Preparation of Health Education Materials in the Field of Maternal and Infant Care for Use in Taiwan

Muriel Howe

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PREPARATION OF HEALTH EDUCATION MATERIALS IN THE FIELD OF MATERNAL AND INFANT CARE FOR USE IN TAIWAN

by

Muriel Howe

A Thesis Prepared in Partial Fulfillment of the Requirements for the Degree of Master of Science in the Field of Administration in Nursing

June, 1958
I certify that I have read this thesis and that in my opinion it is fully adequate, in scope and quality, as a Thesis for the degree of Master in Science.

Maxine Atteberry, Associate Professor of Nursing

Anne P. Martin, Associate Professor of Psychology

Ruth M. White, Instructor in Nursing
ACKNOWLEDGMENTS

The opportunity for further study which was made possible by the liberal policies of the Far Eastern Division of Seventh-day Adventists leaves me a debtor to the officers of the South China Island Union Mission, the Far Eastern Division, and the General Conference of Seventh-day Adventists, and to them I wish to express my sincere thanks for this privilege of a better preparation that will make my contribution more effective as I again take up my duties in the army of overseas nurses.

I am deeply indebted to D. Lois Burnett, Leatha Brooks, Edythe James and many others for the inspiration that started my feet wandering along the paths of higher learning.

Especially am I grateful to Maxine Atteberry, Anne Martin and Ruth White, who as members of my advisory committee have helped to keep my flag of purpose waving loftily above the fog of discouragement and the waves of despair encountered in the preparation of this Thesis.

To other teachers and members of the faculty of the College of Medical Evangelists I also wish to pass on a vote of heartfelt thanks.

Muriel Howe
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PART I

BODY OF THE THESIS
CHAPTER I

INTRODUCTION TO THE PROBLEM

I. THE PROBLEM

Purpose of the study. When planning for the medical care of the people of Taiwan the need for health education was a problem. Especially was this true in the area of maternal and infant care. The purpose of this study was to survey available health education pamphlets in the area of maternal and infant care in an endeavor to find ideas and information which could be used in the creation of health education pamphlets in this area for distribution to the mother's of Taiwan.

Statement of the problem. The problem was to create a health education booklet for health teaching in the area of maternal and infant care in Taiwan.

II. DEFINITIONS OF TERMS USED

Create. To originate, to prepare something new.

Booklet. A small book with a paper cover, the pages of which are held together by pasting or stapling.
III. NEED FOR THE STUDY

Health education materials formerly printed on the mainland of China were not acceptable in Taiwan due to political restrictions on printed materials entering the country.

Health education materials printed in Taiwan were limited in number and inadequate in scope.

Infant mortality and mortality rates are still high in Taiwan. Motherhood is the aim of all Taiwanese women therefore programs on topics of maternal and infant health were well received. Many requests were made each week for pamphlets to take home. Mothers felt that they would like printed reminders of the things they had learned. More important still was the need to show the other women of their households these new ideas so that they could gain cooperation in changing to new methods.

The faculty of the Taiwan Sanitarium School of Nursing planned wider student activity in the area of health education for maternal and infant care.

The felt need for pamphlets was not limited to the mothers and faculty. There were constant requests from students and the medical staff of the Taiwan Sanitarium for booklets which would facilitate their efforts in health education.

It was to meet these felt needs that this study was attempted.
Assumptions. Available health education pamphlets and leaflets in this area which were published in other countries would reveal some which could be adapted for use in Taiwan.

That health education would ensure better maternal and infant health for the patients of the Taiwan Sanitarium and Hospital.

An illustrated leaflet or pamphlet directed for the education of mothers is one effective method of health teaching hospital and clinic patients in the area of maternal and child care.

IV. METHOD OF THE STUDY

I. Survey in the following areas:

A. Vital statistics of diseases and causes of death in Taiwan were surveyed to find the health problems which affected maternal and infant health.

B. Medical facilities and availability of medical personnel on the Island were studied.

C. A study of practices effecting maternal and infant health which are due to the cultural factors was made.

D. Health education materials in the United States and India suitable for teaching maternal and infant care to lay people who
have completed grade school were surveyed.

E. Health education material in the area of maternal and infant care already available in Taiwan was surveyed.

II. Criteria for the development of health education materials for countries where mothers had completed grade school were set up.

III. Materials for use in Taiwan were prepared.

Limitations of the study. This study was limited to free or inexpensive materials published in the selected countries.

Materials that were adapted and created were limited to the needs of the Taiwanese women with an eighth standard education who would be attending prenatal classes.

Materials for infant care were limited to the first year of life.

The Booklet which was prepared cannot be tested at this time by the criteria set up for health education materials.
CHAPTER II

VITAL STATISTICS OF DISEASES AND CAUSES OF DEATH IN TAIWAN

The health needs in Taiwan present a different picture to that found in America. To get a good overall view the ten chief causes of death on the Island were studied. These are presented in Table I which is based on figures from the Annual Government Report of 1955, the latest report available to the writer.

Gastro-intestinal diseases, pneumonia, and tuberculosis have a definite influence on maternal and infant health in Taiwan. Other causes of death, not among the first ten, are also important in the maternal and infant health area and are discussed with the above three.

I. DISEASES

Gastro-intestinal diseases. It is little wonder that Gastro-intestinal disease ranks as killer number one in Taiwan when it is remembered that most of the vegetables were grown by using night soil as fertilizer and that sanitary facilities were, and still are, inadequate. Open drains along city streets serve as breeding places for the millions of flies that swarm over the food displayed in open markets. Amoebia, typhoid, the dysenteries, and parasites could be stressed. These gastro-intestinal diseases were
a menace especially to infant health.

**TABLE I**

**TEN CHIEF CAUSES OF DEATH IN TAIWAN**

<table>
<thead>
<tr>
<th>Causes</th>
<th>Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Gastro-intestinal Diseases (excluding diarrhea of the newborn)</td>
<td>13.3</td>
</tr>
<tr>
<td>2. Pneumonia</td>
<td>12.9</td>
</tr>
<tr>
<td>3. Senility without mention of psychosis, ill-defined and unknown causes</td>
<td>7.6</td>
</tr>
<tr>
<td>4. Tuberculosis of respiratory system</td>
<td>6.6</td>
</tr>
<tr>
<td>5. Vascular lesions affecting central nervous system</td>
<td>6.2</td>
</tr>
<tr>
<td>6. Other diseases of the heart</td>
<td>4.8</td>
</tr>
<tr>
<td>7. Other diseases peculiar to early infancy and immaturity unqualified</td>
<td>4.3</td>
</tr>
<tr>
<td>8. All other diseases classified as infective and parasitic</td>
<td>3.9</td>
</tr>
<tr>
<td>9. Malignant neoplasms, including neoplasms of Lymphotic and Haematopoietic tissue</td>
<td>3.9</td>
</tr>
<tr>
<td>10. Nephritis and nephrosis</td>
<td>3.3</td>
</tr>
</tbody>
</table>

Other diseases not listed in the top ten were responsible for the other "33.2 per cent of deaths on the island."¹

Pneumonia. Pneumonia, which has been conquered in most other countries where the free uses of penicillin is possible, was still killer number two in Taiwan where the economic status of the common man and his family made it difficult for them to pay for such medication. During the winter months which are cold and rainy many babies are admitted to hospital with this disease. The Taiwanese do not seek help from the western doctors until all else has failed. Coming to hospital already in a critical condition, there is often little that can be done to combat this disease in the young infant.

Tuberculosis. Family ties and the closeness of the family relationships made it hard to isolate the tuberculosis patient from the rest of the family. The great fear of making a person lose face prevented, to a great extent, the practice of separating eating utensils. Most of the Taiwanese families are not familiar with methods of birth control and many tuberculous women become pregnant. It is not uncommon for the physician to interrupt the pregnancy of the tuberculous mother. Should the pregnancy be allowed to go to term it is necessary to make the labor as easy as possible. With heavy sedation the infant's chances of survival are meager. The tuberculous mother is not usually

permitted to nurse her baby and this is a terrible burden to a Taiwanese family who can ill afford to purchase milk formulas. The baby becomes a nutrition problem.

Health education is gradually gaining ground and some day it is hoped that tuberculosis will be overcome. In 1954 deaths due to tuberculosis were listed as 7.0 per cent of the total deaths, while in 1955 it had been reduced to 6.6 per cent which shows some gains.³

The problem of tuberculosis was attacked by the government program, with the joint assistance of UNICEF and WHO, which sponsored island wide P.P.D. testing and B.C.G. vaccination of P.P.D. negative reactors for babies and others up to the age of twenty years.

This program was launched in 1951 and to date, 1956, all elementary school students have been tested and a little under a million of them were given B.C.G. vaccinations.⁴

Malaria. While Malaria is not listed as one of the ten chief causes of death it is very costly to the island people.

It is estimated that ten per cent of the population in Taiwan have, or have had, Malaria. About 800,000 suffer from it yearly. This costs 5,256 people in Kao-Hsu alone the equivalent of $17,500. U.S. within four months for treatments, loss of labor, doctor's fees, and relevant expenses a sum equal to nearly five and a half times the cost per person for a

---

³ Han Lin-Wu, Taiwan Today, Taiwan: Hwa Kuo Publishing Company, 1956, p. 43.
⁴ Ibid.
yearly spraying with D.D.T. which costs $0.175 per person protected.\textsuperscript{5}

In 1952 the World Health Organization started an island-wide malaria eradication program with marked success. There were 144 malaria prevention stations subsidized by the Joint Commission on Rural Reconstruction in operation in 1956.\textsuperscript{6} Under the direction of the Ministry for Health, Taiwan also has a "Provincial Malaria Research Institute which was started in 1949."\textsuperscript{7}

Nevertheless, malaria is still a health problem to be carefully considered in relation to maternal health. During pregnancy the blood is more dilute and the hemoglobin ratio is decreased. When a mother has had repeated attacks of malaria which causes anemia, the already decreased hemoglobin ratio is a condition which becomes aggravated and is a pre-disposing cause of post-partum hemorrhage.

Venereal Diseases. The top ten killers did not include syphilis or gonorrhea, yet these two diseases greatly effect maternal and infant health in Taiwan.

In a pilot study it was found that of the mothers participating 49 per cent were still in pregnancy when the figures were made up. The remaining 51 per cent had

\textsuperscript{6}Han Lin-Wu, \textit{loc. cit.}, p. 47.
\textsuperscript{7}\textit{Ibid.}
delivered and of them 13.42 per cent had aborted. Figures are not available as to the number of abortions which were due to syphilis.

Sterility is the most tragic fate for a Taiwanese woman. It has been the observation of the writer that gonorrhea is one of the chief causes of sterility in the mothers of Taiwan.

Venereal diseases listed as being present in Taiwan were syphilis, gonorrhea, lymphogranuloma, venereum, gronuloma inquinale and chancroid. They were poorly controlled.

Under Japanese rule the brothel system of prostitution flourished and although examinations for gonorrheal disease was required, the method of examination was extremely unsatisfactory; prostitutes were examined weekly, but were given special douches prior to examination and then reported to be free of infection.

A venereal control project was started from early 1954 to December, 1956, total number of persons examined by health stations for serological test was 922,522 of which 59,232 were positive reactors. Of these 29,375 were adequately treated free of charge. That the serological positive rate from mass examinations is declining can be

---


seen in the following figures:

<table>
<thead>
<tr>
<th>Month</th>
<th>Year</th>
<th>Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>February 1954</td>
<td>13.4</td>
<td></td>
</tr>
<tr>
<td>February 1955</td>
<td>11.3</td>
<td></td>
</tr>
<tr>
<td>February 1956</td>
<td>5.9</td>
<td></td>
</tr>
<tr>
<td>July-December 1956</td>
<td>4.7</td>
<td></td>
</tr>
</tbody>
</table>

This shows marked improvement in this problem but venereal disease was still an important factor to be considered in preparing maternal and infant care materials.

