the husbands wanted at least 1 child more. A wife from the company camp and poblacion category who already had 8 wanted one child more and a husband coming from the same category wanted as many as 4.00 children more.

It would be expected that persons who do not want additional children already have achieved or exceeded their desired number of children or ideal family size.

Desired number of children. On the average the barangay women had a slightly higher desired number of children than the company camp and poblacion women. The company camp and poblacion women had a mean desired number of children of 3.58 children. Among these children 1.77 were to be boys and 1.81, girls. So there were an almost equal number of boys and girls among the desired number of children. Among the barangay women, the mean desired number of children was 3.68 with boys being more preferred than girls.

Table 7-c. Mean Number of Additional Children Wanted by Husband and Wife by Children Living and Residence

Children Living	Company Camps & Pobl.		Barangays	
	Additional Children Desired		Additional Children Desired	
	Wife	Husband	Wife	Husband
1	1.67	2.00	--	--
2	1.40	1.90	2.50	1.75
3	1.03	1.63	0.00	1.00
4	1.00	1.00	1.00	2.00
5	3.50	1.00	1.00	2.33
6	1.00	1.67	1.00	1.00
7	2.50	1.00	0.00	0.00
8+	1.00	4.00	0.00	0.00
Mean Number	1.64	1.78	0.79	1.16

The mean number of desired children generally increases with the age of the respondent for all residential categories.

The husbands in the company camp-poblacion category had a greater desired number of children than those of the barangay category with an almost equal number of boys and girls desired. The husbands from the barangay showed a slightly greater preference for boys. Table 8-b shows that the husbands from the company camps and poblacions had a gradual increase of desired number of children as they reached the ages of 35 to 44, with the number gradually decreasing with age thereafter. Among those coming from the barangay, it was seen that as the age increases, the number of desired children also increased except for some erratic changes between the ages 30 to 39 and between ages 45 to 54.

It is to be considered that some rationalization took place as the respondents gave their desired number of children. Men as they grow older would like to establish their virility by expressing a high desired number of children or expected children.

Ideal number of children. The data on ideal number of children is answered the question "How many children do you think should a woman have?"

According to the figures in Table 9-a the mean ideal number for women from the company camps and poblacions was 3.67 and from those coming from the barangays was 3.74. Women from both categories had almost the same ideal number. The difference was that among the company camp-poblacion category, the younger cohorts seemed to prefer smaller families and that the barangay women showed in each age cohorts a number of ideal children which is a little higher than the former. The barangay women data did not show a definite pattern of for younger women like the older

Table 8-a. Mean Number of Children Desired by Age and Residence of Women Respondents

Age	Company Camps and Poblacions				Barangays			
	Number of Respondents	Desired No. of Children	Desired No. of Boys	Desired No. of Girls	Number of Respondents	Desired No. of Children	Desired No. of Boys	Desired No. of Girls
20-24	4	2.75	1.00	1.75	-	-	-	-
25-29	15	3.33	1.53	1.80	10	3.80	2.80	1.00
30-34	14	3.42	2.07	1.35	11	3.63	1.81	1.82
35-39	26	3.88	1.88	2.00	9	3.66	2.11	1.55
40-44	23	3.43	1.65	1.78	13	3.61	1.61	2.00
45-49	13	4.07	2.07	2.00	3	4.00	2.33	1.66
50+	5	4.20	2.20	2.00	4	3.00	2.00	1.00
All Ages	100	3.58	1.77	1.81	50	3.61	2.11	1.50

Table 8-b. Mean Number of Children Desired by Age and Residence of Husband Respondents

Age	Company Camps and Poblacions					Barangays				
	Number of Respondents	Desired No. of Children	Desired No. of Boys	Desired No. of Girls	Number of Respondents	Desired No. of Children	Desired No. of Boys	Desired No. of Girls	Desired No. of Boys	Desired No. of Girls
20-24	-	-	-	-	-	-	-	-	-	-
25-29	11	4.08	1.90	2.18	4	3.17	1.75	1.42	1.75	1.42
30-34	18	4.10	2.27	1.73	8	4.49	2.62	1.87	2.62	1.87
35-39	10	5.41	2.83	2.58	10	4.10	2.10	2.00	2.10	2.00
40-44	27	5.88	2.96	3.18	10	4.60	2.40	2.20	2.40	2.20
45-49	15	4.32	2.46	1.86	9	4.21	2.33	1.88	2.33	1.88
50-54	10	4.50	2.40	2.10	4	6.00	3.75	2.25	3.75	2.25
55+	6	4.49	2.16	2.33	5	4.60	2.00	2.60	2.00	2.60
All Ages	100	4.68	2.42	2.36	50	4.45	2.42	2.03	2.42	2.03

cohorts of those coming from the camp and poblacion from age 30 to 54. Thus it seemed that the wives' attitudes toward the ideal number of children was not directly related to a given age group at any time but with a particular age group as it proceeds through time.

The husbands were asked the same questions asked of the women, with the supposition that in considering the appropriate number of children a family should have, the husbands would take into consideration the situation of their wives.

The data of the husbands show that the younger age-groups of husbands aged 25 to 39 preferred smaller families in both categories, followed by falls and rises in the following age cohorts. Both categories said that 4 children was the ideal. The husbands of the company camp-poblacion category however gave a number higher than those coming from the barangays but the margin was very slim.

Table 9-a. Mean Ideal Number of Children a Woman Should Have by Age and Residence of Women

Age	Company Camps & Pobl.		Barangays	
	Number of Women	Ideal Number	Number of Women	Ideal Number
20-24	4	3.25	--	--
25-29	15	3.53	10	3.80
30-34	14	3.85	11	3.60
35-39	26	3.69	9	3.88
40-44	23	3.56	13	3.92
45-49	13	3.84	3	4.00
50+	5	4.00	4	3.50
Total	100	3.67	50	3.74

Table 9-b. Ideal Number of Children a Woman Should Have by Age and Residence of Husband

Age	Company Camps & Pobl.		Barangays	
	Number of Respondents	Ideal Number	Number of Respondents	Ideal Number
20-24	-	-	-	-
25-29	11	4.18	4	3.50
30-34	18	4.16	8	4.00
35-39	10	4.08	10	4.20
40-44	27	4.68	10	4.20
45-49	15	3.50	9	4.11
50-54	10	4.10	4	6.00
55+	6	4.33	5	2.75
Total	100	4.15	50	4.10

Like the wives, the husbands' attitude towards family size was not directly related to any age group at a particular time.

Expected number of children. The question asked to determine the expected number of children was used to determine the fecundity of the women and the maximum number of children a man would have if they responded totally to their physiological capabilities.

The youngest age-groups of each category gave a smaller number of expected children. As the age increased the expected number of children also increased, which was very pronounced between ages 35-39 and age 50-54 in both categories.

It is seen that the women from the company camps and poblacions had a higher expected number of children than the barangay women. This is so because the responses to the questions could be influenced by the way the respondent perceived her health status. The women from the company camps and poblacions had better access to health facilities and better living conditions than the barangay women.

The large number of children of those aged 35-39 could be a redefinition of their achieved fertility.

The husbands from the company camps and poblacions had a higher expected number of children than husbands coming from the barangays. This implied that health considerations other than innate desires was important. The husbands of the first category showed an incidence of a large expected number of children from age 25 to 44 except age cohort 30-34. The only possible explanation to this exception was that husbands within this age bracket were trying to make good in their jobs that they had in the company. This ambition to achieve more may have influenced the answers of these husbands. The number increased at ages 45-49 and gradually declined.

The data of the barangay husbands exhibited that the younger age groups had a lower expected number of children, augmented sharply at ages 25-29, rose a little at age 40-44 and then dropped. The largest number was given by husbands belonging to age 45-49. By this time most of them have felt that they had completed their family size, and therefore justified their achieved family size by giving a larger expected number of children.

