TITLE

An investigation of Maternal Child Health and Family Planning (MCH/FP) services in the Tongatapu area of Tonga

Submitted by

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

ABBREVIATIONS

ANC	Antenatal care
CPR	Contraceptive prevalence rate
EPI	Expanded program of immunization
FP	Family planning
IMR	Infant mortality rate
MCH/FP	Maternal child health and family planning
MMR	Maternal mortality rate
NGO	Non-government organization
PHC	Primary health care
PNC	Postnatal care
SPSS	Statistical Packages for the Social Sciences
UNICEF	United Nations Children Fund
WHO	World Health Organization

STATEMENT OF ORIGINAL AUTHORSHIP

This thesis contains no material that has been accepted for the award of any other degree in any university. To the best of my knowledge and belief, the thesis contains no material that has been previously published or written by another person except where due reference is given in the text of the thesis.

'Ana Fili Havea

ABSTRACT

This is a study on perceptions of women for services provided by Maternal Child Health and Family Planning (MCH/FP) centre in Tongatapu of the Kingdom of Tonga. The purpose of the study is to provide information that will assist the Tongan Health Authority to develop strategies and services which are responsive, effective and accessible to women who utilize the services. A survey was conducted utilizing a self-report questionnaire with a total of 150 questionnaires returned, generating a response rate of 36 per cent of the estimated average number of women who were attending the MCH/FP centre each month. Results showed that although participants were very satisfied with services provided by the MCH/FP centre, there were gaps in the availability and provision of services after business hours. Findings also showed that there were other issues associated with discrimination in staff practice, in that they displayed preferences when they talked to high ranking people, and the centre also experienced shortages of resources and staff. Four factors that influence utilization of family planning and contraception were identified, namely, husbands' objections to contraceptive use, lack of knowledge of the effective method of contraceptives, concern with side effects, and religious beliefs affiliation. Generally, the most common barriers that significantly influenced women's utilization of MCH/FP services were long waiting times, the lack of availability of child-care, a feeling of shyness about exposing the body to doctors for physical examinations, customs, cultural and financial barriers. Barriers identified as significantly inhibiting women from utilization of MCH/FP services were lack of transport, insufficient money (financial constraints), and lack of understanding or lack of knowledge about the benefits of attending antenatal clinics. It is hoped that information generated from this research will assist the Tongan Health Authority, nurses, and other health professionals in the planning and provision of appropriate services for women who utilize MCH/FP services.

Chapter 1: Introduction

This thesis describes women's perceptions of services provided by the Tongan Maternal Child Health and Family Planning (MCH/FP) centre. It is based on a survey conducted between June and July 2002 within the MCH/FP section at Vaiola Hospital, Kingdom of Tonga. A mail out self-report questionnaire was distributed to 150 women and data generated was utilized to describe a picture of the MCH/FP services. This introductory chapter presents the brief background history of Tonga; it outlines the current socio-economic, religious and cultural contexts of the Tongan people within a theoretical framework. The chapter also describes the role of the MCH/FP and the background of health and primary health care (PHC) in Tonga. Finally, the aim of the study and the research questions are described along with the structure of the thesis.

1.1 Brief background history of Tonga: Providing a cultural context

The Kingdom of Tonga, also known as the Friendly Island, is a developing and independent country in the Pacific Islands. Tonga is unique among South Pacific countries in that it has never been formerly colonized. It is located between latitude 15 and 24 degrees South, and between 173 and 175 degrees West (Cartmail, 1997). Tonga is just to the west of the International Dateline, south of Samoa and south east of Fiji, in the Pacific Ocean. Tonga is made up of four main island groups, Tongatapu/'Eua, Ha'apai, Vava'u and Niua's. In addition to the four main islands, there are over 150 smaller islands of which only 36 are inhabited. The total land area is 668 square kilometers scattered over 326,500 square kilometers in the South Pacific Ocean, with a population of approximately 100,000 people (Copyright Secretariat of the Pacific Community, 1999).

Tonga is a hereditary, constitutional monarchy, and Tongans hold their royalty in high esteem. King Taufa'ahau Tupou IV is the Head of State, and an elected Prime Minister is head of government. The executive branch is comprised of a cabinet containing ministers and island governors who are appointed by the King. When he presides in person, the executive branch becomes the privy council (Martin, 1991). Cabinet ministers hold their posts until retirement. The legislative assembly includes the executive branch members, nine members of Tongan nobility (elected by their peers), and nine directly-elected representatives. Internally the society is traditionally divided into nobles and commoners with the King having absolute rule (Martin, 1991). Social, cultural, and economic facilities are available to all citizens regardless of race or religion; however, members of the hereditary nobility have substantial advantages including control over most of the land and a more privileged status. Nonetheless, it is possible for commoners to rise to cabinet positions in government and to accumulate great wealth and status in the private sector. Moreover, there is a growing pro-democracy movement that is lobbying to give commoners a greater say in running the country. Citizens of Tonga desire a Tongan-style democracy, which both retains the monarchy and provides a more significant voice to ordinary people.

1.2 Recent history

Captain James Cook arrived in Tonga from Great Britain in 1773 and returned in 1777, naming Tonga 'the Friendly Islands' because the inhabitants treated him so well (Martin, 1991). Civil war erupted in the 1790s and continued until 1849, when Chief Taufa'ahau Tupou united the islanders into a Kingdom. Tupou, who was chief of Ha'apai, had converted to Christianity in 1831 and renamed himself George IV, after the British King (Kaeppler, 1999). In 1845 Tupou proclaimed himself King George Tupou I, and founded a dynasty that has ruled to this day.

In 1850 the King fully united all Tongan islands, abolishing serfdom in 1862, followed by the promulgation of a constitution in 1875 (Kaeppler, 1999). King George Tupou I, who succeeded to the throne on his father's death in 1893, signed a treaty of friendship between Tonga and the United Kingdom, and in 1970 the United Kingdom made Tonga a protectorate. Queen Salote Tupou III ruled from 1918 to 1965, and her son, King Taufa'ahau Tupou IV, who currently reigns, followed her. In 1970 Tonga became completely independent of the United Kingdom, and joined the Commonwealth (Kaeppler, 1999).

To understand the influence of culture on the provision of health care services for women in Tonga, it is important to have background information about the current socio-economic, political, religious, educational and cultural contexts of the people.

1.3 Kinship and social factors

The value of family closeness and kinship is very evident on the islands Kingdom with family ties maintained over time and distance, and extending across generations. The difficulty in maintaining family ties is a source of worry and concern for Tongans, particularly when someone is separated from family for a short period of time. The concept of separation from loved ones is described as a painful situation in a Tongan's life. Being close to extended family members such as grandparents, aunts, uncles, and cousins remains very strong in the heart of every Tongan. Every member of the family is important and the family network is very strong, with the extended family often providing a strong support, which in turn fosters social harmony and the retention of traditional values (Cartmail, 1997).

Care patterns and meanings are related to kinship patterns for Tongans, and are evident in the finding that care is expressed and intertwined in the daily way of life and expressed in interactions with family and friends (Martin, 1991). Care means presence,

and this is evident in family interactions, for example, Tongans prefer to keep their elderly at home. They are under the care of their offspring and families financially and physically. When the elderly become ill there must be someone who is always present in order to give appropriate care. It is the tradition in Tonga that women care for the sick as well as for the elderly relative, as it is seen as their role. A young mother will generally leave her immediate family or take them with her, to care for an elderly mother or father. This sometimes puts a strain on the mother, because it may last for weeks or months, and in some cases women are not keen to seek health services because of this obligation.

1.4 Economic factors

Tonga is a small island nation in the Pacific with limited resources, and its economy is vulnerable, and remittances from overseas relatives are a significant proportion of many people's income (Kaeppler, 1999). The local economy is based on subsistence agriculture and fishing, which provide for nearly all of Tonga's export earnings. Important products include coconut, bananas, taro, vanilla beans, and other fruit and vegetables, as well as several varieties of fish. New export opportunities, such as selling pumpkins to Japan, have provided a recent boost to agricultural expansion. Agriculture is the main income source, receiving 40 per cent of the government development budget and constituting two-thirds of exports. The manufacturing industry is growing and tourism has become an important source of income. Limited access to adequate health care is linked to economic factors in that 32 per cent of the total population are unemployed. Many of those who are employed are in unskilled and low-income occupations. This illustrates the low economic status of many people, which usually affects their ability to obtain appropriate health care, good nutrition and safe living conditions.

1.5 Political factors

Tonga is a constitutional monarchy, unique in the Pacific. Under its constitution of 1875, the government consists of the King in privy council and cabinet, the legislative assembly and the judiciary. The privy council assists the King in the discharge of his functions and is the highest executive authority. It comprises the cabinet and any others whom the King chooses to appoint. The cabinet consists of the Prime Minister, ministers, and governors of Tonga's two provinces, Ha'apai and Vava'u. The cabinet is responsible for carrying out the decisions of the privy council. The legislative assembly consists of the ministers and two governors, nine elected representatives of the holders of the 33 hereditary noble titles, and nine elected representatives of the people (Wood, 1991). Citizens do not have the ability to change their leaders or the system of government. The King and a small group of hereditary nobles dominate political life by asserting authority largely through their control of substantial land holdings and their predominant role in the legislative assembly. The constitution allows the monarch broad powers, many of which do not require the endorsement of the legislative branch.

In addition, Tongan society is patrilineal in that land is inherited through a male heir and the land tenure system does not entitle women to hold land. It is generally recognized that the incorporation of women into positions of authority in Tonga's political domains such as the legislative assembly and the civil service is incomplete (Wood, 1991). No women have become ministers in the government and the number of women in senior ranks of the public service is limited, with no current female head of department. The majority of women in the public service are employed at lower levels, primarily clerical positions. Political factors show that Tonga is a deeply patriarchal society where men make all the important decisions and where the male is the head of the family. This shows that women experience a lower status, which usually put them at a disadvantage

with respect to health status. The lower status of women also affects their ability to access health care services because they are usually treated with little respect by health care professionals.

1.6 Religious factors

Christianity is one of Tonga's strongest traditions, and no-one may dare to suggest that Christianity is a foreign flower that was brought into Tonga by London missionaries. The constitution provides for freedom of religion, and the government respects this right in practice. Sabbath is kept holy in Tonga with observance law applied permitting no flights in or out of the country, no dockings of large vessels, no commerce or trade, and no sport on Sundays. Tongans consider religion to be very important in their lives, seeking God through prayer, and trying hard to put their religious beliefs into practice in relationships with all people. Tongan people receive a great deal of comfort and support from their religious beliefs, as they believe in the divinity of Jesus Christ, and they wish for their religion to be ever stronger (Kaeppler, 1999).

However, religious values and beliefs strongly influence the use of reproductive health care in Tonga. For example, contraceptive advice is always affected by the strong religious beliefs, especially for those people who belong to the Roman Catholic Church, Seven Day Adventists, Assembly of God and the Latter Day Saints. Tongan people who follow these religions usually believe that one of their Christian tenets is for men and women to follow the word of God and to be fruitful and multiply. In contrast, there is no word in the Bible instructing people to stop or minimize pregnancy or childbearing. On the other hand, abortion is legally and culturally inhibited in the Kingdom of Tonga (Latu, 2000).

1.7 Educational factors

The government provides free compulsory education for children aged from eight years until 14. About two-thirds of the secondary students attend church-sponsored schools. A trade school offers technical skills to post-secondary students. Athens University offers a college education, and the University of the South Pacific also has a campus in Tonga. Education is very important to both young and old and many older people sacrifice their own quality of life in order that their children can attend college. Parents of students often select sciences and technology to study because some advanced technologies such as computers have been recently introduced into Tonga and these are viewed as an important field.

Care is evident in the many sacrifices that Tongan people make in order for their children to be educated. Parents are also proud of the educational success of their children and are content with the many sacrifices they have made in order for their children to receive the best education possible. In turn, children express considerable respect and gratitude to their parents.

1.8 Cultural values and ways of life

Culturally, Tongans value the elderly (Cartmail, 1997), because the wealth of experience, knowledge and goodwill of the elderly enhances Tongan society. The elderly are the guardians of Tongan heritage, and they provide vital links between generations. In terms of knowledge, wisdom and experience they are able to contribute more pertinently than anyone else. For instance, when the researcher was growing up she observed the dignified and solemn respect between brother and sister. The brother is not allowed to enter the sister's room, and if the brother entered the house and the sister was lying down, he would leave immediately, thus showing brothers' respect for their sisters. On the other

hand, sisters outrank brothers; sisters name their brother's children, and sisters get all the best food and bark-cloth from all their brother's possessions although he is married.

In addition, the elderly are also the resources of specialized knowledge and experiences, which they share with young members of Tongan society (Martin, 1991). For instance, in the concept of 'slept close', which is the Tongan way, when the mother sleeps with her children when they are young, laying her children in her arms and telling them stories, her children will feel her love. The concept of mothering is expressed in this proverbial phrase 'mohe ofi' (sleeping close). The image is of a child lying close to his or her mother, head resting on her forearm, listening to her wisdom.

Culturally, older men are concerned with the organization and performing of the Kava ceremonies (Wood, 1991). The ritual movements used in preparing the Kava drink are passed from generation to generation via knowledge of the elderly. This kind of custom today generates and regenerates a covenant between King, chiefs and people. This is also used during sociopolitical events such as weddings, funerals and the investiture of titles. The elders teach the performers how to break up the Kava root and prepare the Kava. They teach performers how to use elegant movements of their arms and head. Other performers are the drinkers, usually men, who sit in a specific layout in a sacred performing space and are served in a specific order. Other performers are the servers and usually wear special clothing, especially waist mats.

On the other hand, elderly women focus on teaching the youngsters how to make bark-cloth and mats, which are still among the most important material objects to Tongans (Martin, 1991). Mats and bark-cloth are ranked by material and manner of fabrication. Bark-cloth is traditionally used for clothing, bed coverings, and interior decoration and ritual presentation, especially at weddings, funerals and investitures. Mats are also used for interior decoration, but mostly at weddings and funerals.

Moreover, culturally, girls are watched very carefully, as Tongan parents keep close observation on their daughters' whereabouts and seek a chaperone to accompany them when they go anywhere. Restriction on girls' movements outside the home is perceived in terms of protecting their virginity and reputation and usually continues until they marry. When girls are sent to the store after dark they are never sent alone, even if the chaperone is a young child.

1.9 Introduction to health and primary health care in Tonga

The Kingdom of Tonga is an archipelago of 170 islands scattered across a 425 kilometers stretch of the South Pacific just to the west of the International Dateline. Politically, it is a monarchy and has a total population of approximately 100,000, the great majority of whom live on the Tongatapu and 'Eua island group. The population is homogeneous, with over 98 per cent being indigenous Polynesians. Tongan is the official language, but English is widely spoken.

Tonga has one large general referral hospital and three district hospitals with an overall capacity of 307 beds. There are also 14 health centres and 33 small clinics for primary care, maternal and child health and family planning. Medical and public health services are provided free of charge.

Since 1980 the government of the Kingdom of Tonga has been pursuing the global goal of *Health for All by the Year 2000* (WHO, 1978). In this perspective, the health objective for the 1996 - 2001 period was to make essential health services available and readily accessible to all. The Ministry of Health introduced the goals of primary health care as an important program target for all Tongan people. For example, three of the objectives pertinent to this study are:

- Accounts for the health of mothers and children in the reduction of the crude birth-rate by providing non-surgical family planning services that are based on

a harmonious balance between respect for the individual and motivation strategies.

- Applies the concept of risk in nursing practice with pregnant women, in order to promote safe motherhood; and to reduce the maternal mortality rate.
- Administers the immunization program efficiently and analyzes progress towards the target of complete immunization (Latu, 2000).