Communicable Diseases. The Ministry for Health has carried on a very extensive program for the prevention of such diseases as cholera which has been extinct since 1947. Plague has not been seen since June 1947. Smallpox has been reduced to sporadic cases since 1948. Typhoid, paratyphoid and diphtheria are still present on the island but are being reduced considerably.

Diseases peculiar to early infancy and immaturity are unqualified as seen in Table I. This indicates that as yet Taiwan has not been successful in overcoming many of the diseases of early childhood. It has been the experience of the writer that many of the lives of infants are lost because they are not brought to the hospital for care until they are already beyond the point where help is possible.

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10 Health Officers, "Resume of Medical and Health Program in Taiwan, Free China," Health Department, March, 1957, p.1. (Mimeographed.)
The women of Taiwan are still steeped in superstition and many do not trust the medicine of the west.

The government of Taiwan is aware of a great need for health education as an avenue through which the people of Taiwan can be brought to accept the assistance available through western medical practices.

Taiwan is making rapid strides toward solving its own health problems as can be seen from the figures in Table II which were stated in the Annual Report of the Taiwan Provincial Health Administration in 1955.

Taiwan, with its population of 10,000,000 people, had in 1957 only 4,795 beds for patients with all diseases. This would make a ratio of approximately 1:2,086 population which was entirely inadequate to care for the ill. Table III indicates how these beds are distributed.

When one considered that only one hundred beds had been set aside for the special use of obstetrical and gynecological cases the picture was grave. This pointed to the fact that in Taiwan most of the deliveries were done in the home. This emphasized the need for wider efforts in health education.

Awareness of these facts made the task of creating health education materials for this field more urgent.
### Table II

**Health Facilities in Taiwan**

<table>
<thead>
<tr>
<th></th>
<th>Provincial</th>
<th>Municipal</th>
<th>Municipal County</th>
<th>Others</th>
</tr>
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<tbody>
<tr>
<td>Health Administration</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hospitals</td>
<td>12</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Branch Hospitals</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tuberculosis Sanatoriums</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Insane Asylum</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Leprosarium</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maternity and Childrens' Hosp.</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Taipei Health Center</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hygiene Laboratories</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Malaria Research Institute</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quarantine Stations</td>
<td></td>
<td></td>
<td></td>
<td>13</td>
</tr>
<tr>
<td>Health Centers</td>
<td></td>
<td></td>
<td></td>
<td>22</td>
</tr>
<tr>
<td>Health Stations</td>
<td></td>
<td></td>
<td></td>
<td>355</td>
</tr>
<tr>
<td>Special Health Stations for Salt Workers</td>
<td></td>
<td></td>
<td></td>
<td>12</td>
</tr>
<tr>
<td>Hospitals</td>
<td></td>
<td></td>
<td></td>
<td>8</td>
</tr>
<tr>
<td>Maternity Hospital</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Infectious Disease Hospital</td>
<td>7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tuberculosis Center</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Childrens' Hospital</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aboriginal Health Sub-stations</td>
<td></td>
<td></td>
<td></td>
<td>140</td>
</tr>
</tbody>
</table>

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**Editors, Annual Report by Taiwan Provincial Health Administration, Taipei, Taiwan: Republic of China, 1955, p. 2. (Chinese.)**
FIGURE 1
DISTRIBUTION MAP OF HEALTH INSTITUTIONS IN TAIWAN

No.

1. PROVINCIAL HEALTH ADMINISTRATION
2. PROVINCIAL HOSPITALS
3. PROVINCIAL BRANCH HOSPITALS
4. PROVINCIAL T.B. SANATORIUM
5. PROVINCIAL INSANE ASYLUM
6. PROVINCIAL LEPROSARIUM
7. PROVINCIAL MATERNITY & CHILDREN HOSPITAL
8. PROVINCIAL TAIPEI HEALTH CENTER
9. PROVINCIAL HYGIENE LABORATORIES
10. PROVINCIAL MALARIA RESEARCH INSTITUTE
11. QUARANTINE STATIONS
### TABLE III
BED CAPACITY OF HOSPITALS IN TAIWAN

<table>
<thead>
<tr>
<th>Hospitals</th>
<th>Number of beds</th>
</tr>
</thead>
<tbody>
<tr>
<td>University Hospital (Teaching)</td>
<td>545</td>
</tr>
<tr>
<td>Provincial Hospitals</td>
<td>1,300</td>
</tr>
<tr>
<td>Mission Hospital</td>
<td>370</td>
</tr>
<tr>
<td>Small Private Hospitals</td>
<td>500</td>
</tr>
<tr>
<td>Tuberculosis Hospitals</td>
<td>580</td>
</tr>
<tr>
<td>Mental Hospitals</td>
<td>450</td>
</tr>
<tr>
<td>Obstetrical and Gynecology Hospitals</td>
<td>100</td>
</tr>
<tr>
<td><strong>Total number of beds</strong></td>
<td><strong>3,795</strong></td>
</tr>
</tbody>
</table>

Note: In addition there are two Leprosaria with inmates totaling 1,000.

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12 Taken from a "Resume of Medical and Health Program in Taiwan, Free China," Taipei, Taiwan, March 1, 1957, p. 1
Obtained from the Department of Health, Taipei, Taiwan. ( Mimeographed.)
II. TRAINED PERSONNEL

**Medical Personnel.** In the latest report from the Ministry for Health it was stated that:

There are three medical schools; the National Taiwan University, the Kao Hsuing Medical College for civilians and the (NDMC) National Defense Medical Center.\(^{13}\)

Taiwan had 6,012 doctors on the island making a ratio of approximately 1:1,637 population.\(^{14}\) It is interesting to note that there are many more doctors than hospital beds which indicates that many patients are treated by physicians in private practice. This is in keeping with Chinese cultural patterns, for the people are still very reluctant to enter hospitals of any kind and most patients will not consider being admitted to a hospital until they have tried all other methods without success. This affects the mortality rates in hospitals which further frightens the average Taiwanese.

The Ministry for Health also reported that there were 839 registered dentists on the island.

**Nursing Personnel.** Trained nursing personnel were too few in number to care for the number of in-patients in most institutions. In 1957 there were 2,596 registered nurses on the island. This gives a ratio of approximately 3:3,986 population.\(^{15}\)

\(^{13}\) Ibid.

\(^{14}\) Ibid.

\(^{15}\) Ibid.
Many of these nurses are women of great ability. Nurse leaders are mostly women who received basic nursing education in the collegiate program in Peking prior to Communist domination. When they arrived in Taiwan several years ago nursing was entirely in the hands of the doctors and it was a colossal task to organize the nurses’ association and to establish a good educational program for nurses. There is now a nurse representative in the Health Department of the Government.

In Taiwan there are now two types of nursing schools. Vocational schools for which students must have completed nine grades of education. Recently with the help of the team from WHO a collegiate program was started in connection with the Taiwan University School of Nursing. This speaks well for the insight shown by nurse educators in Taiwan.

The military school of nursing offers two types of courses. For one the admission requirements is nine years of education while the other is twelve years. Both courses are of four years duration and require in addition six months of preliminary military training. All graduates are required to serve two years in the army hospitals of which there are sixteen in Taiwan.\(^1\)

The provincial school of nursing includes an extra year for midwifery. This is a very good program.

There are a total of six schools of nursing in Taiwan and this strengthens the dreams for better nursing service in the future.

**Registered Midwives.** The Ministry for Health reported in 1957 that there were 1,201 registered midwives. 17

There are two in-service training programs where nurses may gain some experience in midwifery.

In 1953 a program for training supervisors and teachers of midwifery was started in Taiching and Vera Watson, an English nurse connected with WHO, reported that there were two counterparts assisting in the program. Ten selected supervisors and teachers were given an intensive four months course in teaching and supervising in the field of midwifery. There was also a two to three months program for nurses at staff levels and students of nursing were given a one month course at the center as places were available. 18 This program has done much for the mothers and infants of Taiwan.

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17 Resume of Medical and Health Program, *op. cit.*, p. 3.
CHAPTER III

CULTURAL PATTERN EFFECTING MATERNAL AND INFANT HEALTH

Prior to preparing health education materials for the mothers of Taiwan it was necessary to know something of the social and cultural patterns of the Taiwanese so that a clear picture of the needs might be formulated. The historical background of Taiwan shows that it is essentially a Chinese influence.

I. SOCIO-ECONOMIC PATTERNS

The status of women. It is strange but true that:
"The original Chinese social system was a matriarchal system."\(^{19}\) It was only with the coming of confucianism that women began to be subjected. "The progressive subjection of women followed pace by pace the increasing development of confucianism."\(^{20}\)

It stood for obedience, for recognition of authority in a family as in a state, and the division of labor between man's duties outside and women's duties in the home. It encouraged the womanly woman, and naturally taught such


\(^{20}\)Ibid.
feminine virtues as quietness, obedience, good manners, personal neatness, industry, ability in cooking and spinning, respect for the husband's parents, kindness to the husband's brothers, courtesy to the husband's friends and all those virtues desirable from the male point of view.  

Lin Yu-Tang says that "Confucianism saw that this sexual differentiation was necessary for social harmony." and being a man Lin Yu-Tang seems to indicate that this idea started by Confucius was right. He adds: To the observer that women rule in the home is very self-evident. To every girl born in China, a home of her own is provided. Chinese society insists that even slave girls should be married off at an early age. Marriage is women's inalienable right in China, and with the enjoyment of that right, they have the best weapon for power, as wife and as mother. 

Marriage in China is not always easy. One must remember that marriage is not an individual affair. A man does not marry a wife but marries a daughter-in-law, and it often happens that the young wife is under the complete domination of the mother-in-law.

To the Chinese male mind the idea of a woman representing Liberty, Justice, and Peace is foreign. He does not understand the man who puts woman on a pedestal. To him she

21 Ibid., p. 139.
22 Ibid.
23 Ibid., p. 144.
is but a woman and her greatest achievement is to be a
"helpful wife and a wise mother."  

The phrases "a helpful wife and a wise mother" is used very freely in China and is held up to ridicule by modern Chinese women who desire above all else "equality," "independence," "self-expression," and who regard wives and mothers as dependent on men. 24

The Chinese believes that a mother fits in with her position, a very highly honored position, and in the family. To bring a child into the world and lead him and guide him with his mother's wisdom into manhood is enough work for any human being in a sane-minded society. Why she should be regarded as "dependent" on man either socially or economically, because she can do this noble work, and do it better than man, is a notion that is difficult for the Chinese male mind to grasp. 25

In Chinese society it is believed that of all the rights of women, the greatest is to be a mother. Confucius spoke of the ideal society as the one in which there were "no unmarried men or women," and this, in China, has been achieved through a different conception of romance and marriage. Even today in most homes in Taiwan marriage is arranged through a middle man or woman. This is the

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24 Ibid., p. 149.
25 Ibid., p. 151.
26 Ibid.
Among modern youth there is much more freedom of choice but even though they may choose their own wife or husband the actual arrangements are still, to a great extent, made through a third person.

The writer recalls being severely censored by the Chinese members of the union committee and a graduating class of nurses in Chungking because of failure to make marriage arrangements for unattached nurses. They reasoned that while these students were under the jurisdiction of this director of nursing education it was her responsibility to see that these new graduates were given opportunities for marriage. This emphasized the Chinese attitude which is also the Taiwanese attitude to marriage and motherhood. Without children to worship at the ancestral alter, a woman cannot win the approval of her group.

Religion and the philosophy prevailing on the island greatly effect her standing.

Religion and philosophy. In Taiwan as on the mainland of China Confucianism, Buddhism and Taoism were practiced.