Table 10-a. Mean Number of Expected Children by Age and Residence of Women Respondent

Age	Company Camps & Pobl.		Barangays	
	Number of Women Resp.	Expected No. of Children	Number of Women Resp.	Expected No. of Children
20-24	4	5.25	-	-
25-29	15	6.13	10	5.30
30-34	14	7.14	11	6.00
35-39	26	8.65	9	5.77
40-44	23	6.16	13	6.69
45-49	13	6.80	3	6.00
50-54	5	8.25	4	6.50
Total	100	6.91	50	6.04

Table 10-b. Expected Number of Children by Age and Residence of Husband Respondents

Age	Company Camps & Pobl.		Barangays	
	Number of Husband Resp.	Expected No. of Children	Number of Husband Resp.	Expected No. of Children
20-24	-	-	-	-
25-29	11	7.83	4	4.25
30-34	18	5.25	8	6.25
35-39	10	7.80	10	6.20
40-44	27	7.62	10	6.30
45-49	15	8.00	9	8.42
50-54	10	6.80	4	7.25
55+	6	6.80	5	5.80
Total	100	7.16	50	6.35

Comparison

a) Number of living children, additional number of children, desired number of children, expected number of children, and ideal number of children (Company Camps and Poblacions). When the data of husbands and wives of the company camps-poblacion categories were compared, the information showed that the mean desired number of children was already achieved by the time they were between 30-34 years of age. Their mean desired number was 3.50, a number not remotely different from their mean ideal number of children which was 3.67. The husbands had 4.68 children as their mean number of desired children and 4.15 as the mean ideal number of children. Both these were attained by the husbands at the early ages of 35-39.

In all the variables described as having an influence on the fertility attitudes of a couple, such as additional children, desired number of children, expected number of children and ideal number of children a woman should have, the husbands of this category gave a number of children higher than that of the women.

b) Number of living children, additional children, desired number of children, expected number of children, ideal number of children (Barangay). The barangay women had reached their ideal number and almost attained their desired number of children when they decided to control or plan their families. Due to this they stopped wanting more children at the age of 35 while the company camp-poblacion women did so at 45.

The husbands attained their desired number and the number they thought were ideal for a woman to have at the age of 30-34. Since the husbands were generally one age-bracket older than the women (as far as this study is concerned), the barangay

Table 11-a. Comparison Between Number of Living Children, Additional Number of Children, Desired Number of Children, Expected Number of Children, and Ideal Number of Children a Woman Should Have of Husband and Wife by Age (Company Camps and Poblacions)

Age	No. of Living Children		Additional No. of Children Desired		Desired No. of Children at Marriage		Expected No. of Children		Ideal No. of Children	
	Wife	Husband	Wife	Husband	Wife	Husband	Wife	Husband	Wife	Husband
20-24	2.75	-	1.38	-	2.75	-	5.25	-	3.25	-
25-29	3.20	3.00	2.00	2.16	3.33	4.08	6.13	7.83	3.53	4.18
30-34	4.07	3.94	2.28	1.50	3.42	4.10	7.14	5.25	3.85	4.16
35-39	6.38	4.90	1.43	1.75	3.88	5.41	8.65	7.80	3.69	4.08
40-44	6.04	5.96	1.00	2.00	3.43	5.88	6.16	7.62	3.56	4.68
45-49	6.53	6.93	0.00	2.00	4.07	4.32	6.80	8.00	3.84	3.50
50-54	7.80	7.00	0.00	1.00	4.20	4.50	8.25	6.80	4.00	4.10
55+	-	7.50	-	0.00	-	4.49	-	6.80	-	4.33
All Ages	5.25	5.60	1.15	1.49	3.58	4.68	6.91	7.16	3.67	4.15

Table 11-b. Comparison Between Number of Living Children, Additional Number of Children, Desired Number of Children, Expected Number of Children, and Ideal Number of Children a Woman Should Have of Husband and Wife by Age (Barangay)

Age	No. of Living Children		Additional No. of Children Desired		Desired No. of Children at Marriage		Expected No. of Children		Ideal No. of Children	
	Wife	Husband	Wife	Husband	Wife	Husband	Wife	Husband	Wife	Husband
20-24	-	-	-	-	-	-	-	-	-	-
25-29	3.30	3.00	1.50	1.25	3.80	3.17	5.30	4.25	3.80	3.50
30-34	5.36	3.75	1.00	1.67	3.63	4.49	6.00	6.25	3.60	4.00
35-39	5.77	5.60	1.00	1.00	3.66	4.10	5.77	6.20	3.88	4.20
40-44	7.92	7.10	0.00	2.00	3.61	4.60	6.69	6.30	3.92	4.20
45-49	8.00	7.11	0.00	0.00	4.00	4.21	6.00	8.42	4.00	4.11
50-54	6.50	7.50	0.00	0.00	3.00	6.00	6.50	7.25	3.50	6.00
55+	-	6.60	-	5.00	-	4.60	-	5.80	-	2.75
All Ages	6.14	5.80	0.50	1.56	3.61	4.45	6.04	6.35	3.24	4.10

Table 11-c. Number of Children Living, Children Desired, Additional Children Wanted, Ideal Number of Children and Expected Number of Children of All Husbands and Wives by Highest Grade Completed

Highest Grade Completed	Children Living		Desired No. of Children		Additional No. of Children		Ideal No. of Children a Woman Should Have		Expected No. of Children	
	Wife	Husband	Wife	Husband	Wife	Husband	Wife	Husband	Wife	Husband
Some Elementary	6.22	5.95	3.80	3.52	0.20	0.21	3.32	3.90	5.87	7.57
Complete Elementary	5.87	5.78	3.72	4.87	0.23	0.44	3.76	4.17	6.92	6.91
Some High School	5.68	5.40	3.38	4.26	0.52	0.41	3.48	3.81	7.03	6.14
Complete High School	4.66	5.25	3.33	5.00	0.22	0.26	3.61	4.65	6.44	7.45
Some College	5.00	5.50	3.00	5.18	0.33	0.56	3.66	4.33	6.33	5.83
College Graduate	4.52	4.50	4.05	4.90	0.76	0.40	3.88	4.70	5.58	5.80
All Educational Levels	5.32	5.40	3.55	4.62	0.38	0.38	3.62	4.26	6.36	6.61

couples had practically achieved their fertility ideals at the time they started family planning.

Like the company camp-poblacion category, the barangay husbands have larger mean desired and mean ideal number of children than the wives. This was also true of their expected number of children and the additional children wanted.

In each residential category, they stated a desired number and ideal number of children a woman should have that was substantially below the number of living children, by the end of their child-bearing years.

A majority of the women in both categories indicated that they no longer want more children. The number not wanting (as previously cited) was somewhat higher among rural women than the company camp and poblacion women.

The high achieved fertility of the women by the end of their reproductive years suggested that they were less effective in implementing their fertility desires.

c) Number of children living, children desired, additional children wanted, ideal number of children and expected number of children of all husbands and wives. To have a clearer view on the essential variables that influence achieved fertility as well as the practice of family planning, these variables should be considered in terms of education.

Based on the highest grade completed of the respondents Table 11-c shows that the number of children living was inversely related to educational attainment for both husbands and wives.

The desired number of children was almost reflected in the number of children living among the respondents who graduated

from college. Those who had only some elementary education expressed a desired number very much lower than that of the number of living children. The general trend was that the desired number was smaller than children living in all levels except among husbands of the college graduate level.

No apparent interpretation could be elicited from the data on number of additional children wanted except that the respondents of all educational levels did not want more children, and this would be based on the number of children they already had since they already had a big actual family size.

There was no definite pattern regarding the ideal number of children a woman should have and the expected number of children except that in both instances the husbands expressed a larger number than the wives.

C. Use of Family Planning

a) Decision making. The choice of a family planning method is the couple's decision. The fact as to who makes the decision may indirectly affect the success or failure of the method used. In this particular study the responses of the women interviewed suggested that in most of the aspects where important decisions had to be made, the decisions were made by both husband and wife equally. However, in decisions concerning the number of children wanted, the wives had more say than the husbands.

b) Other methods used. The respondents declared that there were times that they used other methods in between in the course of their use of the BBT-Symptothermic Method. It was discovered that a great number of the couples used the calendar for the young-age group or the calendar-condom combination for

for the older ones as an alternative method.

In conversations with the most knowledgeable persons about the Del Monte Natural Family Planning Clinic, Sister Helen Paul, Dr. Miguel Cruz and Mrs. Porsuelo, the present writer had been informed that all, or almost all members of the group used rhythm exclusively. Thus no question on how often other methods were used per 100 cycles.

One of the most important findings of this study has been that in fact some 73 percent of respondents had used methods other than BBT rhythm, together with BBT rhythm.