The Ministry's MCH/FP divisions have traditionally provided primary health care programs, although it has inevitably overlapped with other divisions of the ministry, other government departments and non-government organizations (NGO). The Maternal Child Health/Family Planning section is responsible for mothers and babies, antenatal care and postnatal care services, child health, family planning, expanded immunization program, school health, reproductive/adolescent health, home visits and is responsible for the health of the community as a whole. However, the major role of the Maternal Child Health/Family Planning is to improve maternal and child health through the use of the primary health care approach. This involves family planning services with the aim of reducing the crude birth-rate and problems associated with rapid population growth. Another aim is to encourage every pregnant woman to attend antenatal care programs at 8 to 12 weeks of gestation so that medical staff can detect high-risk pregnancies and abnormalities such as pre-eclampsia or antepartum haemorrhage.

However, despite the attempt made by Maternal Child Health/Family Planning services recently, the health situation in Tonga, including those aspects that relate to safe motherhood, reflects the fluctuating socio-economic climate of the country. For example, according to the available statistics in 2001, the life expectancy at birth was 75 years for both sexes. The crude birth-rate increased from 24.8/1000 live births in 1999 to 26.3/1000 live births in 2001 and the crude death rate also increased from 3.8/1000 to 4.3/1000 of

the total population. The infant mortality rate declined from 14.2/1000 live births to13.1 live births (refer to Table 1, p.11).

19.1Table 1
Vital statistics 1997, 1999, 2001. Ministry of Health: Tonga

	1997	1999	2001
Total population	97,955	97,269	101,023
Households	17,262	21,007	15,904
Crude birth rate	26.4/1000	24.8/1000	26.3/1000
Contraceptive prevalence rate	30%	32.8%	33.9%
Infant mortality rate	16.2/1000	14.2/1000	13.1/1000
Perinatal mortality rate	15.5/1000	11.1/1000	16.9/1000
Stillbirth rate	13.8/1000	9.2/1000	15.8/1000
Maternal mortality rate	118.5/100,000	40.0/100,000	77.5/100,000
Crude death rate	4.6/1000	3.8/1000	4.3/1000
Antenatal coverage	98.8%	98.6%	98.1%
Postnatal coverage	96.4%	97.4%	95.2%
Hospital deliveries	95.0%	96.7%	93.9%
Home deliveries by others	5.0%	3.3%	6.1%
Immunization coverage	94.6%	94.8%	95.2%
Exclusive breastfeeding 0-1 month	72.7%	73.0%	76.5%

Source: Adapted from year-end review reports, public health section: Tonga Ministry of Health

Apart from complications of pregnancy and childbirth, most frequent hospitalizations are related to diseases of the respiratory system, infectious disease and injuries. The most frequently identified causes of mortality include diseases of the circulatory system, neoplasms, infectious diseases of the respiratory system and diseases of the digestive system. However, the maternal mortality ratio (MMR) has dramatically increased from 40.0/100,000 in 1999 to 77.5/100,000 in 2001 (see Table 1). It is of

concern that this dramatic increase in MMR is occurring at the same time as home deliveries have also almost doubled. Additionally, the number of complicated pregnancies was likely to be increased, coinciding with an increase in stillbirth and early neonatal mortalities (Vital Statistic. Tonga Ministry of Health Reports, 1997 - 2001).

Moreover, there is a satisfactory level of awareness of family planning methods within the society, mainly due to widespread publicity about contraception. In 2001, 33.9 per cent of all couples reported that they practised some form of contraception. A recent survey by Latu (2000) showed that the four most common factors for not using contraception in Tonga were: a) lack of contraceptive knowledge; b) inadequate access to services; c) socio-cultural beliefs and the Tongan value for having large families; and d) concern about contraceptive side effects.

1.10 Specific role of the Maternal Child Health/Family Planning (MCH/FP)

This section describes the specific role of the MCH/FP services in Tonga from the perspective of the researcher who is employed at public health section as a senior sister graduate.

The Maternal Child Health/Family Planning program in Tonga is an integral part of the Ministry of Health's primary health care program. This section is responsible for the provision of health services that promote maternal and child health. The main components of the program consist of contraceptive use and family planning, immunization, antenatal and postnatal care, child growth and development, and infant and maternal nutrition. The Maternal Child Health/Family Planning section at Vaiola Hospital situated on Tongatapu, the main island, is responsible for the planning, implementation, monitoring and evaluation of MCH/FP programs. This section is co-ordinated by a public health medical officer, while the programs are implemented mainly by public health nursing personnel. The program manager is responsible for the day-to-day organization

and running of the activities and reports directly to the chief medical officer, public health division. The overall responsibility for this program rests with the office of the Director of Health who in turn reports to the Honourable Minister of Health.

The management staff of the program work closely with the senior medical officers of each of the districts, namely Ha'apai, Vava'u, Niua's, 'Eua, Tongatapu, in co-ordinating the program activities at all levels. In the rural health centres and MCH/FP clinics, public health nurse midwives, public health nurses and health officers implement the activities. They report the activities to the program managers through their respective Heads and Supervisors.

The Maternal Child Health/Family Planning section is responsible for introducing and redirecting primary health care programs in villages throughout the Kingdom. Its target is to make substantial, rational, rapid, and inexpensive improvements in the delivery of preventive and curative services at the community level, primarily in rural areas.

Maternal Child Health/Family Planning section also provides the education of individuals and groups, which are incorporated into the clinics. For example, at every antenatal clinic, public health nurses take turns to present short talks to waiting women about reproductive health and family planning topics, the importance of breast-feeding, and the importance of hospital delivery. Sometimes these talks are repeated in clinic time for those women who are attending the clinic later in the day.

Sometimes women attending the Maternal Child Health/Family Planning complain about services and it would be timely to conduct an evaluation of this work, investigating and reporting on issues such as client satisfaction, and how promptly antenatal and obstetrics problems are detected and managed.

Services such as family planning, provision of contraceptive pills and depo injectable, issuance of condoms and loop insertions, immunization, antenatal and postnatal care, child health, health education and counselling are available and are provided free of charge in all MCH/FP clinics. The following sections will introduce and provide a brief overview some of the important services provided by the MCH/FP clinics.

1.10.1 Antenatal care services (ANC)

Antenatal care service is provided at Vaiola Base Hospital, other hospitals in the group, and some peripheral clinics. The main objective for antenatal care is to reduce and prevent maternal and infant mortality rate. During the time of antenatal clinics, full care and management are under the jurisdiction of the public health section. Public heath nurses are the principal sources of medical, nursing and midwifery care and advice for many women throughout their lives and during pregnancy, and may be their only regular health contact. This contact grows more frequent during the course of antenatal care. Every antenatal defaulter is reported to nurses of a particular area to follow up. Nurses believe that follow up of a defaulter is the only way to reach their main objective of reducing and controlling high risk pregnancies, and to reduce stillbirth, perinatal, and maternal mortality rate which have almost doubled since 1999 (see Table I).

1.10.2 Postnatal care services (PNC)

The postnatal clinic is usually followed by an assessment that physiological changes during pregnancy have reverted to the non-pregnancy stage. This is the time when nurses first try to introduce family planning methods. During postnatal clinics, nurses encourage and advise women to continue exclusive breast-feeding of their babies. Nurses also provide the infant immunization on postnatal dates at Vaiola Base Hospital and out in the community for defaulters. Postnatal care coverage has also decreased since 1999 (refer to Table 1).

1.10.3 Immunization

Following the World Health Organization's recommendations on eliminating infectious diseases such as malaria, poliomyelitis, diphtheria, measles, tetanus and whooping cough through immunization campaigns (AbouZahr, 1998), immunization is a well-established practice in Tonga, which has maintained high coverage since 1990. The main objectives of Maternal Child Health and Family Planning services are to provide immunization to all children up to five years so that the expanded program of immunization (EPI) targets diseases are effectively eliminated or ceased in the country. Tonga is one of the countries in the Pacific that was declared polio free in 1995. Two teams of nurses who visit areas according to pre-arranged schedules conduct selective primary care for disease control immunization. The public health nurses of the particular area join the team to conduct vaccination sessions, village to village. A megaphone is used to call mothers to bring babies to the vaccination sites. The round is generally completed in each region within seven to eight days with the exception being one of the outer islands. Immunization rounds on the main island and the remainder of the outer islands are conducted every two months. The remote islands round is dependent upon weather, and availability of a boat.

1.10.4 Breast-feeding

As stated by the World Health Organization, breast-feeding is the healthiest and safest way to feed infants because the nutrients from breast milk protect a child from illness in the first year of life and are paramount for the child's future development (Kirwin, 1998). Another major objective of the Maternal Child Health/Family Planning services in Tonga is to inform every pregnant mother about the benefits and management of breast-feeding. All the Maternal Child Health staff concerned with this program use radio and television programs, printed pamphlets, and regular health talks at the antenatal

clinics and maternity wards. Maternal Child Health nurses focus on the brief period of antenatal care to encourage and teach pregnant mothers how to breast-feed, and how to maintain lactation even if they should be separated from their infants. The nurses also show mothers how to initiate breast-feeding within half an hour of birth and advise mothers to give newborn infants no food or drinks other than breast-milk, unless medically indicated. Usually, the Maternal Child Health and Family Planning sections encourage staff concerned with the provision of maternity services to review policies and practices that affect breast-feeding.

Recently, the responsibility for the delivery of the program on breast-feeding has moved to paediatric wards. Staff ensure that no formula is available in the postnatal ward except to sick babies. Although obstetric staff assist women on the postnatal ward, they are going home sooner than they used to and consequently many have barely established breast-feeding. The paediatric section consider that there should be in-service training for staff about breast-feeding every one to two years, and that this should be a continuing co-operative effort between paediatrics, obstetrics and maternal child health sections. This is because the public health nurses are the key persons for keeping women breast-feeding longer.

1.10.5 Adolescent health: Reproductive and sexual health status

Adolescence is an exciting but vulnerable stage of life for Tongans. Every effort should be made by health professionals to enable teenagers to cope effectively with the tumultuous changes they are experiencing. In Tonga, there is evidence of the changing cultural values brought about by increased urbanization and exposure to foreign cultures through migration, tourism and the mass media. A 1996 review of Tongan health highlighted several aspects of adolescent reproductive health. Young women are maturing earlier, menstruating earlier and are sexually active at an earlier age, and associated with

this is the increased incidence of teenage pregnancies and sexually transmitted diseases which have a profound effect on them physically, psychologically and socially (Latu, 2000). Tongan culture has strong beliefs that pregnancy should only occur in marriage. The increased incidence of sexually-transmitted diseases and unplanned teenage pregnancy (Latu, 2000) has alerted the Ministry of Health in Tonga to recognize the lack of service provision for this particular age group.

The Tongan government recognizes the importance of the healthy development of young people as an investment in socio-economic development, and supports programs that promote young people's welfare including their health (Latu, 2000). It also recognizes the fact that these young people will become the parents of the next generation and therefore must be given every opportunity to develop their full potential in all aspects of human development.

The Maternal Child Health/Family Planning section is responsible for providing education and clinical services for the Tongan community as a whole. The adolescent reproductive health education service is committed to providing accurate and appropriate health information for all teenagers in assisting them to cope effectively with adolescent health issues.

1.10.6 Family planning (FP)

Childbirth is a celebrated event in many cultures of the world, an occasion for happiness and gift-giving. Yet for many women, it is a grim experience, unpleasant, and dangerous (Kirwin, 1998). Since the introduction of contraception many women have been relieved of the burden of unwanted pregnancies, but more importantly, individuals are allowed the right to decide in advance on the size of their families (Latu, 2000). The main objectives in family planning are: to provide maternal and child health care; to slow

rapid population growth by using family planning methods; and to protect the environment by maintaining sanitation, safe water supply, and reducing the birth rate.

Although there is some fragmentation of the FP service, it provides an opportunity for women to choose whether to attend Maternal Child Health/Family Planning centre, public health nurse clinics in the villages, or Tonga family health and several private doctors' clinics.

The contraceptive prevalence rate (CPR) remains low with 34 per cent of women using contraceptives in 2001, which is a small increase from 32 per cent CPR coverage in 1999 (see Table 1). Family planning in Tonga is a very complex problem, because reproductive and social health is a human right, and nurses must take into account Tongans' cultural and religious beliefs. People or the community believe that nurses are doing an effective job because they have tried different approaches that target specific groups of clients, for example, advising men of the proper way of using the condom and where to get their supply. Nurses have used the basic principles involved in family planning counselling based on information that includes direct questioning about current and past use of contraception. Clients are guided to make a well informed and voluntary choice that is best suited to their individual needs. In addition, choice of methods is dependent on the availability of methods provided by the clinic.

The present study seeks to examine the perceptions of women towards the current health services provided by MCH/FP centre. Such information may assist the Tongan Health Authority to identify reasons why figures (vital statistics) in Table 1, which are reported by ministry's public health section, were almost all significantly increased in the year 2001. It is invaluable to identify where the MCH/FP services stand - the current provision and consequences, and where it should be - the desired provision and

consequences. Absence of this fundamental information impedes efforts to develop, plan and implement effective support for this population.

1.11 Research aim and purposes and questions

Aim

The aim of this research is

To explore and describe women's perceptions of the Maternal Child Health and Family Planning services in Tongatapu, the main island in the Kingdom of Tonga.

Purpose

The purpose of this study is:

1. To provide information to the Tonga Health Authority via the principal public health nurse manager regarding the perceptions of women toward current MCH/FP services; and
2. To assist the Tonga Health Authority to develop strategies and services that are responsive, more effective and accessible to women who utilize MCH/FP services.

Research questions

1. What are womens' perceptions of the services provided by the MCH/FP centre in Tonga, including:
2. What is the profile of women who utilize this centre?
3. What are the feelings of participants regarding utilization of services provided by the MCH/FP centre?
4. What are the factors that influence the utilization of family planning and contraceptives?
5. What are the barriers to utilization of MCH/FP services?

1.12 Structure of the thesis

This thesis is presented in five chapters. Following on from the introduction in Chapter 1, the review of literature based on the World Health Organizations (WHO) recommendations and health needs including primary health care, and reduction of maternal mortality particularly for developing countries, as well as research on various cultures regarding common causes of maternal deaths due to lack of access to the maternal health services, and the theoretical framework are presented in Chapter 2. In Chapter 3, the research design and methods are identified, and the development of the survey tool is described. The results of the survey are presented in chapter 4. Chapter 5 provides the conclusion and a discussion of the overall findings of the study, the significance and implications of the findings for nursing practice, health services delivery and future research.

Chapter 2: Literature review and theoretical framework

2.1 Introduction

This study examines the perceptions of Maternal Child Health and Family Planning (MCH/FP) services by women living in both urban and rural areas in Tongatapu, the main island in the Kingdom of Tonga. Having reviewed the literature, the researcher was unable to locate any studies which specifically focussed on health services for women in Tonga. A possible explanation for the absence of a written account is that knowledge gained and disseminated in Tonga relies heavily on oral tradition. In addition, Tongans are an understudied population in health research. Often their reported lower utilization of health care services and participation in clinical trials has been attributed to socio-economic factors, religious and cultural beliefs (Mikhail, 1999).

Traditionally, women's health services have focussed on reproductive needs, especially contraception and safe childbirth. In any society, women's health services recognize the diversity of women's health needs over the span of their lives and how these needs reflect differences in race, class, ethnicity, culture and access to health care (Kirwin, 1998). Women's health has drawn on research from various disciplines including health care education and social studies. However, for the purpose of this study, the review of literature is mainly concerned with three factors, namely; primary health care (PHC), the World Health Organization's (WHO) recommendations on health needs; and research on women's health in various cultures. The literature review will also describe Leininger's Sunrise Model (1991), which provides the overall framework for conducting the current study. Although, Leininger's Sunrise Model applies to the study of people of diverse cultures, the current study sought to apply this model to the Tongan health system as a guide which will assist in the interpretation and expression of health care in the context of the dominant culture, incorporating Tongans' religious and cultural beliefs,

values, and meanings associated with barriers that may inhibit Tongan women from utilizing the MCH/FP services.