The three share several doctrines in common; all teach the original goodness of man, and all hold that man can attain salvation through the realization of his essential nature.27

Mencius wrote about the links in the chain that bind the people to the three religions. It is their belief that the tendency of man's nature to good is like the tendency of water to flow downwards. There are none but have this tendency to good, just as all water flows downward. And, if men become evil, that is not the fault of their original endowment. The Chinese believe the sense of mercy is found in all men; the sense of shame is found in all men; the sense of respect is found in all men; the sense of right and wrong is found in all men and that charity, righteousness, propriety and moral consciousness are not things that are drilled into us. In their philosophy each man has them originally.  

The doctrines of these three religions have greatly influenced cultural patterns in China but centuries before these religions were born a reverence for the progenitors of the race formed the core of Chinese religious life. "Ancestral shrines existed as early as the Shang dynasty (1776-1122 B.C.)." Today this is the most important belief which effects attitudes toward motherhood in Taiwan. In Chinese eyes the greatest sin of western society is the large number of unmarried women, who, through no fault of their own except the foolish belief in such a real

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28 Ibid.
29 Ibid.
being as Prince Charming, are unable to express themselves. Many of them are great as teachers or actresses, but they would be still greater as mothers.

Motherhood is the ideal for all women in Taiwan. Mothers come from many walks of life. There are the women of the wealthy households who stay in the home. They are educated and beautiful women. Then there are the millions of women who work beside their menfolk in the fields, planting, weeding, harvesting, cutting those vast crops of rice a few stalks at a time. Spreading the grain like a golden carpet along the highways to dry, they watch for the wheels of carts, bicycles and cars to separate the grain from the husks, while the breeze of their passing helps to blow away the chaff; women cooking on small charcoal fires, carrying their water from the nearby wells or streams in which the water buffalo cools off after the hard days work; women, doing the family wash in the stream chatting with their neighbors as they dip up water for cooking; the women of the crowded city streets; all must be reached if the future needs of mothers and infants of Taiwan are to be met.

These hard-working women are happy in their children but hard is the lot of one who does not bear children.

The conviction that no person is an isolated entity but an indispensable link in an endless chain of humanity is the binding force underlying the solidity of the Chinese family.
Chinese believe that no man's home or property, not even his body, is his exclusive possession, but belongs to his ancestors as well. The fortunes of the living and the dead, moreover are inextricably intertwined. When an individual dies, he may become a good spirit, beneficial and helpful to his heirs; but it is also possible that he may join the army of demons.\(^{30}\)

This philosophy influences the health patterns of the people on the island. The people are careful to worship at the ancestral altar to ensure the co-operation of the good spirits. More important is the veneration given to the older members of the family whom it is expected will pass first into the spirit world. Their word, in the old style Chinese family, is law. Where the older generation is steeped in old superstitions it is hard to introduce new health patterns.

Taiwan is essentially an agricultural country and a vast majority of mothers needing care are to be found in the farming areas. To understand something of the way of life practiced by this group of mothers it was necessary to know something of the agricultural methods used on the island.

**Agriculture.** Taiwan is an agricultural country. Mountains bisect Formosa lengthwise. The east coast has

\(^{30}\text{Ibid.}\)
tremendous cliffs that drop down into the Pacific, on the west side of the island fertile plains roll gently down to the Formosa Strait.

Farmers make up half of Formosa's population. Many hold title to their lands. An installment system permits them to pay as they till. Three acres is the average holding. Favorable climate, irrigation, and use of fertilizer allows two or three crops yearly. Watered fields of rice, the island's major crop, terrace Formosa's fertile lowlands. Bumper crops in 1954 produced a record 1,873,910 tons.31

Should you visit a typical farm house, as you entered the gate in the enclosing wall you would probably find a penned sow. The tamped clay floor of the courtyard serves as the playground of scores of children. Formosa's birth rate stands among the worlds highest; the island swarms with children.32 The farmers of Taiwan are very clannish; when a son marries it is common practice for a room to be added to the farmhouse where he brings his bride, on many farms are to be found three and four generations.33

The homes are mostly built of tamped mud or of sun dried brick with a tile or thatch roof. Rooms for sleeping comprise a raised platform backed against the mud brick walls and covered with straw mats, called To-Ta-Mi, piles of cotton quilts folded neatly await the tired members of

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32 Simpich, loc. cit., p. 341.
33 Ibid., p. 332.
the farming family and as they stretch weary limbs on the
To-Ta-Mi they wrap themselves closely in these cotton
quilts. There is no running water or electrical fixtures
to make lighter the daily tasks of the farmer's wife.

Farm implements hang on the walls and from the
rafters of the farm house. "No small farmer has a tractor.
Power is provided by the ever present water buffalo. To
shift its gears, the farmer flips the reins or tweaks its
dangling tail."

Taiwanese farmers blend the old world and the new.
They use ammonium sulfate and night soil (term used for
human excreta which is saved in wooden buckets, or wooden
vats on wheels), as fertilizer, the carrying pole and
American trucks for transportation.

Women assist in the planting, weeding and harvest-
ing of sugar cane. The island produces as much as 970,000
tons of sugar annually. Some of which they export. In
addition to rice and sugar cane, island farmers raise
sweet potatoes, peanuts, tea, bananas, pineapples, citrus
fruits and many vegetables. Recently wheat, soy beans,
jute, and tobacco have become important crops.

Fishing and fish farming are also a source of income

34 Ibid., p. 333.
35 Ibid.
36 Ibid.
37 Ibid., p. 361.
and of food supply for the people of Formosa. It is a common sight to see small fish on mats along the streets of the fishing villages near the sea where they are put to dry.

In Formosa Strait just west of the Pescadores, a warm current moving from the south meets a cold current moving from the East China Sea. These waters harbor more than 300 varieties of fish.

The average annual catch totals about 15,000 tons. It includes red snapper, sardine, shark, and bonite.  

The fishermen are excellent boatmen but they are still very superstitious and most of the fishing boats have a good luck insignia on the vessel's bow. "The symbolic eye painted on the bow enables the craft to see its way through shallow reefs and other dangers."

Most of the people from the mainland have flocked to the cities where there is serious overcrowding. As many as six and seven people are to be found living in one or two rooms in some parts of the city and this is not conducive to good health habits.

Educational standards prevailing among the Taiwanese people also affect the health habits of the people. Therefore a brief study of educational practices was made.

**Education.** The Japanese are very educationally minded and when they handed over rule of the island in 1945

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"the latest statistics under the Japanese showed that a little over 71 per cent of the native school-age children were in school." 39

The Nationalist Government has continued this good work and today, "the latest statistics show that 90.83 per cent of school-age children are in schools." 40

Formosans take pride in its 65 per cent literacy rate, high by Asian standards. Total enrollment in the island's 1,500 odd schools, including one university and eight colleges, is estimated at more than 1,250,000. Military training is compulsory for all young men after graduation from high school or college. 41

Many students of the Taiwan Sanitarium School of Nursing speak Taiwanese, Japanese, and Mandarin fluently, and yet know little of hygenic practices. When they complete their nursing education they also have a knowledge of English. Many of the men who are doing their compulsory military training for which they receive very small remuneration also speak several languages. Simpich, in speaking of one such draftee says, "I saw Wang last night before he was to report as a draftee replacement for


40 Ibid.

Chiang's 600,000-man army. With some 70,000 other Taiwanese, he would serve at least eighteen months—at a dollar a month. 42

These hundreds of thousands of military trainees have families who are given an allowance of rice, oil, and salt. They find it impossible to live on a healthy adequate diet, or to pay for medical care when ill, on such a salary. This increases the health problems on Taiwan.

II. CULTURAL PATTERNS

Customs related to maternal and infant health. The old style doctor, still to be found on Taiwan, was a curious character who passed no examinations and required no qualifications. Maybe he had failed in business and so hung out his name plate and set up as a physician. He required no stock in trade, no instruments. The thing of greatest importance was to know the different pulses of the human system of which this Chinese doctor learned to count the number.

The pulse at each wrist is felt, then he divides the number into three, which according to the light or heavy character of the pressure, indicates a different organ of the body, and by feeling the pulses, can tell the

status of a dozen real or imaginary organs. 43

On the streets of Taiwan in the old style Chinese drug store are still to be seen the ingredients for the nauseous compounds that are prepared, ingredients such as snake skins, lizards, fossils, bones, moths, oyster shells, and dozens of different kinds of herbs are all on display.

This practice of setting up a name plate without any training has been carried over into midwifery. While the number of these self-trained midwives is not known it is interesting to note that out of 413,036 births reported in 1956, (birth-rate of 44.09 per thousand), 53,858 or 13 per cent were delivered by the personnel of the health stations and hospitals. And of these mothers only 20,420 had had any ante-natal examinations. 44 This means that 87 per cent of the deliveries were done by private physicians, untrained midwives and members of the family.

Many of these untrained midwives through long years of practice have an excellent knowledge of the mechanism of labor but have no ideas of aseptic techniques.

Motherhood is the aim of all Chinese women and there are many customs connected with childbirth.

43 J. Dyer Ball, Things Chinese; or Notes Connected with China. Shanghai: Kelly and Walsh, 1925, p. 187.

44 Editors, Rural Health, Chinese-American Joint Commission on Rural Reconstruction, General Report #8, 1957, p. 34.
It is customary for the bride to send branches of trees or plants to the groom, such as pineapple, peaches, etc., which signify that she will be as fruitful as a tree, and as the tree produces fruit and seed so will she produce sons and grandsons. She thus indicates that she accepts her responsibility of producing children.

The mother wears a wide black skirt at delivery (at home) and this is prepared as part of the dowry at marriage to indicate that the parental house expects her, the daughter, to bear many children—male children. These wide black skirts are often dusty and are not conducive to sterile technique.

At delivery, incense is burned to the ancestors so that they will know that there is new posterity. The ancestors are asked to see that the mother has a safe delivery.45

Many mothers will not eat fruit and vegetables after delivery, but eat fish and meat only. For a month after delivery hot foods as opposed to cold foods are eaten. This means that they concentrate on protein so there is much to be said for the custom. Some mothers however neglect both vegetables and protein. Some cannot afford the protein.

Mothers are not often visited on the fourth day after delivery because the fourth day is supposed to be unlucky.

45 Vera Watson, loc. cit.
The character for "four" has the same sound as the one for "death" and so it is considered bad form to visit a mother on the fourth day. This is a good day for a demonstration bath for the baby because there will be no interruption.

During pregnancy some mothers drink a concoction of thirteen different plants that have been cooked together this is to keep the baby quiet in the uterus and to regulate the body processes. After taking this Chinese medicine a young mother is not permitted to take western medicines and this may be of grave danger in an emergency.

To relieve menstrual and post-partum pains, or for any gynecological discomfort, half an ounce of Myrrh; four ounces of Rice Flour; half an ounce of Frankinsense; mixed with wine and applied externally will be ordered by the old style Chinese doctor. This is considered a sure cure. The psychological effects are good if no other results are obtained.

To assist the mother to increase her milk supply the Chinese doctor will recommend swines flesh or fermented rice, for to the Chinese, these are sure ways to increase mother's milk. The child is breast fed, many

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46 Ibid.
47 Ibid.
times to the age of four and five years of age. This custom may be due to superstitions as well as to economy.

Customs related to infant care are legion, a few only of which the writer will discuss.

There is a special ritual for clothing the baby. When born it is wrapped in old cloth no matter how rich the parents. On the third day the baby has its first bath and is dressed in new clothes.

On the third day after delivery a small stone, a duck egg and a chicken's egg are put into the bath water of the baby. The stone is a symbol of health and strength, the duck's egg is a symbol of growing plump, while the chicken's egg is a symbol of beauty. The hospital has a rule that no visitors are permitted in the nursery, with the result that as this custom can not be carried out on the third day, this rule prevents some mothers from having their babies in the hospital.