Since the BBT-Symptothermic Method, requires the woman to be aware of symptoms brought about by the menstrual cycle, they might have found it convenient to take note of their cycle with the help of the calendar. Some of those whose husbands cannot control themselves used condoms during established unsafe days. It is implied however that the principal method used was BBT because they answered such when asked what method they were using.

c) Reasons why couples used other methods. The use of other methods were attributed mainly to the aggressiveness of the husband. Other reasons were minimal. A total of 66 percent of all women in the sample said that their husbands were aggressive. Twelve percent said they had contact during fertile periods. The women may be those who belonged to the 35 and over bracket who reported that they used condom and the calendar combination. In this study most of the women belong to this category.

Other method users were may be the least successful method user because they would tend to be negligent in taking their temperature. Also they probably were the users who had unwanted pregnancies while using the method.

Table 12-b. Percent Distribution of Whether or Not Respondents Used Other Methods and Which Method Used by Age and Residence

Responses	Camps and Poblacions						Barangays						All Places	
	15 - 34		35 - 54		Subtotal		15 - 34		35 - 54		Subtotal		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Did not combine with any method (BBT)	0	00.00	2	93.00	2	02.00	0	00.00	1	03.00	1	02.00	3	02.00
Calendar + BBT	23	70.00	4	06.00	27	27.00	9	43.00	1	03.00	10	20.00	37	24.70
Condom + BBT	5	15.00	6	09.00	11	11.00	4	19.00	4	14.00	8	16.00	19	12.6
Withdrawal + BBT	4	12.00	4	06.00	8	08.00	3	14.00	2	07.00	5	10.00	13	08.70
Condom and Calendar + BBT	1	03.00	51	76.00	52	52.00	5	24.00	21	73.00	26	52.00	78	52.00
Total	33	100.00	67	100.00	100	100.00	21	100.00	29	100.00	50	100.00	150	100.00

d) Reasons why no pregnancies occurred. A total of 83 percent of all the women when asked why they had no pregnancies, attributed this to the use of other methods least frequently. They claimed that the method used was dependable and the patience and honesty in taking temperature were the reasons why there were no pregnancies that occurred. The women referred to here might have had no pregnancy during the times when they were honest in taking their temperatures.

It was unforeseen by the writer, on the basis of what Sister Helene Paul, Dr. Cruz, and Mrs. Porsuelo had said, that more than a few (less than 5%, it would seem), were using or had used other methods than the calendar or symptothermal rhythm. As such, no question had been included on frequency of use of such additional methods. Nevertheless, the present writer on the basis of Table 12d, and Table 12c, attempted to classify each person into one of the seven following categories:

1-5 times per 100	Very rarely	uncertain of interpretation of chart	8
6-9 times per 100	Rarely	when husband drank or very insistent on family relations during safe period	88
10-29 times per 100	Occasionally	contact during fertile period occasionally hard to get time	14
30-49 times per 100	Less than half the time		0
50-64 times per 100	More than half the time		0
65-79 times per 100	Often		0
90-100 times per 100	Very often		0

Table 12-c. Percent Distribution of Reasons of Women Respondents on Why They Used Other Methods by Residence

Reasons	Camps & Poblacion		Barangays		Total	
	No.	%	No.	%	No.	%
Husband is aggressive and cannot control	65	65.00	33	66.00	90	66.00
Husband gets drunk	6	06.00	3	06.00	9	06.00
Uncertain of the interpretation of chart	8	08.00	3	06.00	11	07.00
Contact on fertile period	11	11.00	7	14.00	18	12.00
Forget to take temperature	0	00.00	0	00.00	0	00.00
Change of temperature because of a busy day	6	06.00	1	02.00	7	05.00
NR/AN	3	03.00	2	04.00	5	03.00
NAP	1	00.00	1	02.00	2	01.00
Total	100	100.00	100	100.00	100	100.00

The writer tried to classify the 110 who used other than rhythm on basis of their answers. On the basis of other experience and the pretest, it did not seem possible to get any accurate answers on the number of times per 100 cycles they had used other methods. Accordingly, no such question was included in the questionnaire. But the writer tried to classify them into categories on the basis of an overall impression of what they had said in the interview, and the reason why they used these other methods and the urgency of such use.

Table 12-d. Reasons in Opinion of Respondent on Why No Pregnancy Occurred

Reasons	Age and Percent Distribution										Total					
	20-24		25-29		30-34		35-39		40-44		45-49		50-54			
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%		
Dependability of the Method	3	02.00	18	15.00	16	13.00	20	16.00	20	16.00	6	05.00	3	02.00	66	53.00
Patient and honest in taking temperature	2	01.00	6	05.00	9	07.00	15	12.00	16	13.00	10	08.00	4	03.00	66	53.00
Used other methods in between	0	00.00	0	00.00	0	00.00	0	00.00	0	00.00	0	00.00	2	01.00	2	02.00
Total	5	03.00	24	20.00	25	20.00	35	28.00	36	29.00	16	13.00	9	07.00	124	83.00

D. Attitudes in the Practice of the Basal Body Temperature Method of Family Planning

a) Reasons for using BBT. Acceptance of an innovation depends upon a number of reasons. The preconditions for adopting the Basal Body Temperature Method are shown in Table 13a. The respondents were asked to name at least 5 important reasons for using the method. Since the question asked was an open-ended one, the different reasons given were categorized. The categories that resulted were: 1) to determine the sex of the child, 2) spacing, 3) accurate and simple method, 4) inexpensive, 5) no side effects, and safe, 6) religious reasons and reasons of conscience, 7) because of motivation and 8) the only method recommended. The first 5 reasons according to the order of preference of both residential categories were as follows: 1) spacing, 2) no side effects, 3) accurate and simple method, 4) only method recommended, 5) because of motivation.

b) Most important among the reasons. To obtain a clearer picture, the husbands and wives were asked to give the most important of the 5 reasons why they used the method. Table 13b, shows that the result was the same. The most popular reason was the couples' desire to space their children followed by the fact that the method was a safe method and had no side effects and that it was accurate and simple method. The last two reasons were that it was the only method recommended and because of the amount of motivation given.

c) Reactions to BBT at first use and opinions of couples on BBT. The couples were asked the question "What can you say about BBT when you started using it?"

Out of the 100 couples coming from the Company Camp-Poblacion category, 43 of the husbands and 41 of the wives said that the method was good but demanded some sacrifice. The second reaction pointed out by the husbands of this

Table 13-a. The First Five Most Important Reasons for Using BBT

Reasons	First Reasons		Second Reasons		Third Reasons		Fourth Reasons		Fifth Reasons							
	Husband	Wife	Husband	Wife	Husband	Wife	Husband	Wife	Husband	Wife						
	No.	%	No.	%	No.	%	No.	%	No.	%						
To determine the sex of the child	0	00.00	2	01.00	0	00.00	11	06.00	2	01.00	0	00.00	0	00.00	0	00.00
Spacing	45	30.00	34	23.00	12	00.00	19	13.00	43	27.00	39	26.00	40	27.00	0	00.00
Accurate and simple method	39	26.00	34	23.00	35	23.00	33	21.00	30	20.00	14	09.00	17	11.00	0	00.00
Inexpensive	1	06.00	3	02.00	18	12.00	16	11.00	9	06.00	31	20.00	17	11.00	20	13.00
No side effects/safe	41	27.00	47	31.00	39	26.00	42	28.00	35	23.00	28	19.00	8	05.00	10	07.00
Reasons for religion and conscience	3	02.00	4	03.00	9	06.00	7	05.00	17	11.00	25	17.00	64	43.00	40	27.00
Because of Motivation	7	05.00	10	07.00	19	13.00	10	07.00	2	01.00	6	04.00	0	00.00	0	00.00
Only method recommended	14	09.00	16	11.00	18	12.00	22	15.00	12	08.00	6	04.00	9	00.00	40	27.00

Table 13-b. Most Important Among the Reasons by Residence (Husbands and Wives)

Reasons	Company Camps and Poblacions				Barangays				Total			
	Husband		Wife		Husband		Wife		Husband		Wife	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
To determine the sex of the child	0	00.00	0	00.00	1	02.00	1	02.00	1	06.00	1	00.06
Spacing	42	42.00	42	42.00	23	46.00	23	46.00	65	43.00	65	43.00
Accurate and simple method	19	14.00	14	14.00	6	12.00	8	16.00	20	13.00	22	15.00
Inexpensive	1	01.00	0	00.00	0	00.00	0	00.00	1	00.06	0	00.00
No side effects/safe	25	25.00	25	25.00	4	08.00	3	06.00	29	19.00	28	18.00
Reasons of religion and conscience	11	01.00	1	01.00	1	02.00	1	02.00	2	01.00	2	01.00
Because of motivation	3	03.00	3	03.00	3	06.00	2	04.00	6	04.00	5	03.00
Only method recommended	7	07.00	8	08.00	4	08.00	4	08.00	11	07.00	11	07.00
Others	7	07.00	7	07.00	8	16.00	8	16.00	15	10.00	15	10.00

category was that the method was safe and secure because there was no side effect, while the second most popular reaction among the wives was that the method caused friction between husband and wife. The company and poblacion couples were also one in giving the third most evident reaction as being that when they first use the method, it was confusing and hard to understand.