2.2 Primary health care (PHC)

The Declaration of Alma-Ata in 1978 marked a turning point in the World Health Organization's work for the development of worldwide health services, particularly in developing countries. In setting the goal of 'health for all' peoples of the world by the year 2000, the Alma-Ata conference identified primary health care as the means of achieving this goal. Primary health care is based on the idea of 'essential health care, based on practical, scientifically sound and socially acceptable methods and technology, made universally accessible to individuals and families in the community through their full participation and at a cost that community and country can afford to maintain' (WHO, 1978: 3).

The Declaration went on to state that primary health care should 'form an integral part both of the country's health system, of which is the central function and main focus, and of the overall social and economic development of the community' (WHO, 1978: 3-4). The Declaration suggested that a primary health care approach could contribute greatly to freeing all people from avoidable suffering, pain, disability and death. In that historic meeting, the nations of the world committed themselves and their resources to the achievement of health for all by the year 2000 through primary health care (Anderson & McFarlane, 1996).

'Health for all' is a goal as valid in the twenty-first century as when it was set by the World Health Organization Assembly in 1978. The health for all era was from its very beginning based on the defining principles of social justice and equity. In Alma-Ata, the World Health Organization original definition of health as 'a state of complete physical, mental and social well-being and not merely the absence of disease,' (WHO, 1978:3) was

revised on the basis of the newer understanding of health and its many component parts. According to World Health Organization, health was now to be defined as 'a state of enough physical, mental and social well-being to enable people to work productively and participate actively in the social and economic life of the community in which they live' (WHO, 1978:4). A major consequence of this new definition is that every nation is now challenged to provide a basic level of health for all its citizens so that they are able to lead socially and economically productive lives (Gulzar, 1999).

In addition, primary health care encompasses the essential components of promotive, preventative, curative, supportive and rehabilitative care. Health promotion and illness and injury prevention are emphasized in a primary health care delivery system and access to care for individuals, families, and communities are assured through each essential component of care (Anderson & McFarlane, 1996). It is expected that acceptable and appropriate methods and technologies demonstrate effectiveness in addressing a known health challenge. Although the preferred method for testing outcomes is the scientific method, other acceptable ways of knowing include authority and tradition, inspiration and intuition, trial and error, and logical problem solving (AbouZahr, 1998). In a primary health care delivery system, full client participation is not only respected but also encouraged and supported. Through negotiating and networking, clients and health care providers form partnerships with people from other sectors so that essential health care needs can be addressed.

2.2.1 Elements of primary health care

The Declaration at Alma-Ata defined eight essential elements of the primary health care approach. Although applied differently around the world, the eight elements remain valid for all countries, whatever their level of socio-economic development. As envisioned at Alma-Ata, the priorities in PHC should be:

(i) Education concerning prevailing health problems and the methods of preventing and controlling them;

(ii) Promotion of food supply and proper nutrition;

(iii) An adequate supply of safe water and basic sanitation;

(iv) Maternal and child health care including family planning;

(v) Immunization against the major infectious diseases;

(vi) Prevention and control of locally endemic diseases;

(vii) Appropriate treatment of common diseases and injuries; and

(viii) Provision of essential drugs (WHO, 1978:4).

Due to the time frame of a master degree, this study is limited to dealing specifically with one of the above mentioned elements, namely the integration of maternal and child health care including family planning services, and the perceptions of women about these services.

2.3 World Health Organization health criteria

According to the World Health Organization, a primary health care system should provide its eight essential elements (listed in 2.2.1) for the entire population. This study deals specifically with reduction of maternal mortality (particularly in developing countries) through integration of maternal and child health care services including family planning.

2.3.1 Maternal mortality reduction

Maternal mortality can be seen as an indicator of how well health systems are functioning in relation to women's health needs. The maternal mortality rate is defined as the annual number of deaths of women from pregnancy-related causes per 100,000 live births (Shen & Williamson, 1999). In practice, the definition used is not consistent between countries, particularly with regard to including abortion-related deaths. If the

definition of maternal mortality is to include all deaths due to pregnancy and childbirth, it must include deaths taking place before childbirth (for example, due to abortion), those taking place during childbirth, as well as deaths taking place some time after the actual event of childbirth. However, a large number of maternal deaths signal that health systems, policies and programs are failing to address women's overall reproductive health needs (Kirwin, 1998). Monitoring maternal mortality is a first step toward developing policies and programs to reduce and prevent its occurrence.

According to estimates by the World Health Organization, the dimensions of the problem of maternal mortality are greater than was originally thought. For example, it has been shown that each year, worldwide, there are half a million women whose deaths were caused by complications during pregnancy, delivery or puerperium (AbouZahr, 1998). The World Health Organization also found that maternal mortality is a good indicator to demonstrate the large discrepancies between developed and developing countries. For instance, while infant mortality is almost seven times higher in developing countries, maternal mortality is 18 times higher. Up to one-third of all deaths of women of reproductive age in many developing countries are the result of complications of pregnancy and childbirth (AbouZahr, 1998). The current study focuses on maternal mortality in developing countries, specifically the islands of Tonga.

The World Health Organization has recommended and reiterated as its major goal the reduction of maternal mortality by 50 per cent in the year 2000 (AbouZahr, 1998). The goal is to build and develop essential practice guides for the care of pregnant women. For example, antenatal care should include tetanus immunizations as well as screening tests for syphilis. It was also intended that these guides describe the elements of care that must be in place before others are introduced into the health care system. An example of this would be the education of pregnant mothers on how to exercise adequate nutrition,

proper personal hygiene, and appropriate antenatal exercises. Other issues include the encouragement of pregnant women to understand the importance of regular attendance at their antenatal clinics, to encourage pregnant women to have their babies at health facilities, and to have babies delivered by trained personnel.

Based on the health statistics monitored by the World Health Organization, it has been shown that little progress has been made towards the target for the reduction of maternal mortality, particularly in developing countries (Kirwin, 1998). The World Health Organization has identified a number of factors which have contributed to a failure to achieve reproductive health. These factors include: (a) inadequate level of knowledge about human sexuality; (b) inappropriate or poor quality of reproductive health information and services; (c) discriminatory social practice; (d) negative attitudes toward women and (e) the limited power many women have over their own sexual and reproductive lives. Based on these factors, the World Health Organization has urged developing countries to take all measures necessary to reduce maternal mortality, for example, to ensure universal access to health care services, including those related to reproductive health care as well as access to safe, effective, affordable and acceptable methods of family planning (Kirwin, 1998). The World Health Organization also identifies that overall women's health is recognized as being linked to their educational, economic and social status. Furthermore, if there are any economic or social constraints, the emotional and cognitive capacities of women themselves may limit their access to health care (Kirwin, 1998).

The World Health Organization, United Nations Children's Fund (UNICEF), World Bank, United Nations Population Fund, and other Non-Government Organizations have identified that the absolute value of the maternal mortality ratio is not important for programming or planning purposes of why women are dying from pregnancy-related

complications (Kirwin, 1998). Maternal mortality may be due to women's inability to reach appropriate health services because the services do not exist or are inaccessible for reasons of distance, costs, social or cultural barriers. It has also been suggested that the care received in health services are inadequate, inappropriate or substandard for women (AbouZahr, 1998).

In Tonga, despite the fact that over 90 percent of births are delivered at hospital, home delivery remains an issue with a significant increase in their occurrence since 1999 (see Table 1, p.11). The Ministry of Health continues to seek to understand why some women choose to deliver their babies at home. The answer to this question would be very helpful in knowing how to approach this issue, because home delivery in the remote areas of Tonga is associated with an increase in maternal deaths. Maternal deaths have remained fairly static for several years, even on Tongatapu, (the main island) despite transport being available for most women to easily get to Vaiola Hospital for delivery. However, home deliveries have increased, particularly in the outer islands, and may be explained as due to distance, bad weather, and the unavailability of a boat or other form of transport. Consequently, home delivery remains very popular for some pregnant women because this is where they are able to call for their own favourite traditional birth attendant. It is an ongoing issue because most complications, for instance, post partum haemorrhage and retained placenta, usually occur at home deliveries that were attended by the traditional birth attendants who have no formal medical training.

The traditional birth attendant is usually a member of the community who shares the health beliefs and customs of the family she is attending. They also share their traditional practices that they believe protect the mother and child and include delivery in a safe place, such as their own huts, where it is not sufficiently clean or safe for delivery. The traditional birth attendants mostly practice herbal or Tongan medicine as well as

promoting home delivery. However, because little is known about the actual practices and rituals of the traditional birth attendants, it is unclear what kind of training they might need to ensure the safety of mother and baby.

2.3.2 Research in different cultures

Up to now, most research projects in this field (maternal mortality) have been conducted in western countries (Hollander, 1997). This could be explained by the fact that these regions are able to conduct many studies that have demonstrated an association between lack of antenatal care and adverse pregnancy outcomes such as maternal and perinatal mortality (Hollander, 1997). These studies also address common barriers related to maternal mortality that may prevent women from utilizing health services.

2.3.3 Maternal mortality

According to what is considered the most reliable data source currently available (WHO, 1996), approximately 585,000 women died globally in 1990 from pregnancy-related causes. Rates of maternal mortality show a greater inequality between rich and poor nations than do any of the other commonly used public health indicators, including infant mortality rate, the indicator which is most often taken as the primary measure of comparison disadvantage (Royston & Armstrong, 1989; WHO, 1996). Women who become pregnant in developing countries face a risk of death due to pregnancy that is from 80 to 600 times higher than women in developed countries (United Nations, 1991).

Maternal mortality is a particularly sensitive indicator of inequality and social development as well as health (United Nations, 1991). Due to the importance of maternal mortality as an indicator of social development for developing countries, the World Health Organization and the United Nations have identified a reduction in maternal mortality as a goal for the health of women and children. Reduction of maternal mortality

has also been described as one of the major public health goals at several international conferences, for instance at Cairo in 1994 (WHO, 1996).

Among the major direct causes of high maternal mortality in developing countries are births not being attended by trained personnel, and lack of availability or access to antenatal services among pregnant women (United Nations, 1991). Much of the literature on maternal mortality focuses on its medical, social, and cultural causes that vary among countries and geographical regions (Fortney, Susanti, Gadalla, Saleh, Rogers, & Potts, 1986; Hertz, Hebert, & Landon, 1994; Walker, 1986). It is worthy of note that from studies on maternal mortality in developing countries, three important issues that impact on maternal mortality have been recognized. These are explained in the following section.

2.3.4 Identification of key perspectives that impact on maternal mortality

The first issue is the impact of women's status on maternal mortality. Maternal mortality tends to be attributed to causes such as poverty and underdevelopment, typically assumed to put men and women at the same disadvantage with respect to health status (Kirwin, 1998). The second is the effect of economic dependency and globalization of the world economy on maternal mortality in developing countries. For example, large numbers of women in developing countries are victims of industrial development in that the type of employment available to them often marginalizes women into the low-paying informal economy (Ward & Pyle, 1995). In addition, Albrecht, Maureen, Usha and Diesfeld (2000) assert that in societies where the status of women is low, women usually have too many children, start childbearing too early, end childbearing too late and the children are too close together. The third issue is the unwanted pregnancies, which have been found by researchers to contribute to the occurrence of many maternal deaths because women are having more pregnancies than they want, leading to fatal abortion (Royston & Armstrong, 1989). The only statistics found have shown that at least 300

million couples in the Third World do not want any more children but are not using an effective means of limiting family size (UNICEF, 1990). If women were able to avoid unwanted pregnancies by exercising contraception, at least a quarter of maternal deaths could be avoided (Royston & Armstrong, 1989).

A number of studies (Freedman, 1982; Tolnary & Christenson, 1984; Shen & Williamson, 1999) have confirmed the significant role family planning programs have on lowering fertility statistics, which, in turn, may contribute to a decline in maternal and child mortality. Although modern family planning methods make it far easier to limit unwanted pregnancies, the acceptance and availability of family planning methods are nevertheless uneven. Research has revealed that in many patriarchal societies men do not allow women to practice family planning (Freedman, 1982; Tolnary & Christenson, 1984; Shen & Williamson, 1999).

2.3.5 Antenatal care and maternal health services

Many studies have demonstrated an association between lack of antenatal care and adverse pregnancy outcomes such as maternal mortality, perinatal mortality, low birth-rate and premature delivery (Anandalakshmy, Talwar, Buckshee & Hingorani, 1993; Coria-Soto, Bobadilla & Notzon, 1996; Fawcus, Mbizvo, Lindmark & Nystrom, 1996; Hollander, 1997). Regular antenatal care is important for identifying women at risk of adverse pregnancy outcomes and for establishing good relationships between women and their heath care providers (World Health Organization, 1994). Antenatal care can also be used as an opportunity to provide tetanus immunization, iron and folic acid tablets, and nutrition education.

Tsu (1994) states that in developing countries, where most women deliver outside the formal health sector, antenatal care is important in detecting women with elevated risk of delivery complications so that they can be advised to seek medical care for delivery.

The results from Tsu's study conducted in Zimbabwe showed that women who have elevated risks of pregnancy and delivery complications are teenagers because their bodies are not fully mature (Tsu, 1994). Miller, Lesser and Reed (1996) also assert that lack of antenatal care, rather than biological inefficiency, may be responsible for complications such as pre-eclampsia, anaemia and low birth weight among teenage and unmarried mothers.

The type and quality of antenatal care that women receive is important. A study conducted in the Philippines found that receiving fewer components of antenatal care was associated with increased perinatal death (National Statistics Office & Macro International, 1993). Low frequency of visits or late timing of the first antenatal visit are undesirable because they limit the amount and quality of care that a pregnant woman receives. A study by Coria-Soto, Bobadilla, and Notzon (1996) found that an inadequate number of visits was associated with a 63 per cent higher risk of intra-uterine growth retardation.

There have been many health practitioners questioning the effectiveness of antenatal care in reducing the risk of poor pregnancy outcomes (Munjanja, Linmark & Nystrom, 1996). Specifically, questions have been raised about the effectiveness of individual components such as maternal weight and blood pressure measurements, and the number of visits. Many developing countries have adopted the antenatal care program that was recommended by the British Government more than 70 years ago (Beverly, 1999). In this program, pregnant women make monthly visits up to 28 weeks, followed by visits every fortnight up to 36 weeks, and then weekly visits thereafter. Assuming that a first visit is made during the third month, a woman would be expected to make between 12 and 13 visits in total. The basic content of such programs include history taking,

abdominal palpation, blood pressure and maternal weight measurement. Other components include laboratory tests such as a test for blood group typing.

In many developing countries, the use of maternal health services varies according to socio-economic status, ethnicity, geographical region, and demographic factors. For any country, the identification of subgroups of women who use or do not use maternal health services is important for policy and intervention strategies. Obermeyer and Potter (1991) in their study on the use of maternal health services in Jordan, found that higher levels of education were associated with greater use of antenatal care, while larger numbers of children in the household and rural residence were associated with less use of antenatal care. Another study of the elements of maternal health care conducted by Bhatia and Cleland (1995) confirmed the association between socio-economic factors and the use of maternal health services. Higher levels of maternal education, and higher standards of personal hygiene were associated with increased use of antenatal care services. Demographic factors were also observed to play an important role, for example, mothers aged 18 years and under were less likely to have antenatal care, while first order pregnancies were more likely to receive antenatal care (Bhatia & Cleland, 1995).

Variation in the use of maternal health services can also be present at the individual level depending on the circumstances of the pregnancy. For example, pregnancies that are mistimed or not wanted are associated with irregular and later antenatal care visits than in pregnancies, which are wanted (Joyce & Grossman, 1990). However, in normal circumstances, there is an expectation that health-seeking behaviour will be homogeneous at the personal level. That is, a woman who uses antenatal care for one pregnancy is likely to use the service for subsequent pregnancies.

The homogeneity of health seeking behaviour can also occur at the community level because of common traditional beliefs held by women or because they live very close to a health facility (Shen & Williamson, 1999). Traditional beliefs apply to women in some cultures who may not use antenatal care because of the perception that the modern health sector is intended for curative services only. On the other hand, many women may not know that antenatal care is for monitoring the growth of the baby and the health status of the woman.