On the twelfth day it is customary to cut the baby's hair. At the same time red eggs are given to neighbors and friends to indicate that a new member has been added to the family. The western doctor and nurse must be aware of this custom and receive the red eggs with graciousness.

At one month after delivery the baby is said to

\[49\] Vera Watson, *loc. cit.*
be one year old. Should the Chinese New Year arrive even one day after this birthday another year is added.

Rice cakes are offered to the Goddess called "Seventh Mother," and to her the mother prays while she burns incense asking that the baby be protected and kept from hunger.

Little boys are considered of greater worth than girls, and sometimes if there is only one boy the mother will arrange for his ears to be pierced and ear-rings be worn in an attempt to hoodwink the spirits into thinking that he is a worthless girl and not worth harming. 51

In the modern Chinese home young Chinese mothers are trying to forget the old superstitions but in the care of her sons she must have many struggles with her mother-in-law if she is to bring up her child hygienically. She must watch carefully so that she can forestall the efforts of the older woman as she chews up food and then tries to pass it from her mouth to that of her little grandchild. Gradually new methods are coming to Taiwan.

These old women have faith in their own traditional ways and especially is this true in the event of the illness of an all-important grandson. She has her own home remedies. Hoffsommer indicates that this is true in many rural

50 Ibid.

51 Ibid.
areas. He says:

More modern medical care for rural people is in part a problem of breaking down attitudes of too great reliance on home remedies and self medication. Health reforms involve not only the process of providing new knowledge and facilities but also the breaking down of out-dated cultural patterns and attitudes.\textsuperscript{52}

The breaking down of out-dated cultural patterns in Taiwan can best be done by the nationals themselves.

While old customs still prevail among millions of older people the younger generation are awake to the advances made especially in western medicine. Today the island has thousands of western trained doctors who are slowly taking the places of the old unqualified men.

The leaders of the government are aware of the need for men and women educated in modern methods of medicine. It is to meet this growing awareness of need, to keep pace with the rapid advance in nursing education in government controlled schools, and to meet the needs of students of nursing for health educational materials, which they can use for presentation to the mothers of Taiwan, that this Thesis was presented.

The awareness of a felt need in the area of maternal and infant care is not limited to the leaders of Free China, they but share the belief of the delegates to the International Health Conference of 1946

The concern for the healthy development of the child toward world citizenship was in the minds of the delegates to the International Health Conference when in July 1946 they decided to include in the constitution of World Health Organization the principle that "healthy development of the child is of basic importance. The ability to live harmoniously in a changing total environment is essential to such development."53

The Taiwanese realize that a country is only as strong as its people. They look anxiously to those who can help them to become physically strong.

It is the hope of the writer that the material prepared in this Thesis will provide simple teaching materials that will help to make strong, the Taiwanese people of tomorrow. Thus making them better able to meet life's perplexing problems.

Maternal and infant health in Taiwan. The problems relating to maternal health are a little different in sequence to the problems in the United States where the greatest problems are toxemia, hemorrhage and puerperal infection in this order.

Abortion ranks as the greatest problem in maternal health in Taiwan.

In Taiwan, the lowered rate of hemoglobin which is the result of repeated malarial infection is a predisposing factor which brings post-partum hemorrhage into

second place as a menace to maternal health.

Figures for Taiwan are not available but those from Hong Kong are comparable and of interest. Out of 9,121 cases of complications of pregnancy reported in 1957, the greatest number of cases were 2,367 abortions. While 734 cases were of hemorrhage during pregnancy and childbirth. Toxemia of pregnancy was third on the list with 653 cases. Other complications of pregnancy, childbirth and the puerperium were listed as amounting to 5,367 cases. 54

These figures were for cases treated in government or government assisted hospitals in Hong Kong. They are comparable to the situation, as observed by the writer, in Taiwan. If the figures could be gathered for all pregnant women in either of these areas, the picture may be different but the number of abortions and other complications which are never reported to the health authorities are legion.

In Taiwan puerperal sepsis is high but the amazing thing is that it is not even higher in a country where so many untrained midwives having little or no knowledge of aseptic techniques do such a large percentage of the deliveries.

Problem of infant health in Taiwan is mainly that

of the gastro-intestinal tract. Open drains, open toilets, and the swarms of flies that alight on the food in the open markets are the greatest menace to infant health. As has been previously mentioned grandmothers will take food into their own mouths, chew it until it is soft, then pass it from their own mouths to that of their grandchildren. Very rarely do they wash their hands before feeding children.

Mothers, too, unless instructed do not wash their own hands and clean off the nipple before putting the infant to the breast. These practices open the doors to gastro-intestinal infection.

Prematurity ranks high in the cause of death among infants in Taiwan. Many premature babies are born in the homes and are brought to the hospitals or health centers too late for adequate care to be effective.

The Taiwan Government had long been aware of the need for a strong maternal and child program. In 1952 they made a request to WHO for help in starting a strong maternal and child health project. This request was granted and a program was started in 1952. The full maternal and child project (MCH Project) in Taiwan was a triple sponsored program being sponsored by the Taiwan Provincial Health Administration, the United Nations International Children's Emergency Fund (UNICEF) and the World Health Organization (WHO).
1. The Government undertook to (a) provide a parallel team, consisting of the best qualified personnel available to work in close contact with WHO personnel and (b) to meet certain expenses of the project — such as building and equipment for new centers — administrative expenses including travel within the country, maintenance of jeeps and drivers and clerical workers, etc.

2. The World Health Organization undertook to provide the following personnel: one doctor, one public health nurse and one nurse-midwife. The senior WHO team member advises the Commissioner of Health on the progress of the project and all members of the international team work in close conjunction with their respective counterparts on the national team.

3. UNICEF provided equipment for the setting up of an MCH unit in the Taichung Hospital, provided vehicles for the transportation of administrative staff and trainees in the project and also, certain equipment for the health stations.55

The aim of this project is to promote POSITIVE HEALTH in the mother and child so that the health of the whole family and all the people in Taiwan is improved.56

Pirrie says that in this program counterparts were assigned to doctors, nurses and health educators.57 This was the most outstanding characteristic of this program. The education and experience procured by the National Team was invaluable to the people of Taiwan.


Table IV gives an idea of the activities of the Maternal and Child Health Center in Taichung in relation to refresher courses and special instruction in health education for maternal and child health.

The Chinese-American Joint Commission on Rural Reconstruction also appropriated funds for the MCH project and personnel from this organization also worked in promoting health education in the area of maternal and infant care.

The greatest contribution made by JCRR is that of sanitation. They have started a fertilizer plant and hope that in the not too distant future, night soil will give place to prepared fertilizers. They have assisted in the program for bringing uncontaminated water and now "there are 100 water works providing safe water to 26 per cent of the entire population of Taiwan." 58

This is but a small percentage of the population but at least it is a beginning. In addition a public latrines-wells-graveyard program has been started. "During the year 1956, construction of 1000 shallow wells, 500 deep wells, and 80 public latrines were in progress." 59

This combined attack on the health problems of Taiwan greatly effected the infant mortality rates which

58 Committee, "Resume of Medical and Health Program in Taiwan, Free China," Taipei, Taiwan, March 1, 1958, p. 2. (Mimeographed from Ministry of Health).

59 Ibid.
can be seen from the figures in Table V.

**TABLE IV**

MATERNAL AND CHILD HEALTH CENTER TRAINING ACTIVITIES 1953-1956*

<table>
<thead>
<tr>
<th>Type of trainees</th>
<th>Duration of refresher course on MCH (weeks)</th>
<th>Number completing the course 1953-1955</th>
<th>Number completing the course 1955</th>
<th>Number completing the course 1956</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical officers</td>
<td>4</td>
<td>69</td>
<td>29</td>
<td>98</td>
<td></td>
</tr>
<tr>
<td>Nurse-Midwives at staff level</td>
<td>6</td>
<td>114</td>
<td>89</td>
<td>203</td>
<td></td>
</tr>
<tr>
<td>Nursing supervisors</td>
<td>4</td>
<td>16</td>
<td>7</td>
<td>23</td>
<td></td>
</tr>
<tr>
<td>Student Nurses</td>
<td>4</td>
<td>77</td>
<td>42</td>
<td>119</td>
<td></td>
</tr>
<tr>
<td>Private practicing midwives</td>
<td>4</td>
<td>95</td>
<td>95</td>
<td>95</td>
<td></td>
</tr>
</tbody>
</table>


**TABLE V**

INFANT MORTALITY RATE FOR TAIWAN*

<table>
<thead>
<tr>
<th>Year</th>
<th>Rate per 1000</th>
</tr>
</thead>
<tbody>
<tr>
<td>1930</td>
<td>155.36</td>
</tr>
<tr>
<td>1948</td>
<td>77.55</td>
</tr>
<tr>
<td>1949</td>
<td>47.86</td>
</tr>
<tr>
<td>1950</td>
<td>35.16</td>
</tr>
<tr>
<td>1951</td>
<td>34.27</td>
</tr>
<tr>
<td>1952</td>
<td>35.27</td>
</tr>
<tr>
<td>1953</td>
<td>33.67</td>
</tr>
<tr>
<td>1954</td>
<td>30.11</td>
</tr>
</tbody>
</table>

*Figures taken from Han-Lih-Wu, Taiwan Today, Taipei, Taiwan: Huo Kuo Publishing Co., 1956, p. 49.*
During the period 1940-1955 California reduced its infant mortality rate from 39.2 to 26.5 per cent, which indicates that Taiwan health authorities accomplished a great deal when they reduced the rate from 155.36 in 1930 to 30.11 in 1954.

This decline in the infant mortality rate was due not only to the increase in personnel trained for this specialized program but also as a result of the excellent foresight by the Health Administration in setting up 360 health stations throughout the island. The figures given look wonderful but there are many births, abortions, and deaths that are not registered which might change this picture if a complete record were available.

In America 19.24 per cent of the infant mortality rate occurs in the first twenty-eight days of life, and only 7.35 per cent from one to eleven months. If statistics were available from Taiwan the proportions might be different.

The Provincial Health Administration looks with great favor on the Maternal and Child Health Center and in 1955-56 appropriated NT $120,000 (N.T. = National Taiwan dollars), to

60 Winea Simpson, "Prematurity, A Medical and Economic Problem," San Bernardino County Health Department, Aimed for Health, May, 1956, (Mimeographed.)

help pay the expenses of the center. 62

The center's nursing supervisors gave 1,148 working
days of supervision to 97 of the 147 health stations in
their area. 63

The general lowering of infant mortality rates result
in a substantial increase in the population. In view of the
high birth rate of 44.09 per cent per thousand and the tre-
mendous influx of Chinese from the mainland which has raised
the population from between five and six million in 1945 to
ten million at the close of 1957, it is little wonder that
the situation is attracting the attention of economists and
early warnings have already been sounded for a program of
birth control. 64

To meet the problem that will arise if the island
becomes unable to support its rapidly increasing population
a study was made of the pregnancy rates in different age
groups. A comparison has been made between those who have
accepted and used the instruction given in a Birth-Spacing
Program in an irregular way and those who practice birth-
spacing measures continuously. 65

63 Ibid.
64 Ibid.
65 Ibid.
These figures are seen in Table VI and show that the birth-spacing program is effective. In Taiwan there is a Family Planning Association which is now giving advice to mother's clubs which are being organized in the different districts. By June 1956, 9,878 mothers had sought advice on birth-spacing programs.66

Health leaders and educators, realizing the difficulties and heartaches of wives who have been unable to become mothers, have started a program for these women.