The barangay couples reported that the first two reactions were: First, the method was good but demanded some sacrifice (similar to the first category) and second, that the method was confusing and hard to understand. The couples differed only in their third reaction because the husbands said that they found the method to be safe while the wives said that the method caused friction between them.

When the result of both categories were summed up the first three reactions of the husbands were: 1) the method was good but demanded some sacrifice, 2) the method was safe and secure because there were no side effects, and 3) the method was confusing and hard to understand. The first two reactions of the wives were the same as that of the husbands. Couples in the two categories varied only in the third reaction of the wives which was that, the method caused friction between the couple. Surprisingly only 5 husbands all of them coming from the company camp-poblacion, said that the method caused friction, while no one from the barangay husbands reported such a reaction.

d) Reactions to BBT now. After asking the couples what they could say about BBT when they first started on it, they were asked the question: "What can you say about BBT now?"

The first reaction of the husbands when they first used BBT was still the first opinion given by the husbands from the company camps and poblacion at the time of interview.

The second opinion was related to the sacrifice aspect of the method. A number of husbands (21 percent) said that the method was good for women who were not busy and it was also good but needed patience. The third opinion given was that the method was good because it had no side effects. The barangay husbands gave more or less the same opinions except that only 6 percent of the barangay husbands included in their opinions the idea that the method was good but needed patience as did the husbands of the other category.

The women from the company-camp and poblacion said that the BBT method was good for women who were not busy. Coming next at a very close margin was that the method was good but needed sacrifice and patience. The barangay women expressed that the method demanded some sacrifice. Coming next with equal weight were the opinions that the method was good because it had no side effects and that the method was only good for women who were not busy. Some of the barangay women mentioned that the method was good because it was not against their religion and conscience, while none of the company camp-poblacion women mentioned this.

For all the husbands of both categories, the first 5 reactions to BBT at the moment of interview were: 1) good but needed sacrifice, 2) good for women who were not busy, 3) good because there was no side effect, 4) good but needed patience and 5) good because it is not against their religion and conscience and that it can determine the sex of the child.

For the women the reactions were as follows: 1) good only for women who were not busy, 2) good but needed sacrifice, 3) good but needed patience, 4) good because there was no side effect, and 5) good because it is not against religion and conscience.

e) Problems while using BBT. It was noted that the greatest problem for all the respondents of the two categories

Table 14. First Reaction of Husband and Wife to BBT by Residence

Reaction	Company Camps and Poblacions			Barangays			Total					
	Husband		Wife	Husband		Wife	Husband		Wife			
	No.	%	No.	No.	%	No.	%	No.	%			
Good but needs sacrifice	43	43.00	41	41.00	25	50.00	20	40.00	68	45.00	67	44.00
Confusing and hard to understand	15	15.00	13	13.00	15	30.00	18	36.00	30	20.00	31	21.00
Safe and secured because no side effects	29	29.00	11	11.00	8	16.00	0	00.00	37	27.00	18	12.00
Cause friction between husband and wife	5	05.00	24	24.00	0	00.00	6	12.00	5	03.00	30	20.00
Detect ovulation and preselect sex of child	1	01.00	6	06.00	0	00.00	2	04.00	1	00.06	8	05.00
Other reasons not classified above	7	07.00	5	05.00	7	14.00	4	08.00	9	00.60	24	16.00
Total	100	100.00	100	100.00	50	100.00	50	100.00	150	100.00	150	100.00

Table 15. Opinions of Husband and Wife on BBT Now by Residence

Opinions	Company Camps and Poblacions				Barangays				Total			
	Husband		Wife		Husband		Wife		Husband		Wife	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Good for women who are not busy	19	19.00	42	42.00	13	26.00	28	56.00	32	21.00	70	47.00
Good but needs patience	19	19.00	21	21.00	3	06.00	0	00.00	22	15.00	21	14.00
Good but needs sacrifice	47	47.00	29	29.00	18	36.00	14	28.00	65	43.00	43	28.00
Not against religion and conscience	0	00.00	0	00.00	3	06.00	5	10.00	3	02.00	5	03.00
Strengthens love relationship	0	00.00	4	04.00	0	00.00	0	00.00	0	00.00	4	03.00
Can determine the sex of the child	3	03.00	0	00.00	0	00.00	0	00.00	3	02.00	0	00.00
No side effects	12	12.00	4	04.00	13	26.00	3	06.00	25	17.00	7	05.00
Total	100	100.00	100	100.00	50	100.00	50	100.00	150	100.00	150	100.00

was the same as their first reaction when they started using BBT and their opinions about the method at the time of interview - that it demanded some sacrifice. The second problem was the friction that the method caused. When the wife forgets to take temperature regularly and misinterprets the chart, the method would be likely to fail. These were the third and fourth problems that the couples of both categories cited. The fifth problem mentioned according to the degree of difficulty was that the method is time consuming which would explain why the method would be difficult for working wives. Another important cause of difficulty in the successful use of BBT method (although mentioned in lesser frequency) was that the method is difficult when mothers are nursing.

f) Reasons why BBT fails. The perceived problems mentioned by the respondents were presumed to have been the cause of the failures of the method. When the wives were asked their opinions why the method would likely fail, another set of reasons resulted, but were more or less re-statements of the problems. Table 16 shows the reasons considering the total number of times the item was mentioned, and the first 5 reasons why BBT fails. 121 out of the 150 wives (81 percent) said that the method would fail if the husbands would not cooperate. The reason was a reflection of the second problem - that of causing friction between the couples. The second reason was negligence, and irregularity in taking temperature (99 out of 150 wives mentioned this). The third reason was a classic one. If the method is not honestly followed, naturally any method whether proven to be highly effective or not would fail. The last two reasons were the difficulty in understanding the method and when a woman's cycle is long.

E. The Effectiveness of the Method

Is BBT effective or not? When couples were asked whether or not BBT was effective, 84 percent of the wives and 71 percent

Table 16. Problems of Husbands and Wives While Using BBT by Residence

Problems	Company Camps and Poblacions				Barangays				Total			
	Husband		Wife		Husband		Wife		Husband		Wife	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Difficult when wife is working	3	03.00	3	03.00	5	10.00	5	10.00	8	05.00	8	05.00
When mother is nursing	3	03.00	3	03.00	1	02.00	2	04.00	4	02.00	5	03.00
Time consuming	11	11.00	12	12.00	5	10.00	5	10.00	16	11.00	17	11.00
Errors in interpreting chart	14	14.00	16	16.00	12	24.00	12	24.00	26	17.00	28	18.00
When wife forgets to take temperature	23	23.00	23	23.00	12	24.00	12	24.00	35	23.00	35	23.00
Needs sacrifice	52	52.00	51	51.00	13	26.00	13	26.00	67	45.00	64	43.00
Causes friction between couples	31	31.00	36	36.00	13	26.00	13	26.00	44	29.00	49	33.00
Others	10	10.00	10	10.00	11	22.00	11	22.00	21	14.00	21	14.00

Table 17. Distribution of Wife's Reasons Why BBT Fails

Reasons	Order of Reasons											
	First		Second		Third		Fourth		Fifth		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Difficulty in understanding the method	13	09.00	3	02.00	5	03.00	4	03.00	0	00.00	25	17.00
Husband won't cooperate	72	48.00	38	25.00	10	07.00	1	00.06	0	00.00	21	81.00
Don't follow method honestly	22	15.00	11	07.00	9	06.00	1	00.06	1	00.06	43	29.00
Negligence, laziness and irregularity in taking temperature	28	19.00	51	34.00	79	13.00	1	00.06	0	00.00	99	66.00
Misinterpretation of chart	6	04.00	5	03.00	2	01.00	0	00.00	0	00.00	13	08.00
When cycle is long	1	00.60	1	00.60	7	05.00	6	04.00	0	00.00	15	10.00
Other reasons	7	05.00	1	00.60	2	01.00	1	00.60	0	00.00	11	07.00

of the husbands said it was very effective. Nine percent of the wives and 14 percent of the husbands declared that the method was not very effective and only 2 percent of the wives and 6 percent of the husbands reported that the method was not effective at all, and the remaining husbands and wives were not certain.