2.3.6 Research literature

Despite the lack of literature in the Kingdom of Tonga, some relevant research studies have been conducted in western countries. Mikhail (1999) conducted a study to describe the experiences of 126 low-income African-American women with antenatal care and to determine their perceived impediments to utilizing health services. Mikhail identified the major barriers to accessing the health care as lack of transport, long waiting time to see nurse/physicians, having too many other problems and fear of staff finding out about the women's use of substances. In addition, there were additional impediments reported, such as substance abuse, fear of medical examination, the belief that antenatal care is not necessary, already knew of pregnancy, and no babysitter for other children.

Kielich and Miller (1996) conducted a study in North America exploring the cultural experiences of Arab-American women. They identified themes including religious beliefs, that God is the cause of all that is, gender differences in susceptibility to illness and treatment modalities, reliance and trust in the superiority of United States health care providers, and desirability of change. They also identified a lack of knowledge about reproductive health, and a lack of understanding of prevention services as barriers to accessing health care systems.

Kulwicki and Cass (1994) conducted a study on knowledge, beliefs, and behaviours of 411 Arab-American women. The identified barriers to using health care services including language barriers, cultural barriers related to modesty and embarrassment in exposing one's body to strangers, religious practices, gender preferences in seeking and accepting health care from male or female providers, strong family value related to not exposing family problems to outsiders, folk practices values with regard to honour and shame and barriers related to stresses of immigration and acculturation.

2.3.6.1 Cultural competence

Several authors have defined cultural competence and have developed models for providing culturally competent care for health care providers. Drew (cited in Anderson & McFarlane, 2000) defined cultural competence as the provision of health care that incorporates understanding of and respect for another culture. Camphina-Bacote (1998) defined cultural competence as a process in which the health care provider continuously strives to achieve the ability to work effectively within the cultural context of a client, individual, family or community. Meleis (1999:12) defined culturally competent care as 'sensitive to the differences individuals may have in their experiences and responses due to their heritage, sexual orientation, socio-economic status, ethnicity, and culture'. The above authors viewed cultural competence as a process, on a continuum ranging from culturally destructive to culturally competent. On this continuum, they identified several phases through which agencies move to become culturally competent. The phases they identified are cultural destruction, cultural incapacity, cultural competence, and cultural proficiency.

Currently, in Tonga there remains some misunderstanding by doctors in respect to the doctor and patient relationship (Freund & McGuire, 1995). Doctors control every aspect of the health services and make all the health service decisions for the country. Many doctors consult and give instructions in a one-way communication rather than take time to converse with their patients (Karlsen & Nazroo, 2002). They sometimes do not spend time listening to patients or families and ignore nurses. There are some who do not provide adequate information regarding patients' health status, that would allow patients to have informed options (Mechanic, 1986).

However, the process of cultural competence care is quite unusual for the majority of health care providers in Tonga, and the close association between high authority people (such as medical officers) and the lower socio-economic people, has brought about traditional behaviours linked to hierarchy, power structure and the dominant culture of Tongans.

2.4 Theoretical framework

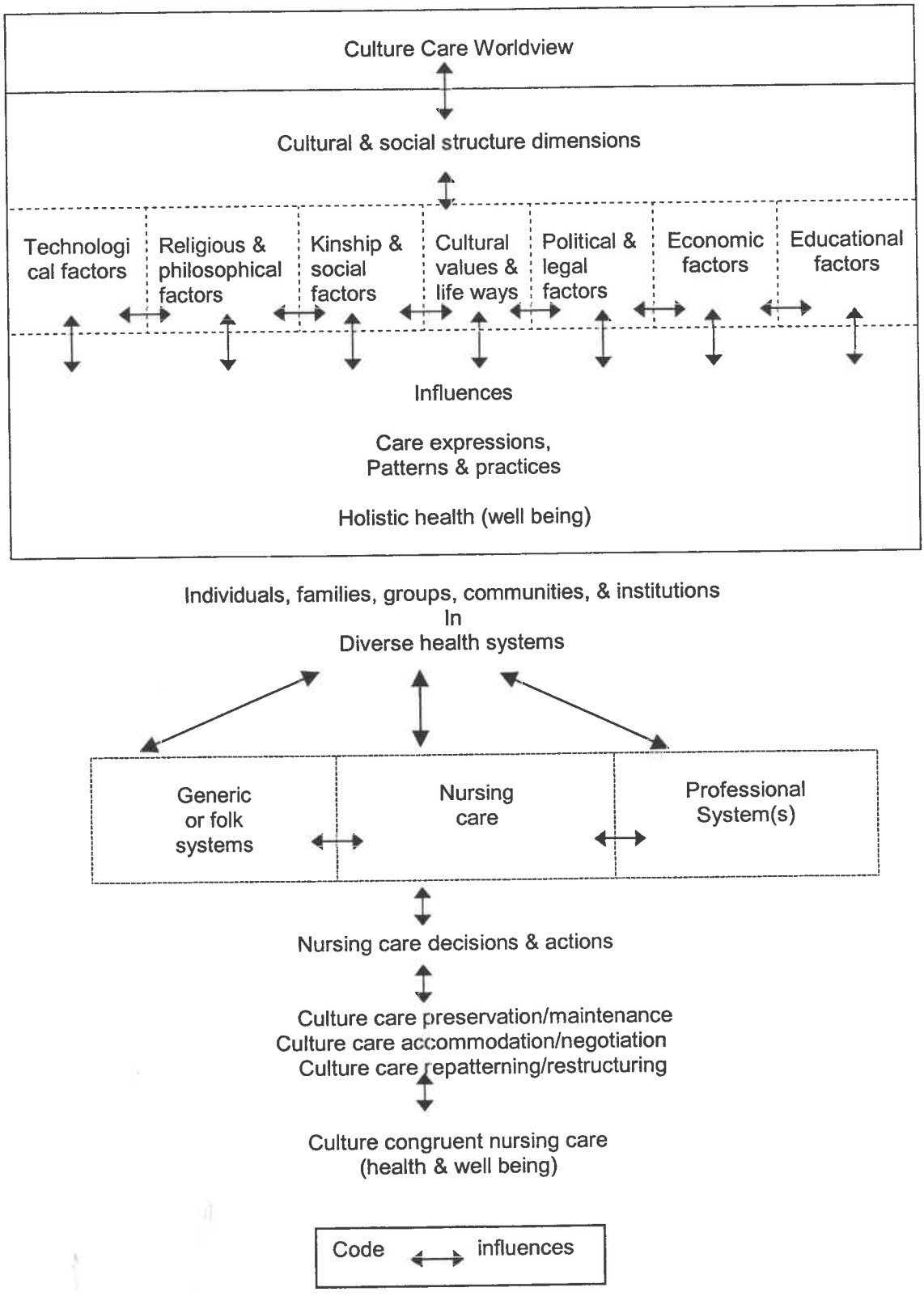
Leininger's (1991) theory of culture care diversity and universality (Figure 1) has been selected as the theoretical framework for this study. The central construct of the theory is cultural care in diverse and similar cultural contexts. Leininger discovered that care is essential for growth and well-being, and is a priority in the survival of human beings. The goal of her theory is to improve the quality of nursing care to people of diverse cultures through the provision of culturally congruent nursing care that is meaningful to the people. Leininger identifies three nursing care modes, which are used to guide nursing decisions and actions to achieve culturally congruent care. The three modes are: (i) cultural care preservation; (ii) cultural care accommodation; and (iii) cultural care re-patterning or restructuring (Leininger, 1991). Cultural care preservation means maintaining family and kinship involvement as caring modes, supporting a client's

religious belief, and preserving generic folk practices. Cultural care accommodation focuses on accommodation of religious values and cultural lifestyles, accommodation of generic folk beliefs, and negotiation about professional versus traditional care. Cultural care re-patterning or restructuring is to restructure by combining professional nursing care with generic folk practices, and to change areas in which nurses do not know about health care needs and context.

Leininger gained experience and knowledge from her various studies conducted on many diverse cultures. She developed her model which she based on the belief that different cultures around the world can receive the appropriate care they desire or need from others, especially nurses (Tomey & Alligood, 2000). In addition, most countries and communities of the world are now multicultural, so health personnel are expected to understand that each culture has different meanings, experiences and beliefs. It can be argued that nurses cannot separate worldviews, social structure and cultural beliefs because they are always linked together.

Basic to successful interaction between clients and health providers is the understanding that individuals are all different from one another, with different ethnic and cultural backgrounds. But despite our differences, we all come together at the same point so as to achieve a common health goal: to maintain or regain health (Leininger, 1995). The concept of culture is seen as an excellent example of beliefs and expectations shared by individuals in diverse communities (Anderson & McFarlane, 2000). Cultural beliefs also give meaning to health and illness experienced by providing the individual with culturally acceptable causes for illness, patterns of seeking help and desired outcomes between people (Leininger, 1995).

Figure 1



Leininger's Sunrise Model to depict Theory of Cultural Care Diversity and Universality.
Culture care: Diversity and universality (p. 43). New York: National League for Nursing.

Leininger's model highlights the need to understand the crucial impact of cultural beliefs of the health care provider on clients attending health services. She suggests that nurses should value and use transcultural-nursing knowledge in their practice with a focus on human caring, health, and illness behaviours. Nurses should understand, and respond to, clients of diverse cultures to respect their values, beliefs and their ways of life.

Although the population of Tonga is largely homogeneous, the author selected Leininger's Sunrise Model, outlined in Figure 1, as the framework for assessing the perceptions of women in Tonga for MCH/FP services. In this study the position is taken that the worldviews and dimensions of social structure such as kinship, religion, education, economy, political orientation, and ethno-history in which it occurs influence cultural care.

In addition, Leininger's theory predicts that if nursing care is designed with an awareness of cultural beliefs, values and practices, it will be more satisfying, acceptable, and health-promoting to clients. It also will lead to fewer cultural conflicts, stresses, and incidences of non-compliance. Furthermore, she contends that factors such as technology, religion, kinship, cultural values, politics, economics, and education influence care and health in different environmental contexts, and expressions and patterns of care take on different meanings in different cultural contexts (Leininger, 1991). The Sunrise Model provides an overall view of the dimensions of the theory. It shows the interrelationships among the major components of the theory, and depicts the factors that potentially influence the health and well-being of clients from a subculture or culture.

A study conducted by Kleinman (cited in Anderson & McFarlane, 2000) sought to gain an understanding of the links between cultural beliefs and health and illness behaviours and actions. The findings of his study are especially helpful in guiding

community institutions. He found, like other researchers, that beliefs based in shared meanings, values, and norms are the basic guidelines people use for recognizing that something is wrong, interpreting what it might be, and organizing a plan of appropriate actions. For example, before action is taken in response to a problem, individual and family members must first agree that the symptoms represent a problem. Next, there is an examination of all possible and probable causes, which may range from behaviours and foods to violation of cultural norms. Once a cause is identified, a plan of action is made and appropriate treatment is determined. In addition, some cultures have specific norms for sick role behaviour, whereas other cultures suggest that the sick person continue to carry out his/her every day role to the best of their ability.

In this overall illness recognition and management process, cultural beliefs influence the reasons the client formulates to explain the illness. For instance, the language and terms used for communicating the health problem, the choice of whom one talks to about the problem, the range of acceptable healing alternatives, how choices are made, and lastly the expectation made for the treatment outcomes (Helman, 1994; Mechanic, 1986).

The findings of the above studies inform Leininger's (1995:104) assumptive premise that 'culturally congruent or beneficial nursing care occurs only when the individual, groups, family or culture care value, expressions or patterns are known and used appropriately and in meaningful ways by a nurse'. In professional nursing practice, nurses should work for the benefit of women, to strengthen their utilization of health care services. Nurses are required to use their cultural knowledge when dealing with women from different educational and socio-economic backgrounds. This means that regardless of the women's background, nurses need to respect women's cultural beliefs, values, ways of life, and their experiences.

The previous literature does not address economic factors such as the cost of doctors and prescription fees as barriers for immigrants to some western countries and especially for people from developing countries. For example, the reports from Pacific Islands Information (1995) noted that the western funded health services are seen as barriers for the Pacific Islands people, because many of them are on low incomes or without employment. The fees charged by health services are seen as too high and the Pacific Islands people will not seek medication unless they are in extreme pain or are very sick. Due to the high cost, many visit doctors as only a last resort, and never turn up for regular check-ups (Pacific Island Information, 1995).

The theory of culture care diversity and universality is used in this study to guide and describe the cultural values and socio-economic factors that influence care and health practices of women in remote and rural communities in the Kingdom of Tonga. Based on the current literature on culturally competent models of health care delivery systems, the researcher has sought to discover the health care perceptions and utilization of services by women living in Tongatapu communities. The research findings of this study will describe the perceptions of the women in relation to culturally competent care and present recommendations to key leaders in the MCH/FP sections in the Kingdom of Tonga.

2.5 Summary

This chapter reviewed the current literature concerning women's health services in three factors, namely, World Health Organization recommendations, primary health care, and research on women's health in various cultures. The evidence from the literature indicates that maternal and infant mortality rates are very high in developing countries compared to western countries. A large number of maternal deaths signal that the health systems may be failing to address women's overall reproductive health needs. Many deaths of women of reproductive age in developing countries are the result of

complications of pregnancy and childbirth. This may be due to the inability of pregnant women to reach the appropriate health services because services are inaccessible for reasons of distance, social or cultural barriers. Lack of access to adequate health care for pregnant women results in deterioration in their health outcomes. The World Health Organization has built and developed practice guidelines for the care of pregnant women and has recommended a reduction of the maternal mortality by half as its major goal.

Research literature identified three perspectives regarding maternal mortality in developing countries. Firstly, that maternal mortality is caused mostly by poverty and underdevelopment. Secondly, the effects of economic dependency and globalization of the world economy on womens' health cause that maternal mortality, and lastly, the increase in unwanted pregnancies has caused many maternal deaths.

A number of studies have highlighted the barriers to using health care services by women, that is, lack of transport, long waiting time to see nurse/physicians, fear of medical examination, no babysitter for other children, and religious and cultural beliefs. The identification of barriers allows for prioritization of these needs thus facilitating a more focussed direction for planning and development all measures necessary to ensure access to health care services. The literature review has shown that accessibility to culturally sensitive health care services and providers played a significant role in reducing infant mortality rate and maternal mortality rate. This is especially so in developing cultures. Leininger's (1991) Sunrise Model which has been selected as the basis for the investigation was described. The following chapter describes the design and methods of the present study, the instruments and procedures, and the ethical issues involved in the research.

Chapter 3: Research methodology

3.1 Introduction

In this chapter the rationale for research design, methods, participants, instruments, procedure for data collection and analysis, and ethical considerations are presented. The development of the instrument is described followed by an explanation of the survey.

3.2 Setting of the study

The setting for this study was the Tongatapu MCH/FP centre in Tonga. This centre provides MCH/FP services to the largest regions in the Kingdom of Tonga. Tongatapu, a suburb of approximately 10,745 households, is considered the centre of all the Tongan communities. It is best known as the headquarters of all government and non-government sectors in the Kingdom, and is also known to be the point of entry for internal and overseas immigrants. It is estimated that there are approximately 66,724 Tongans on the main island, with approximately 21.4 per cent (14,219) of the Tongatapu's total population being women aged between 15 - 44 years. This is an important age range because it covers the reproductive years of women. Teenage pregnancies, sexually transmitted diseases, and complicated pregnancies that are associated with maternal mortality usually occurs within this age group (Latu, 2000).

From government reports for the year 2001, the MCH/FP section of Tongan health services identified the number of women who attended the MCH/FP services as follows: (a) number of family planning users = 4,900 (34.4%); (b) number of antenatal care attendance = 1,693, that is, 98.5 per cent of total pregnancies; (c) number of postnatal attendance was 1,679, that is, 96.8 of total deliveries; (d) immunization attendance was 1,878 (95.3%) of the total number of children to be immunized; and (e) the number of children (up to one year) with one or more clinic or home visits was 91 per cent. Based on

the report made by the MCH/FP section, it was estimated by the researcher that approximately 4,900 women (34.4%) of the population met the study selection criteria.