Thirty-two health centers and stations advise and treat women, where prognosis warrents treatment. It is difficult to get Chinese and Taiwanese men to accept the idea that sterility may be due to some problem with themselves, but seven hospitals now offer clinical services for examining husbands and wives. To refer women to the above mentioned clinics 179 mothers clubs have been organized.67

While so much has been done to ensure better health for the mothers and babies of Taiwan there is still a great task ahead. In 1955 California had reduced its infant mortality rate to 26.5 per cent.68 To accomplish this the use of wide spread health education was necessary.

66 Ibid.
67 Ibid.
TABLE VI
PREGNANCY RATES IN DIFFERENT AGE GROUPS -- JANUARY 1955-JUNE 1956
STUDY ON THE BIRTH SPACING PROGRAM*

<table>
<thead>
<tr>
<th>Class A</th>
<th>Class B</th>
<th>Class C</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Family using birth-spacing method</td>
<td>Family using birth-spacing irregularly</td>
</tr>
<tr>
<td>Age</td>
<td>No. of women</td>
<td>Became pregnant</td>
</tr>
<tr>
<td>---------</td>
<td>---------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>15-24</td>
<td>284</td>
<td>81</td>
</tr>
<tr>
<td>25-34</td>
<td>2,016</td>
<td>655</td>
</tr>
<tr>
<td>35-44</td>
<td>752</td>
<td>143</td>
</tr>
<tr>
<td>Total</td>
<td>3,016</td>
<td>889</td>
</tr>
</tbody>
</table>

Taiwan with its outstanding decline in mortality rates will do even better as more health education is spread throughout the island. There are still the old fashioned grandmothers, the women of the fishing villages, the farms, the factories who need health education pamphlets placed in their own hands and it is to fill this need that this Thesis was prepared.
CHAPTER IV

REVIEW OF PRINCIPLES GOVERNING HEALTH EDUCATION

I. HEALTH EDUCATION

What is health education? Health Education to the students of nursing in Taiwan, as elsewhere means: the sum of the activities in which health agencies engage to influence the thinking, motivation, judgment and action of people.69

The purpose of health education. The purpose of health education is to better the health of the people. Scientific knowledge of how to do this is found in books and in the minds of many students of healthful practices.

Locked up in the storehouse of the few, however, knowledge can do little good for the many; therefore portions of it must be drawn out and so "processed" that they can be transmitted to and applied by, the lowly as well as the learned, both individually and collectively.70

To achieve that purpose this knowledge must be interpreted by the health educator, and delivered in appropriate lists and in palatable form to those who do not have it. To do this she must add encouragement to use the knowledge practically.71

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70 Ibid.

71 Ibid.
Health Education in Maternal and Infant Care must be directed toward the parents of Taiwan and in planning a program. The health educator must recognize that motivation is as important as the facts themselves, people apply facts only when these facts meet their own desires and needs.  

Since learning is a change in an individual's ideas and practices, this change can be brought about only through the individual's own efforts. So long as mothers are passive towards a situation, no learning takes place. The fact that learning is an active process is of particular significance to the nurse in the role of health educationist. She cannot assume that people learn merely because she disseminates health information. She must take into account the following factors which influence an individual's reaction.

The urges that satisfy certain fundamental human needs such as survival, food, love and social approval are the mainsprings of human behavior. People strive for many other things which are no less important to them though less vague. Mothers are interested in doing those things which seem to help them to achieve something they want or to cope with their own specific problems.

These statements are true of any people and health educators will need to be familiar with such attitudes and be

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73 Ibid.
conversant on local interests and goals.

The health education worker in Taiwan who recognizes this characteristic of learning will not ask how can I motivate Taiwanese mothers to learn about health and to change their health practices. Instead she will be concerned with the goals and purposes of the Taiwanese; how she can help them to attain their goals; and perhaps see a relationship between their goals and improved health practices. 74

In such a land as Taiwan the happiness of the family depends to a great extent on the harmony among the several women of the family, group approval is of utmost importance. Especially is this true when new methods effect the grandsons. Most individuals tend to conform to the accepted standards of the family and friends. This is very noticeable in Taiwanese culture. In preparing health education material for Taiwan it was advisable to know the customs of the people so that methods which would be contrary to local beliefs could be handled in such a manner as to avoid a negative attitude, in such a country the health educator must be continually on the alert to make sure that approaches or materials selected for use in an area are attuned to the value patterns of people living in that area, and developed and presented in such a manner that they can be readily adapted into the way of living of the individual. 75

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74 Ibid.
75 Ibid.
Learning takes place more effectively when the experience has meaning for the mother and she is able to see the full implication of the experience. Actual experience in such places as the home, the shop, the farm or the health center are usually more meaningful than academic discussions or lectures about healthful practices, that should be followed. A mother will change her behavior in a prescribed manner, i.e., learning, only when she understands what to do and when she sees the action as a means to an end which she herself desires.76

These principles regarding learning are doubly important in Taiwan. Furthermore, the action suggested to meet health needs must not appear to an individual to be in too great conflict with her normal way of life.

"Motherhood and childhood are entitled to special care and assistance. All children, whether born in or out of wedlock, shall enjoy the same social protection."77

It is true that motherhood and childhood are entitled to special care and assistance. The problem is to make such special care and assistance so attractive that it will be acceptable to them. There are many barriers that must be broken down if good health practices are to be assured in Taiwan. To overcome these barriers, one needs to reach the mothers in their home situation, and one must learn to avoid the obstacles that face

76 Ibid., p. 46.
each health educator.

Levy lists four chief obstacles to accepting professional advice:

1. The lack of practical consideration by the doctor or nurse.
2. The cultural background of the people.
3. Mothers do not understand what the nurse means. This may be due to language difficulties, or it may be due to the selection of words and phrases.
4. "Attitudes" toward the program and to overcome these different attitudes may take repeated demonstrations. 78

People all over the world find "change" distasteful, or at least troublesome. Changes that are undertaken voluntarily will have a much better chance of surviving than any that are forced upon a people even if the change is for the betterment of these people. Paul says: No human behavior is free from emotional content and all cultural practices are invested with emotional significance. It follows that changes tend to be easier where the emotions of the recipient are least disturbed. On the other hand, where strong emotional envolvement is inevitable, change may be expedited if the emotions of the mothers can be mobilized for and not against the program. 79


If the health educators, nurses and doctors will promote their cause with a degree of modesty and humility and present their ideas to the nationals as one of the alternatives but not as the only true road to salvation, they will find their chances of success materially improved. 80

That changes in maternal and infant care practices were essential was the consensus of nurse educators and public health workers in Taiwan, but to introduce changes it was important to remember that an attempt to introduce new knowledge or new techniques in a foreign setting would benefit from the realization that all communities respond to these attempts according to the promises implicit in their own cultural traditions. 81

To assure interest in change the cooperation of the local people was necessary. Interest can be aroused in many ways, and to acquaint students of nursing with some methods of arousing interest was the first step to better health for mothers and babies. At the Taiwan Sanitarium and Hospital the senior students planned with their instructors the different ways in which they would assist the mothers who came for ante-natal care. Programs were planned and executed with great success, but the mothers kept asking for written materials to take home with them. Pamphlets which would enable them

80 Ibid., p. 153.
81 Ibid.
to remember more of the things learned in these programs. More important still, they could show and explain materials to their home group thus making new methods more acceptable in the home. Prior to preparing and evaluating health education literature it was necessary to know what to expect of that literature therefore criteria were set up.

II. CRITERIA

Criteria for good health education material. The team pamphlet is used to represent the various pieces of printed matter commonly used by health agencies. There are several different types of printed materials; the leaflet which is one page only, printed on one or both sides, the folder which has been folded only once; the circular folded more than once; brochures, broadsides, handbills and booklets.

The booklet, a small book with a paper cover, the pages of which are either stapled or pasted together, was the style chosen for the pamphlet prepared.

To be effective the pamphlet must first appeal to the public. No matter how well it may be written, it must have eye-appeal or mothers would not open it. They will only accept it if it appeals to them.

There are no rules for designing a pamphlet, but there are general principles, born of experience. Not only the producers but also the distributors of pamphlets should study

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in order to be able to appraise their effectiveness.\textsuperscript{83}

The typical pamphlet is rectangular in shape. Squares and long-narrow or short-wide oblongs are not pleasing to the eye.\textsuperscript{84}

To determine the size of the booklets, two factors were considered. The convenience of the reader and economy. Common sizes range from 4 x 5\(\frac{1}{2}\) inches to 9 x 12 inches.\textsuperscript{85}

In Taiwan the usual size of pamphlets is 5\(\frac{1}{2}\) x 8 inches and in order to keep the pamphlets in the familiar size and shape this size was chosen for the preparation of the pamphlet, "Pre-natal Care."

Color is important and these will be chosen in Taiwan where a selection will be made from available supplies. The quality of the paper used will have to be selected in relation to costs in Taiwan.

It is of great importance that the whole layout of the pamphlet have "eye appeal" and "balance," the cover must be attractive. The type needs to be readable and the captions must stand out.\textsuperscript{86}

In setting up the criteria for the subject matter in this pamphlet it was necessary to realize that the greatest need was for simplicity. It must be practical, giving full

\textsuperscript{83} Ibid.
\textsuperscript{84} Ibid.
\textsuperscript{85} Ibid.
\textsuperscript{86} Ibid.
\textsuperscript{87} Ibid.
consideration to the availability of materials and facilities.

New ideas must not conflict with the cultural backgrounds of the people if learning was to take place.

The introduction would need to be interesting and the content must be factual and informative. More important than any of these was the need for it to be persuasive in promoting the cause of improved health. The whole work needed to be centered around a central problem and it must be well illustrated if it was to appeal to the mothers of Taiwan.

In the criteria for the evaluation of pamphlets the following questions were asked:

Is the subject matter -

1. simple
2. factual and informative
3. interesting and centered around a central problem
4. persuasive in promoting health
5. well illustrated, colorful and appealing to the eye
6. practical in the Taiwanese situation
7. prepared so it will not conflict with cultural patterns
CHAPTER V

REVIEW OF LITERATURE

I. HEALTH EDUCATION PAMPHLETS OF TAIWAN

The search for health education pamphlets which were suitable or could be adapted for use in Taiwan was very revealing.

Those found in Taiwan were considered, first, to establish the need for this study. Had the materials available proved adequate there would have been no need to continue this work.

In the experience of the writer materials that could be used for maternal and infant care in Taiwan, and that were available on the island, were all too few.

The well educated women, who spoke and read English had been supplied with pamphlets in English.

The question then was, did Taiwan have pamphlets in Chinese within a complete Chinese setting which would supply the needs of mothers who did not speak and read English?

Those found dealing with the area under discussion were:

"Your Baby Book," this book was a publication put out by SMA Powder Food Formula for Infants Company. It had been translated into good Chinese but all of the illustrations showed American mothers and babies. All equipment used to illustrate the book were also such things as found in American
homes. This, while conveying good information lost much of its force because of the illustrations. This was the only booklet on infant care.

One pamphlet published by the Health Department, "The Hygiene of Pregnancy," gave a little information regarding reproduction but it was poorly illustrated and gave no information regarding prenatal care.

The third pamphlet also published by the Health Department gave more information regarding maternal care but had no illustrations. In the experience of the writer this proved of little interest to the mothers of Taiwan.

A booklet for the child of primary school age was available which dealt with the question of personal hygiene. This was a good pamphlet but was unsuitable for infant care.

A small booklet on home nursing and first aid devoted a chapter to the ideal home. The illustrations of the untidy ill managed home environment in comparison with the well ordered home was very good. This idea will be used at a later date in preparing other health education material.

A fifth pamphlet on hygiene included a chapter on reproduction which was inadequate.

The Health Department of Hong Kong was another source which might have health education materials in Chinese that could be used for maternal and infant care in Taiwan.

Fourteen posters were procured. Not one of which was directed to maternal and infant care. Some of these posters
are excellent on the subject of tuberculosis, and fly control
and as such can be utilized as a part of a total program
stressing good health habits.