Reasons for effectiveness or non-effectiveness. The method was said to be very effective first, if couples followed it religiously; second, if husbands cooperated and third, if couples understood it well. The order was true of both husbands and wives from both categories.

From the total sample population 11 percent of the husbands said that the method was not effective if wife was lazy. 11 percent of the husbands said that the method was not very effective if the couple could not understand and/or the husbands did not cooperate. From among the wives, the reason given for the method to be less effective was the lack of cooperation of husbands and when the couples do not understand the method. A substantial number of husbands from the camps and poblacions said that the method was effective whereas the husbands from the barangay stated that the method was not effective due to inaccurate temperature record readings and the interpretations of the temperature readings.

Statistical presentation of the index of effectiveness of the BBT method. The responses of the couples to the preceding questions on the effectiveness or the ineffectiveness of the method showed that the method is effective. However, the best indicator of the effectiveness or ineffectiveness of any method is the number of pregnancies that takes place in the duration of one's practice of any method.

To compute the index of effectiveness, this study employed the multi-decrement or the Life Table Approach.¹

The writer admits a slight bias due to the fact that the approach as Robert Potter and Roger C. Avery illustrated it is

Table 18-a. Percent Distribution Whether BBT is Effective or Not Effective by Residence

Opinions	Company Camps and Poblacions				Barangays				Total			
	Husband		Wife		Husband		Wife		Husband		Wife	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Very effective	78	78.00	86	86.00	29	58.00	40	80.00	107	71.00	126	84.00
Not very effective	9	09.00	10	10.00	12	24.00	3	06.00	21	14.00	13	04.00
Not effective at all	6	06.00	2	02.00	4	08.00	1	02.00	10	06.00	3	02.00
Not certain	4	04.00	2	02.00	3	06.00	6	12.00	7	04.00	8	05.00
No response	2	02.00	0	00.00	2	04.00	0	00.00	5	10.00	0	00.00

to measure a method of effectiveness of a prospective study.² This study is a retrospective one. The computation here was done in years for the length of 13 years, adding another source of bias since to be exposed to pregnancy is of a monthly or periodic and not yearly nature. Nevertheless it was seen that the pregnancies (due to user failure or method failure as in BBT) could be better estimated through this approach. It was assumed that the women who started in 1965 were all women who had not previously practised basal body temperature (BBT) rhythm. The writer investigated this assumption with all concerned persons who knew the history of the Phillips Natural Family Planning Clinic.

The nature of the data used in this study needs discussion so that interested persons will know the nature of the data available to the present writer.

Cards exist in a hospital file in Phillips Bukidnon, listing every person (couple) who began the BBT project in each year.

A sample was taken of these cards, 10 percent proportionately. Thus 360 cards were drawn out of 3,600 cards. However the cards contained only names and addresses of the couples and other data not very relevant to the present research. There was nothing to indicate the person's (couples) perseverance in BBT or success in it, so interviewing was necessary.

Of the 360 cards drawn, only 150 remained within the environs of the sample area (Philippine Packing Corporation Camps and surrounding barangays) which could be traced and interviewed during August-November, 1978. Some had out-migrated and some had died.

For those still living in the environs of the Philippine Packing Corporation Camps and the surrounding barangays, complete data were available from the interviews. Some of these have dropped out of the program, others have remained.

Death or migration seems to be unrelated to the practice of BBT rhythm, unless one could prove that women who died had severe health problem that made bearing a child very difficult or unless the women who migrated did so because/or on the occasion of some problems with their BBT practice. But these relationships seem quite unlikely, so the assumption has been made that the deceased and the migrant samples did not differ significantly in BBT motivation and practice from those practitioners who are alive, and had not migrated.

It is further noted that the results of this study cannot be generalized statistically to other populations except when the comparison will be with samples from the same population (the inhabitants of the towns of Manolo Fortich and Libona).

The measure of effectiveness model*. To determine the probability of surviving the net rates of termination (by year) has to be computed. The following symbols will be helpful in understanding the solution.

N_x - number of women using the method (continuing method users) at start of yearly interval (x to $x + 1$ $x + nth$) ordinal years.

U_x - the number of pregnancies due to user failure.

M_x - the number of pregnancies due to method failure.

W_x - total number of women withdrawing from observation during any year of exposure to risk (of unplanned pregnancy).

Let ordinal year ($y - 1$ to the start of the next year) be the longest duration of observation given a number of cases.

* According to Potter and Avery.

- a) Compute for each year the rates of pregnancies (failures) for specific cause i.e..
- (i) user failure
 - (ii) method failure

Then the probability of failure for any one year is computed thus:

- a) The probability of user failure is equal to the user failures of a certain year divided by the number of women using the method at the start of a yearly interval less than half of the total number of women withdrawing from observation during any year of exposure to risk of unplanned pregnancy. The formula is:

$$Q_x U = U_x / N^* x$$

- b) The probability of method failure is equal to the method failures of a certain year divided by the number of women using the method at the start of a yearly interval less than half of the women withdrawing from observation during any year of exposure to risk of unplanned pregnancy. The formula is: $Q_x M = M_x / N^* x$

$$\text{Where } N^* x = N_x - W_x / 2$$

The rationale underlying $N^* x$ is that, had W_x BBT users not been lost to observation during year $(x, x + 1)$, there would have been additional years of exposure, e.g.

- a) The probability user failure for year 1 is equal to the number of user failures for year 1 divided by the number of women using the method less than half of the women withdrawing from observation in year 1. Thus: $Q_1 U = U_1 / N^*_1$

- b) Similarly the probability of method failure for year 1 is equal for year 1 divided by the number of women using the method less than half of the women withdrawing from observation in year 1.

Thus:

$$Q_{1M} = M_1/N^*_1$$

The combined rate can also be obtained for each year. It is Q_x and it equals:

$$Q_x = Q_{xU} + Q_{xM}$$

The probability of surviving year x to $x + 1$ as continuing user is:

$$P_x = 1 - Q_x; \quad P_{xU} = 1 - Q_{xU}; \quad P_{xM} = 1 - Q_{xM}$$

After obtaining the rates for each year separately they are chained together so as to yield cumulative yearly rates, i.e. up to the start of the present year which gives the cumulative rates. This is done by changing probabilities of user failure and method failure to probabilities of user non-failure and method non-failure. Thus:

- a) Subtract Q_x for each non-cumulative ordinal year in order from 1.000. Also get P_{xU} and P_{xM} the same sort of way.
- b) Multiply together, symbolized as \prod (meaning multiply together the factors from first to last), the survival rates to get the cumulative survival probability in the user non-failure and the method non-failure:

$$P_{x1} \times P_{x2} \dots \dots \dots P_{x13}$$

A yearly observation by month is ideal and a 6-month cumulated rate will provide detailed information. The length of follow-up indicates the maximum duration but it does not

affect directly the values of rates within the duration. In this sense study results are independent of the length of observation. Thus the researcher cumulated the rates as to the length of exposure in the method.

The formula actually used:

- a) The probability of user failure for a certain year is equal to the number of unplanned pregnancies due to user failure for that certain year divided by the number of years in the program multiplied by the number of women less than n years in the program (e.g. 0-1 for year 1) divided by the weight to years of duration minus the planned pregnancies for that year. Therefore: $QxU = \frac{UnP}{M^*x}$
- b) The probability of method failure for a certain year is equal to the number of unplanned pregnancies due to method failure for that certain year divided by the number of years in the program multiplied by the number of women less than n year in the program (e.g., 0-1 for year 1) divided by the weight to years of duration minus the planned pregnancies for that year. Therefore: $QxM = \frac{UnM}{M^*x}$

where: $M^*x = (K Mx - \frac{Mx}{n} - Plp)$

K = no. of years in the program

Mx = no. of women less than n years in the program

n = weight to years of duration

Plp = planned pregnancies

It was assumed that unplanned pregnancies decrease with duration in program, because:

1. People who do not succeed drop out and try another method.
2. People who stay on become more familiar with the method.
3. people become less fecund with the advance of age.