The researcher used a power analysis to estimate the size of the sample. The power analysis revealed that a sample of 150 subjects was required to recruit a representative sample.

3.3 Research design

This is a descriptive study designed to explore the perceptions of women for the services provided by the MCH/FP centre. A self-report questionnaire was used for the study. Roberts and Taylor (2002) define descriptive designs as designs that describe phenomena in order to answer a research question. Burns and Grove (2001) state that descriptive designs are used to examine characteristics of a single sample, and are also useful when studying a variable that has not been previously studied. Burns and Grove (2001:192) also suggest that the purpose of descriptive study is to 'provide a picture of a situation as it naturally happens, ... identifying problems with current practice, justifying current practice, making judgements, or determining what others in similar situations are doing'.

A descriptive design was selected because the researcher considered it to be effective when new areas are being explored and described. The literature review revealed that no similar study had been conducted in Tonga, and there was no previous knowledge about the phenomena under investigation. In addition, descriptive design is useful in this study because it facilitates the exploration of phenomena not previously studied in-depth and for which little information is known (Munhall & Oiler, 1986).

The purpose of selecting this research method was to explore and describe the perceptions of women attending MCH/FP centre in Tongatapu for services provided by MCH/FP staff.

3.4 Methodology

The methodology used in this study was a survey, utilizing a mail-out, self-report questionnaire. A survey study is the investigation in which self-report data are collected from a sample with the purpose of describing populations on some variable or variables of interest (Burns & Grove, 1999). McCormack and Hill (1997) state that a survey is generally used when the purpose of the research is to generate findings from the proportion of a population so that generalizations can be made about behaviour, attitudes, and opinions of the whole population from which the sample is drawn. Surveys characteristically use questionnaires in which the same questions are asked of all study participants (De Vaus, 2002). Bowling (1997) states that a survey is a method of collecting information from a sample of the population of interest, either using face to face interview, telephone or self-completing questionnaire methods. This survey was concerned with self-report questionnaire rather than telephone or face-to-face interviews. It is obvious that the effectiveness of self-report survey method is entirely dependent on the participant's ability to clearly understand both the meaning and intention of the survey questions (Bowling, 1997). Unlike the verbal questionnaire or interview where the researcher essentially controls the pace and flow of data collection, and is also available to clarify questions (De Vaus, 2002), the self-report questionnaire was utilized because the researcher was in Australia and the survey was conducted in Tonga. A telephone survey was not utilized because most women do not have individual telephones at home in Tonga.

The survey, using a convenience sample of 150 participants, was employed to obtain a demographic profile of participants and to gather information about participants' perceptions of MCH/FP services including availability and accessibility of MCH/FP services, as well as satisfaction with these services. Convenience sampling is an example

of nonprobability sampling, which involves the nonrandom selection of participants based on their availability or convenient accessibility (Polit & Hungler, 1999). Though nonprobability sampling is less rigorous and less representative, leading to limitations in generalizability from the findings, it is the most frequently used sampling since it is feasible, practical and relatively inexpensive (Burns & Grove, 1999). To compensate for the disadvantages of nonprobability sampling, it is recommended that the researchers use as large a sample as possible and take steps to build representative groups into the design (Polit & Hungler, 1999). As previously mentioned in this study, a convenience sample consisting of 150 participants was utilized. It was expected that participants would be recruited from all women attending the MCH/FP clinic for a period of four weeks.

A survey may be either cross-sectional or longitudinal (Nieswiadomy, 1998). This study is a cross-sectional survey because participants were studied at one point in time, and the data was collected on only one occasion with the same participants, rather than on the same participants at several points in time (Roberts & Taylor, 2002).

This survey was conducted utilizing a postal questionnaire method which is considered a weak research method, as it is unlikely that the majority of questionnaires will be returned (Gillis & Jackson, 2002). To overcome this disadvantage each woman who attended MCH/FP centre was approached by the sister-in-charge who explained the purpose of the study. Only women who consented to participate in the study were given the questionnaire

There are several advantages in using a survey, as indicated by Roberts and Taylor (2002). One is that it can be administered to a large group of people within a short period of time. Secondly, it removes pressure for an immediate response because the survey questionnaire can be completed at the participant's leisure. Thirdly, participants who are

self-conscious about sharing feelings during interviews may be willing to provide more information via anonymous questionnaire.

However, it was hoped that results from this survey would stimulate further studies that will lead to new descriptions for the phenomenon of human experiences of the MCH/FP services and improvements in the supportive management of public health nursing practice.

3.5 Survey instrument

The instrument used to collect data in this study was a self-report questionnaire (see Appendix A). Two sections of the instrument were developed for the survey. The first section was the participant's demographic factors and the second section was for the assessment of MCH/FP services. The purpose of using instruments in a study is to facilitate variable observation and measurement, so they must be reliable and valid. Reliability refers to the degree of consistency and accuracy with which an instrument measures a variable, while validity refers to the extent to which an instrument measures what it is designed to measure (Polit & Hungler, 1999). The questionnaire used both closed-ended questions using a Likert-scale. Likert scales are used to indicate the strength of agreement or disagreement with a statement. The question contained four responses for each item, ranging from strongly agree to strongly disagree. The major advantage of such questions (closed-ended questions) is that they ensure comparability of responses, facilitate analysis of responses, and also they are particularly easy to administer (Beanland, Schneider, LoBiondo-Wood, & Haber, 1999). Following the sets of closed-ended questions, a number of open-ended questions were included, which allow the participants to add relevant information that could not be included in the closed-ended questions. The purpose of using the open-ended questionnaire in a study is to allow a

greater range of responses to be collected and to allow the participants to report data about their knowledge, attitudes, beliefs and their real feelings (Burns & Grove, 1999).

3.6 Sample selection

The actual survey was conducted in the MCH/FP centre in Tongatapu, the main island. A convenience sample composed of participants who were eligible for the selection criteria was recruited. It was identified from the results of the power analysis, to recruit a maximum of 150 participants.

According to the year 2001 MCH/FP annual review, it was estimated that there are 1,718 pregnant women and 1,770 births per year in Tongatapu. It has been estimated that on average, there may be approximately 407 to 420 women per month visiting MCH/FP main clinic. This figure was used in power analysis to estimate the sample size for this study. The researcher elected to limit the selection to 150 participants according to power analysis. It was anticipated that it would take approximately four weeks to recruit the sample. This period ensured that a reasonable number of participants were available and eliminated some of the difficulties associated with a convenience sample, such as time constraints within the Master of Nursing program. One hundred and fifty participants were to be recruited as they represented nearly 36 per cent of the estimated average of women per month who visit the MCH/FP centre. There may have been others in the community who would have met the criteria for inclusion, but who were not yet scheduled to visit the MCH/FP clinics.

3.6.1 Selection criteria

To be included in the study, participants needed to meet the following criteria:

1. Women aged between 18 to 44 years, as they are the typical group of women who frequently utilize the MCH/FP services;

2. Married, unmarried women and pregnant women, (In Tonga there is only one department (MCH/FP) that provides health services to both married and unmarried mothers including pregnant mothers and postnatal mothers);
3. Postnatal mothers and women who had a child one year old or younger;
4. Must be able to read English and answer the questionnaire; and
5. Consent to complete the questionnaire.

3.7 Research procedure

The study commenced with the development of the survey instrument, and the pilot study to test the instrument, which was followed by the main survey.

3.7.1 Development of the questionnaire and pilot study

Two sections of the research instruments were developed for the survey: (i) Demographic factors; (ii) Current MCH/FP service questionnaires (see Appendix A).

3.7.1.1 Section 1: Demographic assessment

Demographic factors include age, marital status, occupation, religion, number of children, and age of participant when she gave birth to her first child. These questions were designed to gather information useful in creating a realistic background profiles and identifying the socio-economic status of the participant and its relationship to the frequency of antenatal care visits. Bhatia and Cleland (1995) identified that the socio-economic status of most women in many developing countries is the most common barrier to women utilizing maternal health services. It was also assumed that unmarried women, and those who started childbearing before 20 years of age attended antenatal care on fewer occasions than married mothers or those who started childbearing after 20 years of age (Anandalakshmy, Talwar, Buckshee, & Hingorani, 1993). It was important to survey all these group of women as Ward and Pyle (1995) suggested that in societies where the status of women is low, women usually have too many children, start

childbearing too early, and end childbearing too late. In some developing countries, religion or religious beliefs are seen as a barrier to seeking contraceptives, for example, in Tonga, religious beliefs usually influence the ability of women to use contraceptives (Latu, 2000).

3.7.1.2 Section 2: The current utilization of MCH/FP services assessment

This section comprised of sixty-five questions divided into seven parts, closed-ended questions, questions that used a forced or set response options, and questions which allowed participants to give their own comments.

The first question in this section was designed to assess the participant's perceptions of services provided by the MCH/FP section. Participants were presented with a list of nine services provided by the MCH/FP centre and were asked to indicate the MCH/FP services that they were attending on that day. The second question was designed to assess which services participants utilized during the previous six months. Nine MCH/FP services utilized in the first question were also listed in this question and participants were asked to tick as many of the services as they had attended in the past six months. The third question was prepared to assess the satisfaction of the participants with services provided by the MCH/FP. Participants were presented with a list of 12 MCH/FP services and asked to tick the response that they thought was appropriate. The responses included very satisfied, satisfied, dissatisfied, and very dissatisfied. The fourth question was designed to assess the accessibility of the MCH/FP services for the participants. Items included whether the nurses are available to offer services after official hours or during week-ends, if services are easy to get to from where the participants are living, and whether services are available and easy to contact at anytime. The responses included accessible, unsure and inaccessible. One of the World Health Organization's recommendations is to take all measures necessary to reduce maternal mortality including

ensuring universal access to health care services (Kirwin, 1998). In addition, AbouZahr (1998) suggests that maternal mortality is due to women's inability to reach appropriate health services because the services do not exist or are inaccessible for reasons of distance, costs or cultural barriers, or because care received in health services is inadequate, inappropriate or substandard for the women. The fifth question was designed to assess factors that influence contraceptive use. Participants were presented with a list of factors that may have influenced or caused them difficulties in practising contraception. These included contraceptive side effects, do not know the effective methods of contraception, husband does not want his wife to use a contraceptive, and cultural and religious beliefs stop participants from using contraceptives. The responses included agree, unsure, and disagree. Latu (2000) identified cultural and religious beliefs as common barriers to the use of family planning in many developing countries. The sixth question in this section was developed to obtain the participants' own feeling and perceptions about the current MCH/FP services. Eight items were listed, including positive and negative experiences with the MCH/FP care received. The participants were requested to tick the appropriate response that was suitable to their thinking. The responses included agree, unsure and disagree. The final question of the second section of the instrument was designed to assess the barriers that might stop or inhibit participants from utilizing the MCH/FP services. Twelve items were listed, including items related to cost, customs and culture and personal and attitudinal barriers. The responses included agree, unsure and disagree. Kulwicki and Cass (1994) identified barriers to using maternal health services including cultural barriers, embarrassment in exposing one's body to strangers, long waiting time to see the doctor and the problem with no babysitter to look after the other children at home.

De Vaus (2002) stated that survey questions should clearly reflect the meanings and intentions of the researcher, and be designed to specifically address the central research questions. It is therefore crucial that the survey instrument is carefully developed to contain questions that are clear, unambiguous, and universally understood (De Vaus, 2002). Carefully constructed survey questions also reduce participant burden and may result in more efficient use of resources (Bowling, 1997). The researcher firstly utilized three senior academic staff to assist in identifying appropriate and relevant question content of the questionnaire for the survey. One of the senior academic staff asserted that participants' attitudes, beliefs, opinions and interests appear to be quite unstable, affected by question wording, as well as the format questions are presented in. She further recommended using simple survey design and format, with clear instructions written in plain and unambiguous language.

The instrument was developed and adapted by the researcher to address the aims and purposes of the survey. The researcher also developed and refined the instrument based on combining the knowledge gained from the extensive review of literature, and knowledge gained by consultation with the researcher's project supervisors, senior academic nurse mid-wife at the University of Ballarat, and with the assistance of Tonga health professionals experienced in the field of maternal and child health. The project supervisors and the researcher's colleagues asserted that the intent of the final draft and the nature of the information sought were clear, concise, understandable, and acceptable to the study population. In the planning process it was found that completing the questions for the investigation would take approximately 15 to 20 minutes.

3.7.2 Pilot test

Any new research instrument needs to be pilot-tested, revised and retested to determine its validity and reliability (Roberts & Taylor, 2002). Pilot tests are often used to assess the adequacy of the instrument and potential problems with the data collection strategies and methods (Roberts & Taylor, 2002). Adjustments can then be made, if necessary, prior to the conduct of the main study. In developing an instrument, a panel of experts was used to assist in determining the selection of items (Gillis & Jackson, 2002). In developing and refining instruments, a panel of experts consisting of three senior staff from MCH/FP, Vaiola Hospital, Tonga, two project supervisors, and a senior academic mid-wife at the University of Ballarat were used.

The principal supervisor also assisted in formatting and presenting the questionnaire. The researcher conducted a pilot test of the instrument to test the content, validity, structure, and potential bias of the instrument (Roberts & Taylor, 2002). The instrument was pilot-tested by Tonga MCH/FP senior registered nurses experienced in the field of maternal and child health, as well as by the senior academic nurse mid-wife at the University of Ballarat. A number of questionnaires were also given to the university's academic nurse colleagues to pilot-test.

All feedback and comments indicated agreement with statements that the instructions at the beginning of the questionnaire were clear; that the questions were easy to answer, and that the questionnaire was not too long. No comments were made regarding the instrument, which would have indicated the need to change or delete any items, only one item required clarification. For example, in Question 11 (i) the first draft was as follows: MCH/FP staff have sometimes forced me to use contraceptives. The word forced was replaced by persuaded. The tool was found to be clear and readable to the researcher's colleagues and it was considered that participants would be able to answer the

questions without difficulty. However, the researcher refined the questionnaire according to feedback on item question 11 before submitting it to the University of Ballarat Human and Research Ethics Committee and the Tonga Health Service Research Ethics Committee for approval. Based on the above factors, it was decided that the tool be used without changes for the main study.

3.7.3 The survey

As the researcher was based in Australia it was essential to recruit a key contact person who would be able to assist with recruitment of the sample and distribution and collection of the questionnaire. The sister-in-charge was an important person during the process of conducting this study due to the absence of the researcher. The following sections will describe the procedures of recruiting the sample, process of data collection, data analysis, ethical consideration, and the overall process of survey research.

3.7.3.1 Sample recruitment

To facilitate selection of the sample for this study, the researcher contacted the sister-in-charge of the MCH/FP sections in Tonga to explain the aim of the study. The researcher requested the sister-in-charge be the key contact informant during the process of conducting the study. Leininger (1985) defines key informants as those individuals who are believed to be the most knowledgeable about a subject or area of interest. An agreement was obtained, and the sister-in-charge expressed her support for the project and gave permission for data collection. The sister-in-charge is the manager for all the MCH/FP sections, and the most senior nurse regarding the utilization of MCH/FP services in Tonga. She is the person who is responsible for planning, organizing, and implementing the work program for the MCH/FP sections, and also for staffing, allocation of midwives and public health nurses for the main centre as well as peripheral MCH/FP clinics. Based on the above issues, and due to a limitation of time, it was

thought that requesting her assistance in coordinating the project in Tonga would facilitate with conducting the study. The set of questionnaires were posted directly to the key contact informant. Each package contained a copy of the questionnaire, addressed envelope, plain language statement (see Appendix B), written description of the study and its purpose, requesting the participant to participate in this study.