Five booklets were procured, two of which dealt with
the older child. One was on infant care. It contained good
information but was incomplete and not illustrated.

Twelve leaflets were available. Three of which were
on infant care. They are: "The Baby From Birth to Two
Months," "The Baby From Three to Four Months," and "The Baby
at Five, Six, and Seven Months." All three were not illus-
trated in any way.

On studying materials prepared in the Chinese language
it was self-evident that there was a need for more pamphlets
in the field of maternal and infant care for use in Taiwan.

II. HEALTH EDUCATION PAMPHLETS OF INDIA

Pamphlets used in India were also surveyed. It was
found that though many booklets, posters, and leaflets on
subjects dealing with topics regarding better health habits
were available, those directed specifically to maternal and
infant care were few.

However most of the books such as "Better Health,"
"The Rural Development Series," which is prepared by the
Womens' Christian College in Madras and others, are excellent
and with the knowledge contained in such publications in the
hands of the people the improvement in the general health of
mothers and babies would certainly be marked. These pamphlets devote only a chapter to maternal and infant health problems.

Several ideas from the pamphlets prepared for use in India will be adapted for use in Taiwan.

Two circulars devoted to maternal and infant care are well illustrated, simple, and practical.

III. HEALTH EDUCATION PAMPHLETS FOUND IN THE UNITED STATES OF AMERICA

In America a wealth of pamphlets for maternal and child care were found. Some of them are excellent. Many ideas and a great deal of information was adapted for use in Taiwan.

These pamphlets covered many topics regarding maternal and infant health. They could be divided under separate headings.

There were eleven pamphlets directed to pre-natal care. Most of them were used by different state health departments. Of these the booklet "Prenatal Care," which was published by the Childrens' Bureau (publication No. 4) was of the greatest help in preparing the pamphlet for Taiwan.

The topic of "Diet During Pregnancy" was also well covered by eleven different pamphlets devoted to this specific problem. Some attention had been given to diet during labor. This material is excellent for use in America but would not meet Taiwanese needs without a great deal of change.

Seven pamphlets more suitable for the use of nurses
and physicians contained information which will be used, to
great advantage in programs for mothers which will be con-
ducted by student nurses in Taiwan when instructing mothers
in the preparation for child-birth.

The ideas contained in the booklet "What to do at
Emergency Childbirth in Times of Disaster" will be used to
great advantage in mothers' classes.

"Infant Care" was adequately covered in eleven pamphlets
which were well illustrated, and informative. Most of them
met the criteria for good health education materials if used
in America. Ideas, and information were used from these
pamphlets in the preparation of material for Taiwan.

The importance of "Breast Feeding" was emphasized in
seven pamphlets. These will be of value to the writer when
preparing further pamphlets. Most mothers in Taiwan breast
feed their babies. In addition thirty seven pamphlets deal-
ing with "Feeding the Baby" were studied. Ideas from these
can be utilized in Taiwan.

"The Premature Baby" was discussed especially in two
pamphlets. Ideas for the care of premature babies were good
but in a land where so many babies are delivered in the home,
and where there are as few incubators as found in Taiwan,
these pamphlets would not prove suitable or adequate.

Eighteen pamphlets were devoted to care for the safety
of the child, immunization, toilet training, toys, and
related subjects.
One pamphlet only was prepared for the specific purpose of introducing responsibilities of a father. While one other pamphlet was devoted to solving the problem of jealousy among siblings.

This made a total of one hundred and six pamphlets which give to America a wonderful supply of health education pamphlets for maternal and infant care.

Comparing health education material found in America with that found in Taiwan it was evident that there was a great need for the creation of health education pamphlets which would meet the needs of the Taiwanese people.

The health education materials of America were listed in the bibliography under the heading of Publications of the Government, Learned Societies, and Other Organizations.
CHAPTER VI

THE METHOD OF PROCEDURE

Prior to leaving Taiwan the members of the faculty and the senior class of students at the Taiwan Sanitarium School of Nursing met several times with the writer.

The purpose of these meetings was to discuss a health education program especially in the area of maternal and infant health for use in Taiwan.

These meetings resulted in the preparation of a series of fourteen programs to be given one each week over a period of fourteen weeks. These programs were to be repeated in a continuous cycle.

Before the departure of the writer from Taiwan two series of programs had been completed. These meetings were well attended and well received.

The many requests for printed materials dealing with information given in these programs led to further discussion groups of the faculty and senior students.

It was the consensus of the group that booklets should be prepared in the following areas:

1. Prenatal care
2. You and Your Baby
3. Food for Health and Strength
4. Breast Feeding
5. Prevention: Immunization, for What? When?

The pamphlet needed most urgently was the one dealing with prenatal care.

During the discussions it was suggested that these pamphlets should be prepared in English by the writer while on furlough in America. The pamphlet to be translated by the writer on her return to Taiwan.

The writer assumed that pamphlets prepared in the Chinese language, those found in India and the United States of America would contain ideas, and information which would be useful in the preparation of health education booklets for use in Taiwan. So a collection was made.

Available pamphlets in Taiwan were procured from the Government Health Department, Health Stations, the Provincial Hospital School of Midwifery and the Maternal and Child Health Project in Taichung. The collection of these materials was made by Letha Brooks and forwarded to the writer. Thanks is due to Leatha Brooks for her assistance.

Health education materials from Hong Kong were made available by the Public Health Department in Hong Kong. Thanks for the collection of these materials is due to William Hilliard now located in Hong Kong.

A collection of health education materials made by Ruth White during her term of service in India were made available to the writer. Some additional material was supplied by Lois Burnett.
Further materials ordered from India by the writer failed to arrive in time to be included in this study.

Knowing that the United States of America possessed a wealth of material in all areas of health education the writer forwarded a letter to the Director of the Health Department of each state including Hawaii.

A response to this letter (a sample of which is found in Appendix A), was remarkable. Every state health department sent copies of the health education materials used in its respective state. These publications covered all areas. The writer was greatly impressed by the willingness to share their publications which was manifested by each state health department.

These publications were sorted into areas covered and the one hundred and six pertaining specifically to maternal and infant care were studied in the preparation of this pamphlet.

Vital statistics pertaining to the Taiwanese were studied. Government bulletins and reports from Taiwan were collected by Lee Ching Wei and forwarded to the writer. These reports have been helpful in establishing Taiwanese needs.

Cultural patterns were studied to make it possible to prepare a pamphlet which would not conflict with cultural and social patterns of the people on the island.

A survey of literature was made to determine health
education principles which would assist in making the pamphlet prepared acceptable to the people of Taiwan.

The pamphlets collected in the area of maternal and infant care were surveyed to discover if any were already available which could be used in Taiwan. As nothing suitable was found the materials collected were further studied to discover ideas which might be adapted for use in Taiwan.

It was not the purpose of the writer to prepare all five pamphlets for this study.

The pamphlet on prenatal care was considered by the group in Taiwan as being needed most urgently. Therefore the preparation of a booklet on prenatal care was selected as that to be used in this study.

In formulating the pamphlet it was necessary to consider carefully the content. What should be included in this booklet? To determine the most important phases which should be included, it was necessary to consider the needs of the people.

The people of Taiwan were the best judges of what they wanted to have included in this booklet. They have a deeper knowledge of the needs of mothers and of the things in which mothers in Taiwan are interested. Therefore the minutes of the group discussions were reviewed.

The minutes of the meeting held May 18, 1957, which was the last meeting held prior to the departure of the writer from Taiwan, revealed that the concensus of the group in
discussing a pamphlet for prenatal care was that it should include the following:

1. Simple signs of pregnancy.

2. The prenatal visit: explaining fully the procedure which would include registration and the registration card. As to the process of taking the blood pressure, temperature, weighing the patient, the collection of urine specimens were often new to these patients, they should be at least mentioned so they would not be too much afraid when meeting these new procedures. Chinese doctors feel the pulse in both wrists and diagnose all diseases. Therefore a few words on the taking of a history would lessen the possibility of the doctor's questions being met with the phrase "you tell me."

3. The physical examination needed to be explained. Along with the reasons for the procedure.

4. Taiwanese mother does not keep good record of menstrual periods so it is not easy to calculate a due date. They needed to know that this could be calculated approximately.

5. Return visits must be stressed. Many women fail to return until they are in labor unless constantly reminded.

6. Information regarding dangers of sexual intercourse during pregnancy must be included.

7. The development of the fetus needed to be explained.

8. How to keep well needed special attention. Diet with emphasis on cleanliness was one way of helping mothers
realize the need for extra care in preventing typhoid and
dysentery during pregnancy.

9. Taiwanese women of the lower classes must work
during pregnancy, therefore something on exercise, rest and
sleep should be included.

10. The importance of fluids was stressed because
Chinese and Taiwanese people do not take enough fluids.

11. Bowel regularity and good sanitation should also
be included.

12. Danger signals during pregnancy should be mentioned
and stress placed upon seeing the doctor early should such
signals be noticed.

13. Arrangements for delivery should be made early
and the hospital or home delivery needed to be explained.

14. A knowledge of the signs and symptoms of labor
were included because many Taiwanese women arrive just in
time for delivery and there is little time for preparation.

15. How the baby is born was to be discussed briefly.

16. Post-partum care should be touched upon lightly
but left mostly for discussion in a further pamphlet entitled
"You and Your Baby."

The stress on sanitation included in this booklet is
not found in publications on prenatal care in the United States.
In the Taiwanese situation they are of great importance there­
fore they have been included in this booklet.

While differing in some aspects this booklet has been
built in accordance with the needs as expressed by the Taiwanese group.

It is prepared in simple English using a vocabulary which will facilitate the translation into Chinese language which is within the educational level of the people for whom it is intended.

The pamphlet was placed in a 5 1/2 x 8 inch box so that the form could be followed which will be used in the translated copy. No footnotes were made in the pamphlet for they will not appear in the translated copy. Acknowledgements are listed at the back of the pamphlet.
CHAPTER VIII

SUMMARY AND RECOMMENDATIONS

Summary. The survey of health education literature in the area of maternal and infant care proved that literature which was appropriate and acceptable for use in Taiwan was unavailable.

This indicated that to meet the needs established by the study of vital statistics a series of pamphlets should be prepared.

The time element prevented a series of pamphlets being prepared at this time. Therefore as it was the consensus of the faculty-student group that the booklet needed most urgently was one on prenatal care the writer choose that topic for this study.

Before the preparation of the booklet commenced it was necessary to survey literature to discover the underlying principles which should govern the preparation of this work. These principles were used in setting up a criteria for evaluating the booklet and step by step the booklet was measured against the criteria.

The booklet "Prenatal Care" was set up as a beginning tool for use in health education for mothers in Taiwan.

Distance prevents the evaluation of the booklet at this time. It is the intention of the writer to translate
the booklet on return to Taiwan. It will be used as part of the health education program at the Taiwan Sanitarium and Hospital in Taipei.

It is the intention of the writer to collect data regarding its use and to evaluate the results seen in Taiwan. The method will be worked out in conjunction with a faculty-student group in Taiwan. The results of the evaluation will govern the method of preparing additional pamphlets on the other topics needed for health education in the area of maternal and infant care in Taiwan.

This booklet "Prenatal Care" meets the criteria as set up for the preparation of health education pamphlets.

The writer would have liked more illustrations. These were difficult to procure while in the United States. When back in the field where it is possible to take actual photographs additional illustrations will be added or substituted for those used.

Recommendations. The preparation of the booklet "Prenatal Care" will not be complete until it is translated into simple Chinese. Therefore it is recommended that this booklet be translated into the Chinese language.

It is further recommended that continued study be made after this booklet has been put into use. The data gathered of the effects the booklet has had on mothers is to be tested against a control group, and this data is to be used to evaluate the effects of this type of health education
literature on the health of the mothers of Taiwan.