Therefore, for assigning weights to years of duration rates have been split in parts by the formula: (x_1) (x_2) (x_3) (x_n) , where x_1 etc. is the probability of not having user failure or method failure (success); in such a way that x_1 is larger than x_2 and x_2 is larger than x_3 etc.

The Findings

The basic data of the study are shown in Table 19 and Table 20.

Method Failure

The pattern of method failure is of central interest to this study because in the BBT method the factors which contribute to a user failure are also the same factors that explain why the method may fail. Readers will recall that method failure was defined as pregnancies about which intentions the couple did not notify the clinic personnel or any identifiable person before hand. In the judgment of the respondents, some of these failures considered as method failure may actually have been user failures. In general, those who tried the method one year only had the highest failure rates. Those who used the method longest had least failures.

In short there is a downward, somewhat irregular trend. From 0-5, the less successful dropped out, the more successful continued to be satisfied with the method and continue to use

Table 19. Data on Women in Program, Planned Pregnancies, Years of Use, and Method Failure

Duration (years) in Program	Adjusted Number of Women	Years' in Program	Weight	Planned Pregnancies	User Failure	Failure Method
	Mx	k	n	Plp		
0 - 1	68	1	$\frac{1}{2}$	4	4	5
0 - 2	20	2	$\frac{1}{4}$	4	2	2
0 - 3	23	3	$\frac{1}{6}$	6	4	4
0 - 4	15	4	$\frac{1}{8}$	2	4	4
0 - 5	7	5	$\frac{1}{10}$	2	2	1
0 - 6	7	6	$\frac{1}{12}$	1	2	0
0 - 7	2	7	$\frac{1}{14}$	2	3	0
0 - 8	1	8	$\frac{1}{16}$	0	0	0
0 - 9	1	9	$\frac{1}{18}$	0	0	0
0 - 10	3	10	$\frac{1}{20}$	0	0	0
0 - 11	2	11	$\frac{1}{22}$	0	3	0
0 - 12	0	12	$\frac{1}{24}$	0	0	0
0 - 13	1	13	$\frac{1}{26}$	0	0	1

it. The rate of failure therefore declined, and the remainder had almost no failures except that of 0-13 years, this failure could very well be attributed to respondent error due to poor memory recall because the pregnancy may have taken place during the early years of practice or may be because she thought that she was no longer fecund but actually still was.

The reasons for success and failure are complex, but appear to include components of the following.

For Failures and Dropouts

1. A larger percentage of fecund women.
2. Less women with higher educational attainment.
3. Less highly intelligent women, who are unable to understand the complexities of the BBT method.
4. Less time in practising and learning (because they dropped out), therefore less knowledge and experience.

For Continuing User

1. A smaller percentage of fecund women.
2. More women with higher educational attainments.
3. More highly intelligent women.
4. More time and more knowledge in practical usage of the method.

Table 20. Probabilities of User Failure (QxU) and of Method Failure (QxM)

Duration	QxU	QxM
0 - 1	.13333	.16667
0 - 2	.06452	.06452
0 - 3	.06761	.06761
0 - 4	.07127	.07127
0 - 5	.06192	.03096
0 - 6	.04948	.00000
0 - 7	.26087	.00000
0 - 8	.00000	.00000
0 - 9	.00000	.00000
0 - 10	.00000	.00000
0 - 11	.05860	.00000
0 - 12	.00000	.00000
0 - 13	.00000	.07715

The Annual Rates by Years of Duration of Practice

A better way of indicating probability of failure is to show the rates of failure per year within categories of duration of use. No exact solution is available for this computation because the data were not gathered in such a manner. The data present total method failures during entire duration (in years) of BBT rhythm practice, and are as follows:

Table 21. Mean Rate of Failure Per Year By Duration of Use

Duration	Mean Per Year	Duration	Mean Per Year
0 - 1	.03226	0 - 7	.002271
0 - 2	.02254	0 - 8	.001365
0 - 3	.01782	0 - 9	.000991
0 - 4	.00619	0 - 10	.000690
0 - 5	.00593	0 - 11	.000538
0 - 6	.003489	0 - 12	.000451
		0 - 13	.000379

Certain reasonable assumptions can be made. These are:

1. The decline per year in failure within each total failure in n year categories resemble the trend of average failures per year in the 0 - n categories. Thus it is assumed that the two rates for (0 - 1.9) and for (2.0 - 2.9) which together equal a rate of .06452, resembles the decline from .16667 to .03226 (the mean failures per year of continuing use for 0 - 2 years of duration).
2. There is a roughly continuing downward curve.

Values for each category of years during which couples continuously used the method were computed on the assumption that the above method failure for preceding years of use is generally larger than in the following years of use.

During those years for which no method failure was reported, i.e. years 6-12, a graduation was carried out assuming a reasonable decline, beginning from the value for 0-5 (.03096) through .07715, such that the values are generally diminished, while yet preserving the overall rate .07715 as the q for 8 years. The gradual decline begins from .03096.

After this last operation, results were graduated using smoothed difference equations (Whitticker-Chambers Type A difference equations), starting with preliminary estimated values and adjusting slope till the results were reasonably smooth, and fitted the requirement of a gradual decline, while reproducing the overall result.

Table 22 shows the overall result. The probability of non-failure is greater among women who used the method for less than one year. As the number of years increased the failure rate declined gradually. If a couple use it for two years or more, the couple's chances of failing is bigger in their first year of use than their second year and their second year is greater than their third year and so on.

Graph A shows the Schematic representation of the gradual and more or less smooth decline of method failures as number of years of exposure to the basal body temperature method increased.

The Fertility Profile of the Women in the Sample

Most women in the sample had a high fecundity, thus a high fertility rate implied by the large mean number of living children as was seen in Tables 6-a and 6-b according to the

responses of wives and husbands respectively. The fertility of the women in the sample was compared to the Misamis Oriental Women assuming that the death rates of Misamis Oriental and Bukidnon are similar. From the ratio of the living children and children ever born data, the children ever born values of the sample women were estimated for the different age groups. This was done by multiplying the value of the living children data by the ratio of the corresponding age groups from the Misamis Oriental data (Table 22). The result of this operation could be seen in Table 23.

The women in the sample had 2.92 children ever born more than that of the Misamis Oriental women.

Table 22. Ratio of Children Ever Born and Children Living of Misamis Oriental Women by Age of Mother (Taken from Tables IV-1 and IV-2, pp. 352-3, 1975 Census)

Age of Mother	No. of Mothers	No. of Living Children	Percent Children Living	Children Ever Born	Percent CEB	Ratio
15-19	3,400	2,000	0.6	2,000	0.6	1.00
20-24	13,100	20,000	1.5	21,200	1.6	1.07
25-29	14,900	40,100	2.7	42,300	2.8	1.04
30-34	13,200	53,000	4.0	57,250	4.3	1.08
35-39	10,200	50,100	4.9	55,000	5.4	1.10
40-44	8,400	42,200	5.0	48,700	5.8	1.16
45-49	7,450	38,700	5.2	45,400	6.1	1.17
50-54	5,800	28,500	4.9	34,000	5.9	1.20
Average			3.60		4.06	