Arrangements were made between the sister-in-charge and the provider of services (public health nurses) to explain details of the study, and to discuss how to recruit participants for the study. Such meetings were held every Monday morning at the main centre prior to the arrival of the questionnaires. As a result, the sister-in-charge and her staff agreed to assist in the distribution of questionnaires to women who expressed interest in participating. Maternal Child Health and Family Planning nurses consented to conduct the study every morning during official hours from Monday to Friday throughout the four week period of the research. The permanent daily program of the MCH/FP is as follows: Monday: postnatal and immunization clinics; Tuesday: booking (first antenatal visits); Wednesday: for return visits for normal antenatal pregnancies below 36 week of gestation; Thursday: abnormal antenatal pregnancies and Friday: normal antenatal pregnancies 36 weeks of gestation and above. It was identified that most (98%) women attended the MCH/FP services in the morning session rather than the afternoon, because the appointment time given to all of them was 9 o'clock in the morning.

The role of the sister-in-charge in this study included introducing the aim of the research project to participants, organizing staff to distribute the questionnaires to participants while waiting for their appointments, and organizing a private and quiet place where there will be no disturbance while participants complete the questionnaire. The sister-in-charge was also responsible for collection of completed questionnaires from the sealed box provided in the nurses' main office, and returning them to the researcher.

The sister-in-charge and the public health nurses organized recruitment of participants, distributing the questionnaires to women who met the inclusion criteria, and those who were interested and consented to participate in the study. In order that the research project not impinge on therapeutic relationships, the midwives and the public health nurses were asked by the sister-in-charge not to remind women about the completion of the questionnaires or in any other way put pressure on them to participate.

3.7.3.2 Data collection process

The survey was implemented within a four week period in June and July 2002 in Tongatapu the main island in the Kingdom of Tonga. It was conducted in the main MCH/FP centre at the Vaiola Hospital with the assistance of the public health sister-in-charge and the public health nurses. The MCH/FP centre is located at the front area of the Vaiola Hospital, together with the consultation department. It is divided into ten rooms, with the largest room provided for women as the waiting area which include the nurses' main office (reception office). Three rooms are provided for the antenatal and postnatal checkups: one for immunization, one for loop insertions, and one for staff meetings, while the remaining rooms are provided for the doctor, sister-in-charge, senior sister graduates and the clerk's offices.

Each day before the data collection stage the sister-in-charge explained the aim of the study to all participants who attended the MCH/FP services, the women were then left to choose whether they consented to participate or not. Only those women who expressed an interest in participating in the study were given the questionnaire package to complete. Consenting participants were then directed to the staff room with one mid-wife to assist in clarifying questions if required by participants. The mid-wife then left the women alone during the completion of the questionnaire. Participants who were attending weekly appointments were not permitted to participate twice. Having completed the

questionnaire, each participant was asked to seal it in the envelope provided and place it in the sealed box in the nurse's main office that was facing the participants' waiting area.

Every sealed envelope was checked and counted by the MCH/FP sister-in-charge. In all, 150 survey packages were distributed to consenting participants during the period of four weeks and 150 were returned, giving a return rate of 36 per cent of the estimated average of women per month visiting the MCH/FP centre. All questionnaires returned, had a complete or nearly complete response rate.

Some participants did not consent to complete the questionnaire because they had appointments with other doctors, and some were in a hurry to return to work or get back to other children at home. They were informed that their nonparticipation in the study in no way influenced the services they would receive.

3.7.3.3 Data analysis

The purpose of data analysis was to gain information from participants regarding their perceptions of services provided by the MCH/FP centre in Tonga.

Statistical analysis, such as frequencies, cross-tabulation, and correlations were used to analyze data in accordance with the levels of measurement in this study.

Levels of measurement in this study were nominal and ordinal. Nominal level involves some closed-ended questions and also involves the assignment of numbers simply to classify characteristics into categories (Polit & Hungler, 1999). The frequency in each category can be counted and occurrence can be determined, while the numbers themselves do not carry any quantitative meaning (Burns & Grove, 1999). Examples in this study were demographic characteristics including age, marital status, occupation, religion, and the age of the participant when she gave birth to her first child.

With the ordinal measurement, numbers are assigned to categories and variables are sorted, based on the relative ranking of the levels of an attribute (Polit & Hungler, 1999). Examples in this study were current level of accessibility and satisfaction with current MCH/FP services, including promotion of maternal and child health, antenatal care, postnatal care, family planning clinics, immunization clinics, child health care clinics, general health education, breast feeding and counselling services. This includes factors that influence the method of family planning used, and barriers to participants utilizing MCH/FP services.

Statistical Packages for the Social Sciences (SPSS) Version 10.0 was used for data analysis to produce descriptive statistics about the study variables. All survey data were entered on a data file, and the analysis process was as follows:

1. Frequency and percentage for age group, marital status, occupation, religion, and number of children, and the participant's age when she gave birth to her first child.
2. Frequency and percentage for promotion of maternal and child health, antenatal care, postnatal care, family planning clinics, immunization clinics, child health care clinics, general health education, breast feeding and counselling services. Each variable was grouped into subgroups after preliminary analysis for further analysis. All the above variables were grouped into very satisfied, satisfied, dissatisfied, and very dissatisfied categories.
3. Frequency and percentage for satisfaction, accessibility, and utilization of MCH/FP services.
4. Frequency and percentage regarding participant's own feelings for MCH/FP services. This included items such as: nurses always welcome participants when going for consultations and nurses always maintain the client's privacy.
5. Cross-tabulation for marital status by variable related to contraception.

6. Correlation coefficient for demographic factors with barriers to utilizing family planning and contraceptives alone, and with barriers to utilizing MCH/FP services as a whole.

3.7.3.4 Ethical consideration

Approvals from the University of Ballarat Human Research Ethics Committee (see Appendix C) and the Tonga Health Service Research Ethics Committee (see Appendix D) were obtained to conduct the study. The Tonga Health Service Research Ethics Committee granted approval for the project to commence subject to gaining ethical approval from the University of Ballarat Human Research and Ethics Committee.

On gaining ethical approval from the University of Ballarat Human Research Ethics Committee and from the Tonga Health Care network, the researcher made phone contact with the MCH/FP sister-in-charge to discuss and organize the commencement of data collection. The researcher used nurses (sister-in-charge and public health nurses) exclusively as key informants during data collection at the agency. The rationale for this was the researcher was absent from Tonga, to give nurses the opportunity to be involved in nursing research, and also because nurses would have greater access to information about women who utilized MCH/FP services and activities on the site. Once the arrangements were established, the researcher then arranged to have the research packages posted to the sister-in-charge. Each research package contained one copy of the questionnaire, one reply envelope addressed to the researcher, and the Plain Language Statement.

A Plain Language Statement was given to participants. It provided the following information to them: identity of the researcher and the principal supervisor and their contact details, aim and significance of the project, data collection process, how to return

the completed questionnaire to the researcher, confidentiality, voluntary participation, and the person to contact upon inquiry.

The Maternal Child Health/Family Planning sister-in-charge and public health nurses, normally in contact with the participant, assisted the researcher with the distribution of the survey package. Participants were informed of their right to decline to participate or to withdraw from participation at any time. The researcher provided assurance in the information letter that none of the information the participant provided would be communicated to any other person. A mechanism for inquiry to the study was also outlined in the information letter for participants.

Anonymity of each participant and confidentiality of all data was ensured at each phase of the study. No names, addresses or other identifying details were recorded on the data collection files. Throughout this research project, there would be no procedures that would leave the participants open to risk or physical harm. Participants might experience some shyness when answering questions about family planning and type of contraception used, because of religious beliefs and cultural taboos.

Data was stored during the course of the study in a locked filing cabinet at the University of Ballarat, Australia. The data will be stored for a period of five years in the School of Nursing research office, and all data will then be destroyed.

3.7.3.5 The overall process of survey research

Considering the size of the project, the number of participants and the agency involved, the process of implementing the survey proceeded smoothly, albeit a little slowly. The assistance of the MCH/FP sister-in-charge and public health nurses was invaluable, and there were numerous phone calls between the researcher and the sister-in-charge to ensure that the survey was established successfully. The researcher viewed the liaison with the sister-in-charge as only a way to ensure the successful implementation of

the survey. Overall, the sister-in-charge and public health nurses were very supportive of research that derived its impetus from the practice world, and they were in full support of an investigation of Maternal Child Health/Family Planning nursing.

3.7.3.6 Summary

In this chapter, a description of the setting for study, the research design and methods, instruments, and procedures used for the study has been provided. The development of the survey instruments and the pilot testing of the instrument have been described, followed by the conduct of the main survey. This study was a descriptive design. A survey was conducted, and convenience sampling was employed. Questionnaires were used in data collection. Statistical measurements including frequency, percentage, cross-tabulation, correlation coefficient were used in data analysis. Finally, ethical considerations were presented. In the following chapter, the findings of the survey are presented and discussed.

Chapter 4: Results

4.1 Introduction

This chapter presents the findings of the survey. Before presenting the main survey findings, a profile of the participants who utilized the MCH/FP centre at Tongatapu is presented. Reliability of the survey instrument is also described. The main body of the chapter summarizes and describes data that answer the following three research questions: (i) What are the perceptions of participants who utilize services provided by the main MCH/FP centre?; (ii) What are the factors that influence the utilization of family planning services by participants?; and (iii) What are the barriers to utilization of MCH/FP services?.

4.2 Demographic profile of participants

The profile of participants is summarized and described, including their age, marital status, occupation, religion, number of children and the participant's age when she gave birth to her first child.

4.2.1 Demographic data

One hundred and fifty women who attended MCH/FP services at Tongatapu were recruited to form a convenient sample for the study. Table 2 shows that the age of participants ranged from 18 to 44 years with a mean age of 28 years, and a standard deviation of 1.28 years. Approximately 17 per cent of participants were younger than 22 years old. One hundred and eighteen (79%) participants were married, and 21 per cent were either single, divorced, widowed, defacto or unmarried. Seventy-six per cent of participants were currently unemployed whereas only 24 per cent were employed. Twenty-seven per cent of participants belonged to the Free Wesleyan Church, and the remainder (73%) belonged to either the Latter Day Saints (22.7%), Anglican (4%), Free Church of Tonga (14%), Seventh Day Adventists (2%), and other Churches including

Assembly of God, Bahai, and Constitutions Church (14%). The mean number of children for participants attending the MCH/FP was 3.46 with standard deviation 1.72 and a range of zero to more than six children. A total of 101 or 67 per cent of the study sample gave birth to their first child aged 22 years or under (see Table 2).

Table 2
Demographic data of participants (N = 150)

Variable		Frequency	Percentage
Age (years)			
	18 - 22	25	16.7%
	23 - 27	42	28.0%
	28 - 32	35	23.3%
	33 - 37	34	22.6%
	38 - 42	10	6.7%
	43 or older	4	2.7%
Marital status			
	Single	21	14.0%
	Married	118	78.7%
	Widowed	3	2.0%
	Divorced	3	2.0%
	Defacto	5	3.3%
Occupation			
	Employed	41	27.4%
	Unemployed	109	72.6%
Religion			
	Latter Day Saint	34	22.7%
	Roman Catholic Church	25	16.7%
	Anglican Church	6	4.0%
	Free Wesleyan Church	40	26.7%
	Free Church of Tongan	21	14.0%
	Seventh Day Adventist	3	2.0%
	Others	21	14.0%
Number of children			
	0	17	11.3%
	1	39	26.0%
	2	26	17.3%
	3	23	15.0%
	4	22	14.7%
	5	16	10.7%
	6 or more	7	4.7%
Age on first child born			
	Less than 18	17	11.3%
	18 - 22	84	56.0%
	23 - 27	35	23.4%
	28 - 32	10	6.7%
	33 - 37	3	2.0%
	38 - 42	1	.7%

In the present study, 11.3 per cent of participants gave birth to their first child when they were aged under 18 years. Over half of participants gave birth to their first child aged between 18 and 22 years old. The results revealed that the fertility rate of participants in the study remains high and participants remain very young with 11.3 per cent of participants below 18 years and 56 per cent between 18 - 22 years of age (age at first child born).

4.3 Reliability of the instrument

To assess internal reliability of the instrument, coefficient alpha was calculated. The overall Cronbach's alpha for 47 items is .76 (N = 146). The coefficient alpha values for the instrument as a whole are above the suggested minimum of .70, which according to Burns and Grove (1999) indicates moderate reliability of the instrument.

4.4 Results of survey

The remaining sections of this chapter present the survey findings for each section of the questionnaire. The first question relevant to the findings is:

Question 1: *What are the perceptions of participants of services provided by the MCH/FP centre?*

Participants' perceptions of MCH/FP services are presented in three parts as follows: (1) Satisfaction of participants with MCH/FP services; (2) Accessibility of MCH/FP services by participants; and (3) Participant feelings regarding utilization of services provided by MCH/FP centre.

4.4.1 Satisfaction of participants with MCH/FP services

Participants' satisfaction regarding services provided by the MCH/FP centre are summarized and described. Table 3 shows the 12 variables in rank order of satisfaction of MCH/FP services from the highest to the lowest, are immunization, antenatal care, child health care, postnatal care, promotion of maternal and child health, breast feeding, nurses'

attending to the needs of women who visit the clinic, information about nurses' programs, nurses' advice for baby's development, health education, family planning, and counselling.

Table 3
Satisfaction with the Maternal Child Health/Family Planning services (Total =150)

	Very satisfied n (%)	Satisfied n (%)	Dissatisfied n (%)	Very dissatisfied n (%)
Immunization clinic	90(60.0)	55(36.7)	5(3.3)	
Antenatal care service	88(58.7)	58(38.7)	3(2.0)	1(.7)
Child health care service	88(58.7)	58(38.7)	4(2.7)	
Postnatal care service	86(57.3)	55(36.3)	6(4.0)	3(2.0)
Promotion of maternal and child health service	83(55.3)	61(40.7)	4(2.7)	2(1.3)
Breast feeding service	79(52.7)	68(45.3)	3(2.0)	
Nurses attending to the needs of women who visit the clinic	78(52.0)	64(42.7)	6(4.0)	2(1.3)
Information for nurses working programs	77(51.3)	65(43.3)	7(4.7)	1(.7)
Nurses' advice for baby's development	76(50.7)	68(45.3)	5(3.3)	1(.7)
Health education service	75(50.0)	69(46.0)	6(4.0)	
Family planning care service	71(47.3)	69(46.0)	7(4.7)	3(2.0)
Counselling service	69(46.0)	77(51.3)	3(2.0)	1(.7)

On the scale of 1 to 4 among the 12 MCH/FP service items with 1 = very satisfied and 4 = very dissatisfied, the survey participants indicated that they were very satisfied or satisfied with services provided by the MCH/FP centre with a minimum of almost 50 per cent indicating that they were very satisfied with services. The two services with less than 50 per cent of sample showing very satisfied were counselling services and family planning care services. This result was rather unexpected, considering the number of participants that made up the study sample. It may be that these participants did not experience any other needs or difficulties at the time of attending the MCH/FP services. By contrast, the results indicated that there was no significant differences among item

scores except that the immunization clinic was the highest reported very satisfied item (60%) compared with other MCH/FP services. This may reflect that the immunization program is well-established since its inception in Tonga in 1990. Current MCH/FP annual reports indicate that the immunization program in Tonga for the year 2001 achieved 95 per cent coverage (refer to Table 1, p. 11). It is obvious that the vast majority of survey participants were very satisfied or satisfied with the MCH/FP services, however, it is very important to note that there are three services which showed some dissatisfaction among participants. These were postnatal service (6%), family planning service (6.7%), and nurses attending to the needs of women who visit the clinic (5.3%). Although the percentages are not statistically significant they do show that these services require improvement.

4.4.2 Accessibility of MCH/FP services

The accessibility of services include items pertaining to nurses being available to offer services after official hours, that is, 8.30am - 4.30pm, Monday to Friday; nurses being available to offer services during week-ends; services are easy to get to from where I live; services are available when I need them; and I can contact services at any time.