It is recommended that the preparation of further booklets be delayed until this booklet has been used and the results evaluated. The method of preparing further booklets to depend on the evaluation placed on the booklet "Prenatal Care."

It is further recommended that this booklet be made available in English for the use of students studying nursing in relation to world health or mission health education.
PART II

THE PAMPHLET
CHAPTER VIII

THE PAMPHLET

The pamphlet "Prenatal Care" which was prepared for use in Taiwan is Part II of this thesis.

It was recommended by the committee when the pamphlet was presented that such headings as "blood pressure" and "temperature" be omitted from the pamphlet in an endeavor to give warmth and an informal appearance.

After further investigation it was found that most literature in the Chinese language on the subject of health was prepared in the same formal style as this pamphlet. This was found to be characteristic of most other subjects also.

Therefore after consultation with her Major advisor the writer decided to leave the pamphlet in its original form on the assumption that the more familiar style will assist in gaining a more ready acceptance of the pamphlet by the mothers of Taiwan.
FIGURE 2

EXPECTING A BABY?
ACKNOWLEDGEMENTS

The anatomical figures in the booklet were taken from "How Does Your Baby Grow," which was prepared by Maternity Center Association. Thanks are due the members of that committee for permission to use these figures.

The Chinese cover page and figures 3, 4, 15, and 32 are originals drawn by Leslie Lee of La Sierra College. Thanks are due him for the interpretation of the writers ideas.

The rest of the figures are reproductions of posters supplied by the Department of Public Health, Hong Kong. Thanks are due to the Director of this department for supplying these materials.
INTRODUCTION

Women who have good care during pregnancy enjoy better health than those who do not know what to do to keep well.

The babies of mothers who learn how to take care of themselves during this time are healthier, better developed and better able to resist disease.

This booklet deals with your care during pregnancy. It will remind you of the things told you by your doctor and the things learned in prenatal classes.

Following out the instructions contained in this booklet will help you to keep well during your pregnancy. It will help you to understand what to do to ensure better health for yourself. It will also help your baby to be healthier and happier.
Prenatal Care

You think that you are going to have a baby! This is a very important event for you especially if you bear a son. You will want to keep your body healthy and strong so that you can produce a healthy baby.

If you are not sure whether you are pregnant or not some of these signs should help you to know. The pregnant woman will:

- Probably miss a menstrual period or the menstrual flow will be very scanty.
- Her breasts will be tender and enlarged.
- She may have nausea and vomiting.
- She will probably have frequency of urination.

When you have checked these signs and still think that you are pregnant, find a doctor whom you like and feel that you can trust.

The doctor will examine you and tell you what to do to safeguard your health and that of your baby.

Prenatal Visit

When you first visit the hospital you will register at the registration office. The woman at the desk will give you a card with a number on it. This card is important. Bring it with you every time you visit the doctor.
When you have registered sit in the waiting room until the nurse calls your name. She will take you to see the doctor.
BLOOD PRESSURE.

The doctor or nurse will check your blood pressure to see if your heart is working normally. He will fasten a cloth bag around your upper arm and inflate it with air, then he will read what it says on the little blood pressure machine. Figure 3 shows how this is done.

FIGURE 3
TAKING THE BLOOD PRESSURE
TEMPERATURE.

The nurse will place a thermometer under your tongue. Do not talk while it is in your mouth. The thermometer is made of glass so do not bite on it. The thermometer shows if you have fever. Fever is usually the sign of infection. Some infections might cause injury to your baby.

WEIGHT.

The nurse will weigh you to see that you do not gain too much weight. You should only gain about 15-25 pounds during your pregnancy. If you gain too much weight your baby may become too big and it will be hard for you to deliver.

URINE.

Each visit a urine specimen will be examined to see that your kidneys are getting rid of the waste materials from your body.

BLOOD.

During your first visit the doctor will take 5-10 c.c. of blood from your arm. It will not hurt any more than a pin prick. The blood will be made up quickly if you drink fruit juices. Testing the blood will show if you have "bad Blood" (syphilis). It will also show if your blood is red enough.

HISTORY.

Western trained doctors use different methods to those used by Chinese doctors. He will want to ask you many questions. Answer
him clearly as you can. He will record your answers on the Clinic card and this will help him to know all about your health.

PHYSICAL EXAMINATION

EYES, EARS, NOSE AND THROAT.

Doctor will examine your eyes, ears, nose and throat to check for any infection. He uses a little instrument with a light on the end. He will show you how it works if you are afraid. It will not hurt.

To examine your throat he presses down your tongue with a tongue blade and uses a flashlight to see inside.

TEETH.

Doctor will see if you need to go to a dentist. It will not hurt your baby if you have dental work done during pregnancy.

HEART.

Carrying a baby increases the amount of work your heart must do. To check your heart doctor will listen to your chest with a stethoscope. The heart sounds are clear to him. He will let you listen to your heart beat if you ask him.

BREASTS.

Your breasts will be examined to see if the nipple is right for your baby to grasp. If the nipple sinks in too much doctor will show you how to help draw out the nipple. Any lumps in your breasts may mean that something is wrong.
LUNGS.

Doctor will listen to your lungs through the stethoscope. He may ask you to have an X-ray taken to make sure that you do not have tuberculosis.
FIGURE 4

ABDOMINAL EXAMINATION
CHECKING THE FETAL HEART BEAT

The nurse and the doctor will examine your abdomen. By feeling the abdomen they can tell which way your baby is lying in the uterus. When they listen with the stethoscope they can hear the baby's heart beat, after you are twenty weeks pregnant. (See Figure 4).
PELVIS.

Doctor will want to know if the birth canal is big enough for the baby to pass through safely. To do this he must examine you internally. The nurse will assist into the right position and she will not leave you during this examination.

If you will open your mouth and pant you will relax better and this examination will not hurt you.

The doctor will first insert a small instrument into the vagina which is shaped like the bill of a duck. There is a light behind where the doctor sits. When he opens the instrument he can see if you have any old tears of the cervix from previous pregnancies or if there is anything wrong.

When this part of the examination is over the doctor will put on a rubber glove and placing one hand on the abdomen he will insert two fingers into the vagina. By doing this he can tell if the birth canal is big enough for you to have your baby normally. He can also tell how far along is your pregnancy.

DUE DATE.

You will want to know when your baby will be born. It is impossible to tell the exact date but pregnancy usually takes 280 days. Doctor will help you to calculate the approximate date.

RETURN VISITS.

Most western trained doctors will want to see you once every month until you are
seven months pregnant. Then they will want to see you every two weeks until labor begins.

SEXUAL INTERCOURSE.

Intercourse during the first three months of your pregnancy may cause an abortion. This is especially true during the time that your menstrual period is normally due. Show this statement to your husband. If he wishes doctor will explain more about this to him.

During the last two months of pregnancy intercourse may cause premature labor or infection. It is better to refrain from intercourse during this period.
FIGURE 5

FEMALE REPRODUCTION ORGANS
UTERUS, FALLOPIAN TUBES, AND THE OVARIES
HOW YOUR BABY DEVELOPS

The life of your baby begins when the ovum (your seed) meets the sperm (seed from your husband). Figure 5 shows the female reproduction organs where your baby will develop and grow for the first part of its life.

The ovum grows in the ovary. It is very tiny and can be seen only through a microscope. Figure 7 shows the ovum greatly magnified.

FIGURE 6
OVUM

The ovum is released from the ovary about midway between your menstrual period. This is shown in Figure 8.

FIGURE 7
OVUM RELEASED FROM THE OVARY

The sperm is also very small and has a tail. Each time you have intercourse with your husband millions of sperm are released into the vagina. If one of them unites with the ovum you become pregnant and your baby begins to grow. The sperm shown in Figure 9 has been greatly enlarged.
The ovum and sperm usually unite in the fallopian tubes. The sixth or seventh day it attaches itself to the lining of the uterus.

FIGURE 9
FETUS AT SIX WEEKS

The baby grows very rapidly and at eight weeks has the beginnings of all his organs. He has eyes, nose and mouth, fingers and toes. Bones and muscles are beginning to form.

FIGURE 10
FETUS AT EIGHT WEEKS
Growth is rapid as can be seen by comparing Figure 11 and Figure 12.

FIGURE 11
FETUS AT TEN WEEKS

At twelve weeks he really looks like a baby.

Before he is twenty weeks old you will feel him move and the doctor will be able to hear his heart beat when he listens to your abdomen with his stethoscope.
When your baby is twenty-eight weeks old he is about fourteen inches long and weighs about two pounds. His body is all formed and from now on he will begin to get fat and healthy.

Ask your doctor or nurse to tell you the things that you should do so that your baby will grow healthy and strong.

Your baby will grow to be about twenty inches long and between six and seven pounds when he is at full term. Full term fetus is shown in Figure 13.

FIGURE 13
FETUS AT FULL TERM
HOW TO KEEP WELL

DIET

While you are carrying your baby it is necessary to be careful of the kind of food you eat. Baby gets his food through you. The food that you eat is absorbed into your blood stream where it can be used to build your body tissue or that of your baby.

It is not "how much" you eat but "WHAT" you eat that is important.

VEGETABLES

Each day it will be well to eat at least one serving of green leafy vegetables such as spinach, Chinese cabbage or dandelion greens. This kind of vegetable will help to build up the supply of vitamins and iron in your blood.

Carrots, bamboo shoots, Chinese radishes, squash, pumpkin and taro, while they help build your supply of minerals and vitamins also are high in calcium which helps to build your baby’s bones.

MILK

Soybean milk is very high in protein and is a perfect food so each day you should drink one quart. If you like the powdered milk that is found on the market it is also very good but it is more expensive and the soybean milk will be as good for you if you eat the vegetables that contain calcium.
FRUIT

Fruits are a very important part of your diet for they supply the vitamins that are so necessary for your baby's health. Eat four to five servings of fruit each day.

When you buy your fruit be sure that you buy it whole. Do not buy those that have been cut at the market or that have been peeled like those in Figure 14.

Ice cream or cordials, or any foods that you buy should be clean for it is important that you do not get any of the germs that are carried to fruits that are either cut or peeled in the market place.

RIGHT TO BUY  WRONG!  DO NOT BUY

FIGURE 14
FRUIT IN THE DIET
THE RIGHT AND WRONG WAY TO BUY
CEREALS

Three servings of rice are necessary each day. Brown rice is the best for you for it contains many minerals which your baby needs. These minerals are not found in white rice.

Your rice must be clean. Do not leave it uncovered on the table for flies may light on it and leave germs which you cannot see. They will injure you and your baby.

FLIES ARE NOT welcome visitors. Rid your home of flies which are a constant danger to you. See Figure 15.
If your old home is in North China you will prefer Mien (noodles) to rice. Mein can be substituted for rice once each day. It would be better if the mein is made with whole wheat flour.

Mo Mo (steamed bread) is also good for you but it will be better if you make it with half whole wheat and half white flour. Try making them this way. They are tasty and contain many vitamins that your baby needs.

EGGS

Eggs are a good source of iron which helps to build good blood for you and your baby. Eat at least one egg each day. If you have had malaria you will probably be anemic and will especially need these eggs.

PROTEIN

Protein is one of the most important of your foods. If you are eating meats, eat the lean parts. Beef and chicken are the best for you. The soy bean protein is better for you and there are many kinds on the market.

Small soybean curd that has been fried is the highest in protein. Other kinds that are good are: pickled soybean curd, soybean sheet, dried soybean curd, soybean curd cake, Clotted soybean milk is the highest in protein value.
All of your food should be covered. These covers are not expensive and they will protect not only you and your baby but will help to keep the rest of your family healthy.

The right way to cover your food is seen in Figure 16.
FLUIDS

While carrying your baby you need to drink more fluids than usual. The fluids are needed to keep your kidneys working well.