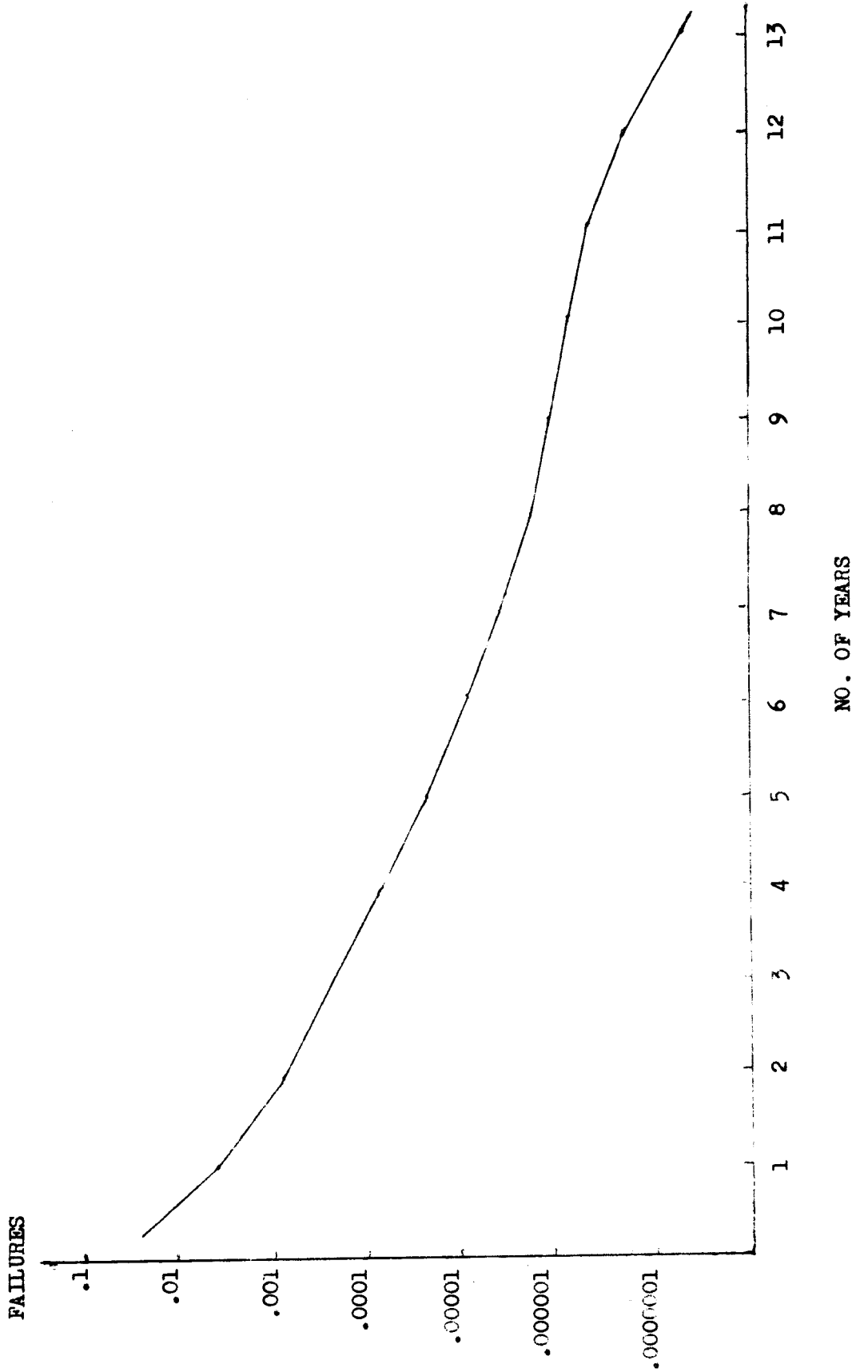
Table 23. A Probable Distribution of the Data from Table 6-A in Terms of Misamis Women Ever-Married

Age of Women	Children Living Camps/Pobl.	Estimated CEB	Children Living Barangays	Estimated CEB
15-19	-	-	-	-
20-24	2.75	2.94	-	-
25-29	3.20	3.33	3.30	3.43
30-34	4.07	4.40	5.36	5.79
35-39	6.38	7.02	5.77	6.34
40-44	6.04	7.01	7.92	9.18
45-49	6.53	7.64	8.00	9.36
50-54	7.80	9.36	6.50	7.80
Average	5.25	5.95	6.14	6.98

Table 24. Estimated Method Failures Per Year on Continued Use of BBT Rhythm of the Natural Family Planning Clinic in Phillips, Bukidnon

	0.0-0.9	1.0-1.9	2.0-2.9	3.0-3.9	4.0-4.9	5.0-5.9	6.0-6.9	7.0-7.9	8.0-8.9	9.0-9.9	10.0-10.9	11.0-11.9	12.0-12.9
0.0-0.9	.075044												
0.0-1.9	.067059	.007151											
0.0-2.9	.058152	.006711	.002029										
0.0-3.9	.048714	.004617	.001553	.001154									
0.0-4.9	.029370	.003729	.001352	.001006	.000255								
0.0-5.9	.015233	.002195	.001183	.000766	.000125	.000064							
0.0-6.9	.009195	.001735	.000954	.000386	.000096	.000057	.000018						
0.0-7.9	.004643	.001488	.000506	.000185	.000065	.000048	.000015	.000014					
0.0-8.9	.003913	.001262	.000201	.000099	.000039	.000030	.000012	.000010	.0000072				
0.0-9.9	.002960	.001161	.000160	.000075	.000029	.000026	.000010	.000008	.0000053	.0000032			
0.0-10.9	.001852	.001140	.000095	.000054	.000019	.000018	.000008	.000005	.0000021	.0000019	.000000010		
0.0-11.9	.001706	.001102	.000073	.000036	.000010	.000009	.000003	.0000019	.0000018	.0000015	.0000009	.0000009	.00000008
0.0-12.9	.001486	.001001	.000052	.000023	.000005	.000004	.000002	.0000010	.0000012	.0000014	.0000005	.0000005	.00000002
X	.024564	.002774	.000742	.000378	.0000712	.000032	.0000917	.0000065	.0000034	.00000195	.0000008	.0000006	.00000002

Graph A. Schematic Representation of Method Failures Per Year on Continued Use of BBF
Rhythm of the Natural Family Planning Clinic in Phillips, Bukidnon



FOOTNOTES

1. Chandrasekaran and A.I. Hermalin (eds.) Measuring the Effect of Family Planning Programs on Fertility (International Union for the Scientific Study of Population, Ordina Editions, 4830, Dolhan Belgium), pp. 133-142.
2. Ibid., pp. 135-6.

CHAPTER V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

SUMMARY

Many women in the sample started family planning at the late age of 35 and over, the age level when they had completed their fertility desires and fertility ideals. They had generally had a larger number of living children than their desired and ideal number but lower than their expected number of children. Many couples said that the reason why they adopted BBT was spacing, but in fact the time of life when they started was too late to allow this. The fertility pattern of the women in the sample was close to that of the Jordanian women who have one of the highest average fertility rates in the world.¹ A study conducted in 1972 showed that by the time the Jordanian women reached the end of their reproductive life (ages 40-44) 82 percent of them had six to nine live births. The women in the sample at ages 40-44 had a mean number of living children of 7.92 for rural women and 6.04 for the women from the company camps and poblacions. The sample women too had a higher number of children ever born compared to the Misamis Oriental women.

The high fertility pattern of the sample could not be clearly explained by differences in education, residence, income or employment even if the said factors were found out to have affected the total fertility differentials. The fact that these women value children greatly seemed to be the explanation. The value they placed on children was indirectly influenced by a high expected number of children and a relatively high desired number of children.

The fertility values of the husband were higher than that of the wives. This fact may aggravate the issue of high fertility, since the husband also has an influence on the number of children the couple would have.

Although more than half of the women sample were working, and working women tend to have more influence in family decision-making than women who are not working, their husband's decision had an effect. Herrin stated that with regards to decisions regarding number of children, a high proportion of both working and non-working women claimed that husbands have an influence.²

In this particular study, the women decided as to how many children to have but the husbands had the stronger influence on the number of children had, as seen from the fact that the number of living children was higher than the ideal number of the women.

Among couples with unplanned pregnancies, in most cases these were due to the aggressiveness of the husbands, even if the wife suggests the number of children they should have. In spite of the fact that the wife decides the sufficient number for her, the husband is part of the control process.

Sometimes abstinence presents psychological difficulties.³ These psychological difficulties could be checked by proper motivation and education (through seminars and the like) of couples of the parental responsibilities for the advent of every child.

This study affirms that the users of family planning are in the prime of their fertile period which is the same as that of the findings of an area fertility study for Northern Mindanao. At ages 15-24, the couples are occupied with having a first or second child and at 40-49, they feel less need for practice of a family planning method because of one reason or another.⁴

CONCLUSION

When women were asked about the methods used, a great number said they used other methods in addition to BBT. Eighty three percent of the respondents said that non-occurrence of pregnancy

was not due to the use of other methods but because of the dependability of the BBT method and honesty in taking temperature. One hundred percent of the respondents answered the question whether or not they used other methods, only 2 percent said that they did not combine with other methods. The explanation to this seemingly inconsistent data is that the women in the duration of exposure to the method had sometimes used other methods, but did not believe that non-occurrence of pregnancies was because they used other methods but because they could follow the method well. Therefore, the BBT Method is theoretically effective as a method if couples who use it follow it honestly and religiously. The non-effectiveness of a method depends on the theoretical understanding of the method.