Less than half (47.3%) of participants indicated that the nurses were available to offer services especially after official hours, and just over one-third (38.7%) indicated that the nurses were available to offer services during week-ends. Almost 60 per cent of the 150 participants indicated that MCH/FP services were available to them when they were needed. The last three items showed that although services were very accessible to participants, there is a shortfall in the provision of nurses outside of normal working hours. This result may indicate that a number of MCH/FP nurses refuse to offer services to those women who attended the centre during lunch break or after 4.30 pm. In addition, nurses may be unwilling to offer MCH/FP services during nurses off-duty periods,

particularly at week-ends and after business hours when MCH/FP clinics are closed. This may need adjustment in the allocation and rostering of nurses' hours of employment, especially after business hours. On the other hand, it is also important to note that 20 per cent of participants indicated that services were unavailable when they needed them whilst nearly 23 per cent indicated that they were unsure about the availability of the services. If we combine the scores in the categories of 'unsure' and 'inaccessible' the results show that there is a need to make services more available and accessible. The frequency and percentage for five items of the availability and accessibility of MCH/FP services are presented in Table 4.

Table 4
Availability and accessibility of the services provided by the MCH/FP centre (Total =150)

	Accessible n (%)	Unsure n (%)	Inaccessible n (%)
Nurses are available to offer services after official hours	71(47.3)	38(25.3)	41(27.3)
Nurses are available to offer services during week-ends	58(38.7)	48(32.0)	44(29.3)
It is easy to get to services from where I live	87(58.0)	27(18.0)	36(24.0)
Services are available when I need them	86(57.3)	34(22.7)	30(20.0)
I can contact services at any time	82(54.7)	36(24.0)	32(21.3)

4.4.3 Participants' feelings regarding utilization of the MCH/FP services

Responses to items pertaining to the overall feelings of participants about utilizing MCH/FP services showed some negative responses. Unsatisfactory responses or negative experiences that were most frequently reported by participants are as follows: (1) MCH/FP staff sometimes ignored others when they talk to high ranking people; (2) There is discrimination in MCH/FP staff practices; (3) MCH/FP staff usually showed that they are the more knowledgeable people at the clinic; and (4) MCH/FP clinics often experience a shortage of staff, and a shortage of resources (see Table 5).

Table 5
Participants' feeling regarding utilization of the services provided by the MCH/FP centre Total = 150

	Agree n (%)	Unsure n (%)	Disagree n (%)
I believe there is discrimination in practice of the MCH/FP staff	71(47.3)	37(24.7)	42(28.0)
The MCH/FP staff usually showed that they are the more knowledgeable people at clinic	65(43.3)	28(18.7)	57(38.0)
We are sometimes ignored by the MCH/FP staff when they talk to high ranking people	74(49.3)	28(18.7)	48(32.0)
MCH/FP clinics often experience shortage of resources	67(44.7)	36(24.0)	47(31.3)
MCH/FP clinics often experience shortage of staff	71(47.3)	36(24.0)	43(28.7)

The survey results indicate that MCH/FP staff sometimes ignored others when they talk to high ranking people. Seventy-four participants (49.3%) nearly half of the study participants revealed that they agreed with this item. Seventy-one (47.3%) participants reported that there is discrimination in staff practice whereas 43 per cent stated that the MCH/FP staff usually showed that they are the more knowledgeable people at the clinic. In addition, the study also revealed that 67 (44.7%) of participants felt that there was a shortage of resources and 71 (47.3%) of participants felt that there was a shortage of staff.

4.5 Family planning practice and contraceptive use

This section presents the results of factors that influence the utilization of family planning services and contraceptives, and address the research question 2: *What are the factors that influence family planning and contraceptive used?*

Factors involved in family planning practice and contraceptive use among this sample are summarized, analyzed, and described in Table 6. These variables are: I want to use contraceptives, do not know the effective contraceptive methods, want to use contraceptives in-between pregnancies, contraceptive side effects, husband's objections, and religious and cultural beliefs, advantages and disadvantages of contraceptives, staff

sometimes persuaded me to use contraceptive, and I am currently using effective contraceptive method (see Table 6).

Table 6
Family planning and contraceptives used (Total = 150)

	Agree n (%)	Unsure n (%)	Disagree n (%)
I want to use contraceptive	82(54.7)	36(24.6)	44(29.3)
I do not know the effective methods of contraception	55(36.7)	38(25.3)	57(38.0)
I want to use contraceptive in between pregnancies	95(63.3)	19(12.7)	36(24.0)
I do not want to face contraceptive side effects	108(72.0)	14(9.3)	28(18.7)
I am happy to use contraceptive but my husband does not want	85(56.7)	15(10.0)	50(33.3)
My strong religious beliefs stop me using contraceptives	90(60.0)	12(8.0)	48(32.0)
My strong cultural beliefs stop me using contraceptives	85(56.7)	19(12.7)	46(30.7)
Contraceptives have advantages and disadvantages	119(79.3)	14(9.3)	17(11.3)
Sometimes nurses persuaded me to use contraceptive	64(42.7)	16(10.7)	70(46.7)
I am currently using contraceptive	48(32.0)	17(11.3)	85(56.7)

Over 50 per cent of participants indicated that they want to use contraceptives and 63 per cent stated that they want to use contraceptives in-between pregnancies. Fifty-seven per cent of participants indicated that they disagreed with the item I am currently using a contraceptive. This may mean that these participants were currently pregnant, and that they attended the MCH/FP centre for an antenatal check up. Almost 43 per cent stated that sometimes the MCH/FP nurses persuaded them (participants) to use contraceptives. It is likely that on some occasions MCH/FP nurses directly influenced the utilization of contraceptives by participants. For example, some participants may refuse to use contraceptives because they were either afraid or became angry when nurses persuaded them. In addition, few participants - less than one-third - stated that they do not know the effective methods of contraception, which may indicate that by the time participants got angry and frustrated with nurses they were not keen to listen to nurses explaining about effective methods of contraception.

It should be noted that in all ten family planning and contraception items, there were two items which (I do not want to face contraceptive side effects (72%) and, contraceptives have advantages and disadvantages (79%) scored significantly higher compared to other items. This may suggest that these participants were concerned about using contraceptives or alternatively, that these results reflect a lack of knowledge about modern methods of contraception.

For the overall family planning and contraceptive items, participants reported that contraceptive side effects, husbands' objections to contraceptive use, and religious and cultural beliefs were the most common barriers to family planning and use of contraception. From a total of 108 (72%) participants who agreed that they did not want contraceptive side effects, it is interesting to observe that 85 (56.7%) were married participants and it was anticipated by the researcher that these participants would have had sufficient knowledge of using contraceptives and managing their side effects (see Table 7).

Table 7
Cross-tabulations: Do not want to face contraceptive side effects by marital status

		Marital status			
		Single	Married	Others	Total N
Do not want contraceptive side effects	(1) Agree	18(12%)	85(56.7%)	5(3.3%)	108(72%)
	(2) Unsure	1(.7%)	13(8.7%)		14(9.3%)
	(3) Disagree	2(1.3%)	20(13.3%)	6(4%)	28(18.7%)
	N	21(14%)	118(78.7%)	11(7.3%)	150(100%)

Others include divorced, widowed, defacto, and never married.

Among the study sample, 85 participants, that is 56 per cent, indicated that they were happy to use contraceptives but their husbands did not agree with it. Among them, 48 per cent were married, and the remaining 8 per cent were single, defacto and others (see Table 8). This finding supports the notion that Tonga is a patriarchal society and it

may be very difficult for participants to use contraceptives without their husband's knowledge and permission.

Table 8
Cross-tabulation: Husband's objections to contraceptive use by marital status

		Marital status			
		Single	Married	Others	Total N
Husband's objections	(1) Agree	12(8%)	72(48%)	1(.7%)	85(56.7%)
	(2) Unsure	4(2.7%)	10(6.7%)	1(.7%)	15(10%)
	(3) Disagree	5(3.3%)	36(24%)	9(6%)	50(33.3%)
	N	21(14%)	118(78.7%)	11(7.3%)	150(100%)

Others include divorced, widowed, defacto, and never married.

Other factors that significantly influenced participant's use of family planning and contraceptives are strong cultural and religious beliefs. Ninety participants (60%) of the study sample indicated that strong religious beliefs influenced their ability to utilize family planning and contraception. Forty-nine per cent were married participants and the remaining were single and others (see Table 9).

Table 9
Cross-tabulations: Strong religious beliefs by marital status

		Marital status			
		Single	Married	Others	Total N
Strong religious beliefs	(1) Agree	14(9.3%)	74(49.3%)	2(1.3%)	90(60%)
	(1) Unsure	1(.7%)	9(6%)	2(1.3%)	12(8%)
	(2) Disagree	6(4%)	35(23.3%)	7(4.6%)	48(32%)
	N	21(14%)	118(78.7%)	11(7.3%)	150(100%)

Others include divorced, widowed, defacto, and never married.

Eighty-five participants (56.7%) stated that their strong cultural beliefs stop them from using contraceptives. Most of the participants who agreed with this item were married women and the remainder were either single or others (see Table 10).

Table 10
Cross-tabulations: Strong cultural beliefs by marital status

		Marital status			
		Single	Married	Others	Total N
Strong cultural beliefs	(1) Agree	12(8%)	70(46.7%)	3(2%)	85(56.7%)
	(1) Unsure	3(2%)	15(10%)	1(.7%)	19(12.7%)
	(2) Disagree	6(4%)	33(22%)	7(4.6%)	46(30.7%)
	N	21(14%)	118(78.7%)	11(7.3%)	150(100%)

Others include divorced, widowed, defacto, and never married.

4.6 Barriers to utilizing MCH/FP services

Question 3: *What are the barriers that may stop or inhibit participants from utilizing the MCH/FP services?*

Finally, barriers are summarized, analyzed and described. Table 11 summarizes factors contributing to barriers to utilizing MCH/FP services as reported by survey participants. In general, the study results indicate that there are barriers that significantly inhibit participants from utilizing the MCH/FP services. The reasons given for such barriers were the long waiting time to see the doctor, no one to look after other children, feeling shy about exposing their body to doctors for physical examinations, cultural barriers, customs, and some financial barriers were the most common barriers to utilizing the MCH/FP services (see Table 11).

Among the study sample, eighty-six (57.3%) participants revealed that they really wanted to attend antenatal clinics but they were tired of the long waiting time at the clinic to see the doctor. The long waiting time to see the doctor may cause other difficulties for participants including childcare, time off from work, or taking care of family problems and needs.

Table 11
Barriers to utilizing MCH/FP services n (%) (Total = 150)

	Agree n (%)	Unsure n (%)	Disagree n (%)
I want to attend the antenatal check up but I am tired of the long waiting time to see the doctor	86(57.3)	12(8.0)	52(38.7)
I want to frequently attend the antenatal clinic but there is no one to look after my other children	80(53.3)	12(8.0)	58(38.7)
I do not need to attend all antenatal clinic because I have experience from previous pregnancies	53(35.3)	15(10.0)	82(54.7)
I sometimes fail to keep my appointment because I do not have transport	66(44.0)	15(10.0)	69(46.0)
I want to attend the antenatal check up but I do not have enough money	64(42.7)	14(9.3)	72(48.0)
I want to attend the antenatal check up but I do not think there are benefits	53(35.3)	24(16.0)	73(48.7)
In our culture, we believe that pregnancy only occurs in marriage	92(61.3)	11(7.3)	47(31.3)
I feel shy to expose my body to doctors for physical examinations	78(52.0)	15(10.0)	57(38.0)
Single pregnant mothers attend the antenatal clinic late because they feel shame if the community knows about their pregnancy	96(64.0)	18(12.0)	36(24.0)
Some pregnant women prefer to have their babies delivered at home because of their low income	78(52.0)	20(13.3)	52(34.7)
Tensions between doctors and the nurses at the MCH/FP services can sometimes cause barriers to attending health services	56(37.3)	28(18.7)	66(44.0)
I believe that most of our customs cause barriers to accessing the MCH/FP services	80(53.3)	19(12.7)	51(34.0)

Eighty participants (53.3%) stated that they still needed to frequently attend their antenatal appointments but there was no one to look after the other children at home. Seventy-eight participants (52.3%) asserted that they often feel hesitant to seek antenatal care because they felt shy about exposing their body to doctors for physical examinations. Tongan culture and customs appeared as other barriers to attending MCH/FP services. For example, ninety-two participants (63.3%) reported that in Tongan culture it is believed

that pregnancy should only occur in marriage. In Tonga, there are single mothers, but it is very disgraceful for a family to have a single pregnant mother because it is illegal, and Tonga is a very small island country where everybody knows who everyone is, causing all members of the family to feel embarrassed. Eighty-two participants (53.3%) reported that most Tongan customs caused barriers to accessing MCH/FP services. It is possible that this is the reason why sixty-four per cent of the participants indicated that single pregnant mothers attended the antenatal clinics late because they feel shame to be known by others, or to be known by the community.

Finally, despite the attempt made by the MCH/FP section to promote or to encourage hospital delivery, a financial barrier associated with the low-income participants appears to be a significant barrier to utilizing health services. The study results revealed that seventy-eight (52%) participants asserted that most pregnant women preferred to have their babies delivered at home because they do not have sufficient income, perhaps for the purchase of baby's belongings suitable to take to hospital. This may reflect the socio-economic situation of the people in Tonga where only 32 per cent of the total population are employed or have paid jobs. These results are also supported by data in Table 2, which shows that over 70 per cent of the survey participants were unemployed or had no paid job.

The calculation of mean barrier scores for the most frequent seven categories revealed no significant difference, indicating that the survey participants were experiencing similar difficulties which might inhibit or delay their ability to access or to utilize the MCH/FP services (see Table 12).

Table 12
Mean barrier scores

Barriers	Mean barrier scores
Tired of the long waiting time to see the doctor	17.73
No one to look after the other children	18.53
In Tongan culture, pregnancy is believed to only occur in marriage	17.00
I feel shy to expose my body to doctors for physical examinations	18.52
Single pregnant mothers attend the antenatal clinic late because they feel shame to be known by others	16.00
Some pregnant women preferred to have their babies delivered at home because of their low income	18.26
Tongan customs cause barriers to access the MCH/FP services	18.06

4.7 Bivariate analysis: Demographic factors and barriers to use contraception

Correlation coefficient was used to test the relationships between participant's demographic factors, for example, age, marital status, occupation, and religion with the four barriers to utilizing contraceptives such as 'do not know the effective contraceptive methods', 'do not want to face contraceptive side effects', 'husband does not want his wife to use contraceptives', and 'strong religious beliefs'.

The results indicate that there is a relationship associated with age and the 'lack of knowledge about effective contraceptives' (.152). Marital status is associated with 'do not want to face the contraceptive side effects' (.193), 'husband does not want his wife to use contraceptive' (.169), and also with 'strong religious beliefs' (.154). Occupation was associated with the 'lack of knowledge of the effective contraceptive methods' (.217), as well as 'husband objections' (.197). Religion showed relationships with 'do not want to face the side effects of contraceptives' (.151), and was also related to the 'husband objections' (.179). Although the results showed that the relationships between demographic variables and barriers to use of contraceptives are present, they are weak. What is evident from the results is that husband's objection was positively associated with

marital status and religion. Overall, it is possible to explain that the major barriers to utilizing contraceptives in Tonga are 'husbands' objections to contraceptive use', 'lack of knowledge of the effective contraceptive methods' followed by concern about 'contraceptive side effects' as well as 'religious beliefs' (see Table 13).

Table 13
Correlations: Demographic factors and barriers to family planning and contraception use

		Do not know the effective contraceptive methods	Do not want to face contraceptive side effects	Husband does not want his wife to use contraceptive	Strong religious beliefs
Age Group		.152*	.079	.014	.090
	Sig. (2-tailed)	.029	.273	.844	.206
Marital Status		-.030	.193*	.169*	.154*
	Sig. (2-tailed)	.688	.013	.028	.046
Occupation		.217*	.067	.197*	.114
	Sig. (2-tailed)	.004	.379	.009	.134
Church		.085	.151*	.179*	.102
	Sig. (2-tailed)	.216	.033	.011	.150
	N	150	150	150	150

* Correlation is significant at the 05 level (2-tailed).