Soups, milk, and fruit juices are a good source of fluids. In addition you need to drink at least four to six glasses of water each day.

It is important that this water be free from germs. If you take the water from the well or from the faucet it is still better for you to drink only water that has been boiled. See Figure 17.

RIGHT                WRONG

FIGURE 17
IS YOUR DRINKING WATER SAFE?
If you do not like to drink plain water, chrysanthemum or almond teas are very good for you and have a very fragrant flavor which you probably like.

EXERCISE

A moderate amount of exercise is good for everyone. Even when pregnant it is good to keep on doing most of the things that you have been doing all the time.

While you are pregnant it will be better if you work slower than usual and that you do not lift heavy loads. If you get tired stop for a little rest. Do not get too tired.

REST AND SLEEP

While you are pregnant you need at least eight hours of sleep at night and a rest period at least once each day.

Try to lie down for at least ten to fifteen minutes each day. This will help you to relax. Sit down several times a day and put your feet up. This will help you so that you do not get too tired.
BOWELS

It is very important during pregnancy that you have a daily stool.

The drinking of the extra water as has already been advised will help you to have regular bowel movements.

The eating of green leafy vegetables and the fruits also help to keep you regular. It is important for this is another way of eliminating the waste materials from your body and that of your baby.

It is important that your latrine be sanitary. In Figure 18 you will see that one is unsanitary. This type is a danger to your health and to that of your baby so try to see that your latrine is clean and sanitary and in this way you will safeguard your own health and that of your baby.

SANITARY UNSANITARY

FIGURE 18
IS YOUR TOILET SANITARY?
CLOTHING

Wear clothes that are loose and comfortable.

If your breasts are enlarged and tender it would be well to try one of the new type brassieres. They lift up your breasts rather than binding the breasts down like the old style Chinese brassiere. Try one and see if you are not more comfortable.

Do not wear tight round garters for they hinder the circulation of the blood to the legs and may cause trouble.

Your flat heeled Chinese shoes are better for you than the high ones used by the foreigner. There is less danger of falling in your Chinese shoes and they give better balance to your body.

BATHING

During pregnancy you perspire more than usual. This is one way of getting rid of the waste materials from your body. Since baby's waste materials must also be gotten rid of through your body you perspire more.

During pregnancy it is better to have a bath every day. A shower or a pail pour is better for you than sitting in the wooden tub.

SPECIAL ADVICE

If you follow these rules for keeping well you should have no trouble during pregnancy but if anything unusual happens tell your doctor at once and he will advise you.
DANGER SIGNALS

1. SEVERE BACKACHE
2. SEVERE OR CONTINUED HEADACHE
3. DIZZINESS
4. SWELLING OF THE HANDS OR FEET
5. SEVERE VOMITING, NAUSEA, OR INDIGESTION
6. SEVERE PAINS IN THE ABDOMEN
7. SEVERE OR CONTINUED CONSTIPATION
8. SCANTY URINE
9. SPOTS OR BLURRING BEFORE THE EYES
10. SUDDEN GAIN IN WEIGHT
11. BLEEDING FROM THE BIRTH CANAL, EVEN IF ONLY SLIGHT

If any of these things happen to you, tell your doctor immediately. Nothing serious may be the matter but your doctor should be notified in order to give you treatment if it is necessary. If there is nothing to worry about he will be happy to set your mind at rest.
HOSPITAL VERSUS HOME DELIVERY

It will be necessary for you to decide whether you are going to have your baby in the hospital or at home. If you wish to see the maternity ward and the nursery, please ask the nurse and she will show you.

Western doctors prefer to have their patients in the hospital for the delivery and for four to five days after delivery. This is because they have so many things in the hospital that can be used should any complications arise.

This must be your own decision. You can talk with the registrar and arrange regarding fees if you decide to have a hospital delivery. If you prefer to have your baby at home get advice about a good midwife to attend you.

If you are having a home delivery be sure that your midwife understands about sterile technique and do not allow her to examine you internally without first scrubbing her hands, this is important to the welfare of you and your baby.
HOW YOUR BABY IS BORN

When your baby is fully developed, nature gets ready to expel your baby.

During the last month of pregnancy you may notice that the baby gets lower in the abdomen. This makes the baby ready when labor begins.

When the uterus is ready, the strong muscles begin to contract regularly. In this way the baby's head pushes against the cervix which stretches and pulls back over the head of the baby.

HOW YOU WILL KNOW THAT LABOR HAS BEGUN

When labor begins you will notice the following:

a. Regular contractions of the uterus. (The uterus gets hard then relaxes and becomes soft).

b. The contractions are forceful.

c. You will have pain in the lower back.

d. The pain gradually spreads to the abdomen.

e. You have a feeling of pressure in the lower abdomen.

f. Contractions come regularly by the clock. They may start one hour apart and gradually decrease the time between contractions.

g. Between contractions you will relax and feel sleepy.

h. The bag of waters may break in the early part of labor or not until just before the baby is born.
See your doctor if you notice any of these signs. He will tell you if you should stay in the hospital. If you are having a home delivery notify your midwife so that she can prepare.

Do not wait too long to see your doctor. It is better to come early than too late.
LENGTH OF LABOR

The length of labor differs with every woman. It may differ with each pregnancy. The first baby takes longer. It may take sixteen to eighteen hours. Your other babies may take less than six hours.

PREPARE FOR LABOR

When you are in labor the nurse will shave the hair off your lower abdomen and around the vaginal opening. Then this area will be cleaned to prevent infection.

The doctor will often order an enema to clean out the rectum. This does not hurt for the nurse will be careful. Do not go to the toilet while you are in labor. Use the bedpan that the nurse will give you.

STAGES OF LABOR

There are three different stages of labor.

First stage: During the first stage of labor the muscles of the uterus contract and cause the cervix to open. In Figure 19 you will see the head pressing down against the cervix which is gradually opening. This is the longest part of labor.

Figure 19 shows the dilation of the cervix as the head presses down on it.

FIGURE 19

DILITATION OF THE CERVIX
Second stage: The second stage of labor begins when the cervix is fully open.

The head passes down through the birth canal as can be seen in Fig. 20.

During this stage you have a feeling that you must bear down like when you are having a hard stool.

**FIGURE 20**

HEAD PASSING THROUGH THE VAGINAL OPENING

When the head reaches the vaginal opening the doctor helps the head through the opening as you can see in Figure 21

**FIGURE 21**

DELIVERING THE HEAD
Third stage: The third stage of labor starts when the baby is expelled and finishes when the placenta is expelled. This usually takes place ten to fifteen minutes after the baby has been delivered.

MEDICATIONS DURING LABOR

The doctor has medicines which he will give you during the latter part of labor. If the pain gets too severe tell him and he will give you something to ease the pain.

CARE OF THE BABY

While the doctor waits for the placenta to be ready to be expelled he will take care of your baby. He will cut the cord. He will examine the baby to see that it is normal, put drops in its eyes to prevent infection. The nurse will put a label around the baby's arm on which your name has been written. She wraps baby warmly and takes it to the nursery where it will be cleaned with oil and dressed in hospital clothes that are not new.

Baby will be watched carefully and kept warm and clean. The nurse will bring the baby to you after you have had a short rest and have had some food.

Doctor will want you to stay in the hospital for four or five days and during that time the nurse will teach you how to care for yourself and your baby.

She will show you how to breast feed your baby. How to clean your nipples. How to bathe and take care of your baby and will help you to learn to care for baby each day.
Your baby is precious and you will want baby to grow healthy and strong. The nurse will tell you about the Well Baby Clinic. Do attend these clinics for there you will learn many things that will help you to care for your baby so that it will become strong and healthy.

POST-PARTUM EXAMINATION

The nurse will instruct you how to care for yourself after delivery. She will help you make plans for solving any difficulties you may face.

The doctor will want to see you six weeks after your baby has been delivered. Before you leave the hospital see the doctors office nurse and make an appointment for this visit. At that time the doctor will examine you to see that the uterus is back to it's normal size and that there are no tears in the cervix or any part of the birth canal.

When you come for your examination, the doctor will also wish to examine the baby to be sure that progress is being made.

Talk to doctor about immunization for your baby and he will tell you what you should do to protect your baby against disease and when immunizations should be done.
THE DOCTOR AND NURSES WILL DO ALL THEY CAN TO HELP YOU TO CARE FOR YOUR BABY SO THAT IT WILL GROW HAPPY, HEALTHY AND STRONG.

FIGURE 22
A HAPPY, HEALTHY BABY
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APPENDIX
APPENDIX

TAIWAN SANITARIUM AND HOSPITAL
1000 Chung Cheng Road
Taipei, Taiwan

March 1, 1957

The Director
Public Health Department
115 Colchester Avenue
Burlington, Vermont
U.S.A.

Dear Sir:

While in America on furlough it is my plan to prepare some health education materials that will be of use to us in our work at the Taiwan Sanitarium and Hospital.

After spending ten years on the mainland of China and now the past two and a half years in Taiwan the lack of an adequate supply of health education materials has been greatly impressed on my mind.

In planning for the preparation of materials which will fit our situation I am sure that many pamphlets published in America will be of great value in supplying ideas and information which can be adapted for use in our own situation.

I would be deeply appreciative of your assistance in this matter. If you would please send me a copy of each of your health education materials used by your State Health Department especially those in the area of maternal and infant care I shall be grateful indeed.

Please forward these materials to me in care of:
The White Memorial Hospital
312 North Boyle Avenue
Los Angeles 33, California

Thanking you in anticipation, I am

Yours sincerely,

Muriel Howe
Director of Nursing Education
COLLEGE OF MEDICAL EVANGELISTS
School of Graduate Studies

PREPARATION OF HEALTH EDUCATION
MATERIALS IN THE FIELD
OF MATERNAL AND INFANT CARE
FOR USE IN TAIWAN
by
Muriel Howe

An Abstract of a Thesis
In Partial Fulfillment of the Requirements
for the Degree of Master of Science
in the Field of Administration in Nursing

June, 1958
ABSTRACT

Health Education was assumed to be one effective method of improving maternal and infant health on the Island of Taiwan.

To establish the need for new health education pamphlets to be used as a supplement to the health education program in the area of maternal and infant care in Taiwan, a survey of pamphlets already available on the Island was made.

This study revealed that while an occasional chapter in several books lightly touched upon maternal and infant health only nine pamphlets were specifically prepared in the area of maternal and infant care.

After studying the principles underlying good health education pamphlets criteria were set up. Then the available pamphlets were measured against the criteria.

It was found that of the nine pamphlets available not one could meet the criteria. Therefore it was necessary to prepare a pamphlet for use in Taiwan.

Group discussions in Taiwan indicated that while several pamphlets were needed, one on the topic of "prenatal care" was most urgent. A pamphlet on this topic was prepared.

A study of available pamphlets in this area which had been prepared for use in India and the United States was also made. Pamphlets in these countries were unsuitable for translation because they were prepared for a different way of life.
Facilities were different. The technical information was sound but this too needed to be adapted for use in Taiwan.

In the preparation of the pamphlet for Taiwan hygiene was particularly stressed because a study of vital statistics had revealed that gastro-intestinal disease was the number one killer on the Island.

The problem of the lack of suitable health education pamphlets for use in Taiwan was partially solved by the preparation of the pamphlet "Prenatal Care" which will serve as a nucleus for a series of pamphlets to be prepared after this one has been translated into Chinese and used on the Island.

Further studies were recommended and data will be collected in Taiwan after this pamphlet has been in use for several months. It is hoped that this data will be a guide in the preparation of further pamphlets.

The pamphlet "Prenatal Care" was measured against the criteria and will be of great assistance to the staff and students of the Taiwan Sanitarium in their work of health education for the mothers of Taiwan.