The motivation of this method should be set at the early stage of marriage. This should be before the time they have achieved their desired number of children in order to space effectively and thereby reducing the total fertility.

The fertility rate of the sample women was as high as that of a population which has a high fertility rate (Jordanian women). But the sample's fertility rate could not be explained fully by demographic variables, such as residence, income, religion, education and age even if they do contribute in one way or another. This may be attributed to the socio-psychological aspects such as the fertility values of the couple. Additional number of children is due to unachieved expected number of children and sometimes absence of children of the preferred sex.

Lastly, the method is very effective when the couple uses it for a longer period than those who just practice it for a short time. It is seen that incidence of unplanned births while using the method occurred for couples who have practised it for less than a year. The intelligence and diligence of the women are essential factors to the success of the method; however the cooperation of the husband also is important. Those who tend to continue using the method are those who understand the method fully. Therefore,

all things being equal, with all other variables under control, the longer a couple uses the method, the greater the effectiveness.

RECOMMENDATIONS

It is a fact that more and more women shift from the pill to the rhythm method.⁵ The pill is virtually 100 percent effective, yet women are shifting to a natural family planning method among which is the Basal Body Temperature Method. The task then of educating couples about the natural way of planning families like BBT should be included in the program of the Population Commission. Outreach workers should not only capitalize on the mechanical, chemical or surgical methods but should also be ready to promote and introduce seriously the BBT method to those who desire to use it, because of moral, social or health reasons.

The Philippines is a predominantly Catholic country. The method approved of by the Catholic Church is periodic abstinence. However many Catholics do not abide by the Church's teachings on contraception because of the absence in their area of rhythm clinics run by the Catholic Community. The task of running these clinics should not only be of the Church organized efforts but should also be of the government and funding agencies, especially in a country like the Philippines which has different value orientations from all the rests of the countries.

The thorough understanding of the BBT is an essential factor in the success and failure of the method, so motivation is very important in the dissemination of information on responsible parenthood. This information may be disseminated through established Natural Family Planning Clinics. Population Education in schools should focus more on the cost of every child which consist not only of providing food, clothing and shelter but preparing him for a career in the future, thus encouraging them indirectly to limit the

number of children. But the trend at present is to point out the economic disadvantages of having many children. This is trying to control population in a manner which may be contrary to social values. Direct control of population is an economic consideration. Economic solutions may not be in direct consonance with social values. The effort should be in the redirection of values first, so that economic problems can be faced without hurting cultural values.

In conclusion, this paper has found that the women in the sample expressed their desire for family planning in order to space the birth of their children but their fertility pattern showed a high fertility rate because they started late in planning their families. The husband's attitude has had a strong influence in the success or failure of the method. The socio-economic and demographic variable helped in understanding the difference of method effectiveness but did not explain fully the degree of effectiveness as did the socio-psychological aspects such as the fertility value of the couple and the length of exposure the couple had used the method.

The couples in the sample did not use purely the BBT rhythm but BBT plus other rhythm methods or BBT plus condom. However the respondents claimed that the principal method used was BBT and that the effectiveness of the method was due to proper motivation and thorough understanding of the method, not anything else. BBT method is more effective if the couples are exposed to the method longer in order that they understand the method fully and if the women are intelligent and diligent enough to cope with the requirements for the theoretical understanding of the method.

Population education in schools should include BBT method and young couples should be taught about this method before marriage (during the seminar period required by both church and government). POPCOM people should encourage young married couples to space child-bearing and teach them about this method. Government hospitals and clinics should include in their set-up a Natural Family Planning Clinic.

An evaluation survey of pure BBT users on a regional or a national level is recommended.

A prospective comparative study on the use-effectiveness and socio-psychological factors of natural family planning method and IUD method is also recommended by the writer. This study should try to investigate not only the method's success in spacing child-bearing but also the degree of self-fulfillment as well as frustration felt by the couples. The sample population should be matched according to age of the women, duration of marriage and desired number of children and other relevant variables. This recommended research should investigate closely the effectiveness both in the physiological and psychological areas of couples using a family planning method, given that they have the same amount of motivation and follow-up.

FOOTNOTES

1. Hanna Rizk, "Trends in Fertility and Family Planning in Jordan", Studies in Family Planning, Vol. 8, No. 4, April 1977, p. 93.
2. Alejandro N. Herrin, "Female Work Participation and Fertility in the Philippines". Prepared for the Project Development Division, Population Center Foundation, Makati, Philippines, p. 12.
3. John Marshall, "Psychological Aspects of Temperature Method of Regulating Births", Catholic Marriage Advisory Council (London, W. 11, 1J Landshown Road: Clitherow House), p. 11.
4. Francis C. Madigan, et. al., "North Mindanao Region: A Preliminary Contributive Report to the Joint Area Fertility Studies Findings on Fertility and Family Planning Prevalence in Selected Philippine Regions", Area Fertility Study (Xavier University: RIMCU, November 14, 1978), p. 14.
5. Francis C. Madigan, "Recent Patterns of Differential Fertility Observed in Northern Mindanao and the Policy Implications", Area Fertility Studies (Cagayan de Oro: RIMCU, Xavier University, Nov. 3, 1979), p. 13.

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SEAPRAP

THE SOUTHEAST ASIA POPULATION RESEARCH AWARDS PROGRAM

PROGRAM OBJECTIVES

- * To strengthen the research capabilities of young Southeast Asian social scientists, and to provide them with technical support and guidance if required.
- * To increase the quantity and quality of social science research on population problems in Southeast Asia.
- * To facilitate the flow of information about population research developed in the program as well as its implications for policy and planning among researchers in the region, and between researchers, government planners and policy makers.

ILLUSTRATIVE RESEARCH AREAS

The range of the research areas include a wide variety of research problems relating to population, but excludes reproductive biology. The following are some examples of research areas that could fall within the general focus of the Program:

- * Factors contributing to or related to fertility regulation and family planning programs; familial, psychological, social, political and economic effects of family planning and contraception.
- * Antecedents, processes, and consequences (demographic, cultural, social, psychological, political, economic) of population structure, distribution, growth and change.
- * Family structure, sexual behaviour and the relationship between child-bearing patterns and child development.
- * Inter-relations between population variables and the process of social and economic development (housing, education, health, quality of the environment, etc).
- * Population policy, including the interaction of population variables and economic policies, policy implications of population distribution and movement with reference to both urban and rural settings, and the interaction of population variables and law.
- * Evaluation of on-going population education programs and/or development of knowledge-based population education program.

- * Incentive schemes — infrastructures, opportunities; overall economic and social development programs.

SELECTION CRITERIA

Selection will be made by a Program Committee of distinguished Southeast Asian scholars in the social sciences and population. The following factors will be considered in evaluating research proposals:

1. relevance of the proposed research to current issues of population in the particular countries of Southeast Asia;
2. its potential contribution to policy formation, program implementation, and problem solving;
3. adequacy of research design, including problem definition, method of procedure, proposed mode of analysis, and knowledge of literature;
4. feasibility of the project, including time requirement; budget; and availability, accessibility, and reliability of data;
5. Applicant's potential for further development.

DURATION AND AMOUNT OF AWARDS

Research awards will be made for a period of up to one year. In exceptional cases, requests for limited extension may be considered. The amount of an award will depend on location, type and size of the project, but the maximum should not exceed US\$7,500.

QUALIFICATIONS OF APPLICANTS

The Program is open to nationals of the following countries: Burma, Indonesia, Kampuchea, Laos, Malaysia, Philippines, Singapore, Thailand and Vietnam. Particular emphasis will be placed on attracting young social scientists in provincial areas.

Applications are invited from the following:

- * Graduate students in thesis programs
- * Faculty members
- * Staff members in appropriate governmental and other organizations.

Full-time commitment is preferable but applicants must at least be able to devote a substantial part of their time to the research project. Advisers may be provided, depending on the needs of applicants.