4.7.1 Demographic factors and barriers to utilizing MCH/FP services

Correlation coefficient was also used to test the relationship between demographic factors and barriers to utilization of the MCH/FP services as a whole. The results showed significant interaction effects of demographic factors with four barrier items, namely, 'no transport', 'do not have enough money', 'no benefits of attending antenatal clinic', and 'low-income pregnant women usually preferred to have their babies delivered at home' (see Table 14).

Table 14
Correlations: Demographic factors and barriers to utilizing MCH/FP services

		No transport	Do not have enough money	No benefits of attending antenatal clinics	Low-income pregnant women usually having their babies delivered at home
Age group		.123	.065	.191**	.141*
	Sig. (2-tailed)	.082	.358	.007	.047
Marital status		.012	.131	.088	.108
	Sig. (2-tailed)	.880	.088	.246	.158
Occupation		.095	.032	.022	.021
	Sig. (2-tailed)	.209	.669	.768	.780
Religion		.005	-.004	-.022	.065
	Sig. (2-tailed)	.938	.953	.754	.355
Participant's age on first child born		189*	.167*	.146*	.101
	Sig. (2-tailed)	.011	.024	.047	.171
	N	150	150	149	150

** Correlation is significant at the .01 level (2-tailed).
* Correlation is significant at the .05 level (2-tailed).

The result showed that age was associated with 'no benefits of attending the antenatal clinics', and 'low-income pregnant women usually preferred to have their babies delivered at home'. Age of participant when she gave birth to her first child was associated with 'no transport', 'do not have enough money', and 'no benefits of attending the antenatal clinics'. This result may indicate that the younger the participant when she had her first baby the more difficult it was for her to cope with the problem of having no transport, not having enough money and the lack of knowledge about antenatal care benefits. This may be due to the participant's limited understanding of the value of early and continuous antenatal care. Some women seek care early to confirm pregnancy but if they already know of their pregnancy, they may delay care to a later time especially when they do not believe in the benefits of service. Generally, the results indicated that the main barriers for utilization of the MCH/FP services were 'financial barriers' and 'lack of understanding or lack of knowledge for the benefits of antenatal care'. Results (Table 14) show that correlations between demographic factors and barriers in utilizing the MCH/FP services are significant but weak.

One disadvantage of the quantitative method is that it can show the differences in the responses but it does not reveal the reasons for the differences. Thus at least some of the reasons for the findings presented may be seen as speculative, whereas for some items it was difficult to give explanations for the significant effects found. Once again, the reasons for these findings are not very clear and may require further research about the experiences of women and the practice of public health nurses in the MCH/FP settings in Tonga.

4.8 Summary

The survey was conducted in the MCH/FP centre of Tongatapu in the main island and involved 150 participants who were attending MCH/FP services. The majority of participants were between the ages of 23 and 27 years, that is, 28 per cent of the total number of participants. The majority of participants were married and almost 12 per cent gave birth to their first child aged less than 18 and more than half gave birth to their first baby between 18 and 22 years of age. The result indicated that participants gave birth to their first child when they were quite young, aged below 22 years.

Participants' feelings regarding utilization of services provided by the MCH/FP centre show that they were very satisfied with services. Sixty per cent of participants indicated that the MCH/FP services were available and accessible at their time of need, but the services are sometimes under-resourced and short of staff. Results also show that there is discrimination in staff practices, staff ignored others when they talked to high ranking people, and staff usually showed that they are the most knowledgeable people in the centre. This may suggest that MCH/FP staff treated the lower socio-economic participants with little respect in the clinic or alternatively staff ignored these kind of participants because they are poor or uneducated.

Four common factors that significantly influenced the use of family planning and contraception reported by participants are contraceptive side effects, husband's objections, and religious and cultural beliefs. Correlations between demographic factors and barriers to utilizing family planning and contraceptives were significant but weak.

Finally, the barriers to using the MCH/FP services reported in the study were the long waiting time to see the doctors, no one to look after other children, feeling shy about exposing their body to doctors, customs, and financial barriers. Once again, results show that correlations between demographic factors and barriers to utilizing the MCH/FP services are significant but weak.

The findings presented in this chapter provide a context for the understanding of women's perceptions of services provided by the Tongatapu MCH/FP centre. In addition, it is important for health care providers to learn about the reasons why women obtain or delay utilizing MCH/FP services. Those reasons are likely to be different from those of health care providers and should be taken into account to improve women's use of MCH/FP services and to reach the goal recommended by the World Health Organization. These findings have implications for nursing practice, for health care services and for further research, and are presented in the final chapter of this thesis.

Chapter 5: Discussion and conclusion

5.1 Introduction

The aims of this study were to explore and describe women's perceptions of the Maternal Child Health/Family Planning services in Tongatapu; to identify issues women perceived as barriers that may inhibit utilization of these services; and to provide information gathered to the Tonga Health Authority regarding MCH/FP services in Tongatapu. This information will assist the Tonga Health Authority to develop more effective strategies and services responsive and accessible to women who utilize the services. The results gathered from the survey have been presented in Chapter 4. The purpose of this final chapter is to present the major findings of the study along with implications for nursing practice and health care services. The application of the theoretical framework used for the study is discussed in relation to the findings of the study. The chapter concludes with a consideration of the limitations of the study and the implications of the findings and implications for future research.

5.2 Profile of participants

A sample of 150 participants was recruited into the investigation. The age range of the participant sample was 18 to 44 years with the mean of 28 years (SD = 1.28 years). The majority (79%) of participants were married and 67 per cent gave birth to their first child aged 22 years or under. The mean number of children for participants was 3.46 and a range of zero to more than six children. Most of participants (76%) were currently unemployed. Twenty-seven per cent of participants belonged to the Free Wesleyan Church, and the remainder belonged to either Latter Day Saints, Seventh Day Adventists, and other Churches including Assembly of God, Bahai, and Constitution Church.

5.3 Major findings of the study

This study has revealed that the majority of participants who gave birth to their first child were aged under 22 years old. Eleven per cent of participants gave birth to their first child aged below 18 years old, and over half gave birth to their first baby aged between 18 and 22 years of age. The results show that the fertility rate of participants is very high. According to Royston and Armstrong (1989), in societies where fertility is high, maternal mortality tends to be high. These demographics are consistent with the literature which indicates that women who have elevated risk of pregnancy and delivery complications leading to maternal deaths are mothers aged 18 years and under because their bodies are not fully mature (Miller, Lesser & Reed, 1996). An added factor contributing to the high risk associated with these women is that mothers aged 18 and under were less likely to have antenatal care (Bhatia & Cleland, 1995). Results in the current study reveal that the age of participants is very young, which exposes this group of pregnant women to higher risks and more complicated pregnancies.

The majority (79%) of participants were married with a significant proportion of other participants being single (14%). Although single mothers were not found in the literature to be a risk factor for antenatal care, it is a meaningful feature to be considered when educational programs are designed and conducted to prevent increased incidence of unplanned teenage pregnancies and sexually transmitted diseases, particularly in developing countries. For example, the increase in sexually transmitted diseases and unplanned teenage pregnancies, particularly in single teenagers, is an ongoing issue in Tonga, and has forced the Ministry of Health to recognize the lack of service provision for this particular age group. Adolescent pregnancy, particularly single pregnant teenagers, will become a potential problem for Tonga if this issue is not addressed. The

results reveal that there is a need for a separate service for single women in view of the potential for embarrassment in Tongan culture.

The data showed that most (73%) participants were unemployed. Unemployment in Tonga is generally high, and many of those who are employed are in unskilled and low-income occupations. Only 27 per cent were employed and their income would be at a relatively low level compared to males, whose occupations are normally on average better remunerated. These results were similar to the results reported in literature by Ward and Pyle (1995), that a large number of women in developing countries are victims of industrial development in that the type of employment available to them often puts women into the low paying informal economy. In addition, these authors also suggest that in many developing countries maternal mortality tends to be attributed to causes such as poverty and underdevelopment, typically assumed to put women at a disadvantage with respect to health status.

5.3.1 Perceptions by participants of services provided by the MCH/FP centre

From the survey results, it was evident that there were several issues that existed in the MCH/FP centre. These include discrimination in the practices of MCH/FP staff. On occasions staff ignored other women when they talked to high ranking people. Staff usually showed that they are the more knowledgeable people at the clinic, and the main centre often experiences a shortage of staff and resource. This may suggest that whenever nobles' and ministers' wives attend the clinic, staff leave the other women waiting, to offer services according to the required needs of higher status women. On the other hand, perhaps some staff want to show that they are higher in status than participants because they are clever, they are working, they wear a uniform, and they tend to look down or ignore participants because they are poor or uneducated. There seemed to be a shortfall in the practices of health care providers and also a lack of capability by the institution to

provide appropriate, high quality care to women who utilized these services. These results suggested that adjustment in MCH/FP staff responsibilities and improvement of the main centre resources might be needed for the participants to maintain utilization of MCH/FP services and thereby reduce failure of participants to attend their appointments.

5.3.2 Influencing of family planning and contraception

There were three factors identified as common barriers to family planning and contraception by study participants. Firstly, they do not want to face contraceptive side effects, with 72 per cent of participants indicating this. In addition, the result of correlation analysis showed there was a relationship between age and marital status of participants with contraceptive side effects. Perhaps young and single mothers had only vague understandings of the reproductive system and pregnancy risk in relation to the menstrual cycle or on first intercourse and most, although aware of family planning, were not using contraceptives even if sexually active. Secondly, participants have indicated their need to use contraception but their husband did not agree with it. This illustrates what is perhaps the most common influence on family planning and contraceptive use in Tonga. For instance, family planning decisions are often influenced by the husband, who usually wants a large family, without due consideration to his wife's health. This is supported by the literature that in many patriarchal societies men do not allow women to practice family planning (Freedman, 1982; Tolnary & Christenson, 1984; Shen & Williamson, 1999). Thirdly, cultural and religious beliefs were identified as another factor that influenced family planning and contraception. These results supported the findings in previous studies that common barriers to utilizing contraceptives in most developing countries are concerned with religious and social or cultural beliefs (AbouZahr, 1998). In addition, these results are consistent with the theoretical framework that if nursing care is designed with an awareness of religious and cultural beliefs, values and practices, it will

be more satisfying, acceptable, and health-promoting to clients (Leininger, 1991). On the other hand, this may reflect the strong cultural values and beliefs of the people in Tonga. For instance, the Tongan people believe the more children in a family the more benefits for the parents. If the parents become ill, age or die, their offspring have the ability to share responsibilities. The results reflect a need to educate men in general about the benefits of family planning.

Part of the present study also involved a testing for associations between participant's demographics and knowledge of effective contraceptive methods. Findings suggest that there was a positive relationship between marital status, occupation and the lack of knowledge about the effective methods of contraception. One reason was perhaps that younger, single, widowed, divorced, and defacto women had difficulty finding a health professional from whom to obtain appropriate information regarding effective contraceptive methods, mainly because of socio-cultural barriers. Though the above relationships were not very strong to influence family planning and contraception, they may serve as composite precautions to eliminate the difficulties in using family planning and contraceptives.

5.3.3 Barriers to utilize MCH/FP services

The results showed that common barriers to utilizing MCH/FP services include the 'long waiting time to see a doctor', 'no one to look after the other children', 'feeling shy about exposing the body to doctors for physical examinations', 'single pregnant mothers attend antenatal clinic late, because they feel shame about being known by others', and 'some pregnant women prefer to have their babies delivered at home because of their low income'. Most of these findings are consistent with what was noted in the literature, that the main barriers to access health care are: long waiting time to see nurse/physicians, no babysitter for other children, cultural barriers related to

embarrassment in exposing one's body to strangers, and religious beliefs, that God is the cause of all (Kielich & Miller, 1996; Kulwicki & Cass's, 1994; Mikhail, 1999). The long waiting time at the clinics or offices decreases the importance of antenatal care especially when compared to the actual length of the physician visit, which may be about five minutes (Curry, 1990).

From the bivariate results, the following patterns emerged: there were positive relationships associated with demographics such as age with 'no transport'; 'insufficient money'; 'no benefits of attending the antenatal clinics'; and 'some pregnant women preferred to have their babies delivered at home because of their low income'. The Tonga medical and public health services are provided free of charge, which perhaps means this result points to the financial requirements for providing complete accessories for baby, and additional clothing suitable to take to hospital. One possible explanation may be that the insufficient income or financial constraints of participants are significantly interrelated with home deliveries and failure of participants to frequently attend their antenatal appointments. The second possible explanation may be the benefits of attending antenatal clinics were less important to younger pregnant mothers, or the information given to them by the MCH/FP staff regarding benefits of antenatal care were not provided sufficiently to motivate them. Another explanation may be that the older the woman's age, the more likely they are to have their babies delivered at home. However, the recurring patterns seem to suggest that participants, particularly those who are younger, have more difficulties associated with low income/insufficient money, lack of transport as well as lack of understanding of the benefits of attending antenatal checkups. These groups of participants may need to be supported, encouraged and given individualized counselling, in order to empower themselves to take account of their own and baby's health.

Furthermore, the importance of these needs to be clearly explained to women, particularly single mothers, which might help to reduce or to eliminate their difficulties.

5.4 Major implications of the findings

From the pattern seen in the correlation of the barriers and the demographic factors, all barriers were significantly correlated. This is in line with the key notion within the theoretical framework that nurses cannot separate worldviews, social structure, and cultural beliefs from health, wellness, or care when working with cultures because these factors are closely linked.

From the standpoint of clinical practice, the findings indicate that services are available, and nurses are helpful and responsive to women's needs sometimes at the time of their need. Maternal Child Health/Family Planning nurses, midwives, and those who coordinate the main centre were very much appreciated for their services. However, there are areas that need improvement. The need for nurses, particularly those who coordinate the main MCH/FP centre, to focus on the individual needs of participants still exists; they need to value each person regardless of their status, to focus on their needs, keeping in mind that women appreciate practical help and information that is relevant to them. What the study has found is that there is discrimination in MCH/FP nursing practice and MCH/FP nurses sometimes ignore other women when they talked to high ranking people. There seemed to be a lack of acceptance of each woman and their individual needs and individual rights in the health care system and also in capabilities of the nurses to provide appropriate, high quality care to every woman. The World Health Organization identified that a large number of maternal deaths in developing countries are due to failure of the health systems to address women's overall health needs, including discriminatory social practice and negative attitudes towards women (Kirwin, 1998). This reflects the special need of the study population for a better adjustment in characteristics of the MCH/FP

staff. Nurses should understand their role, as they are there to serve or to work for the benefit of women, not the other way round.

Maternal Child Health/Family Planning nurses need to show respect and genuine interest and know that by being approachable and available, they can provide the same opportunities to every woman attending the clinic to discuss alternatives to their present situation, as well as attending to their individual needs regarding whatever services they need. Nurses should focus their attention on the woman as a whole person and their individual needs by establishing a therapeutic relationship. In the therapeutic relationship, the nurse and the woman can come to know and to respect each other, as person who are alike, and yet, different, as persons who share in the solution of problems. The therapeutic relationship can be defined as a connection between the nurse and patient. Where there is the existence of attachment with the nurse always dealing with the patient and building up a good relationship.

As suggested by the World Health Organization, in a primary health care delivery system, full client participation is not only respected but also encouraged and supported (AbouZahr, 1998), so that they know they have the right to speak up and adequately represent themselves. The women's religious and cultural beliefs, traditions, and lifestyles should be respected and considered in any communication with them. This is consistent with the theoretical framework that health care providers should focus on accommodation of religious values and cultural lifestyles of clients. More time and effort should be spent in educating teenagers and women in general about contraception and the benefits of regular antenatal care and the negative consequences of failing to obtain such care.

There should be attempts to reduce the waiting time in the clinics to no more than 60 minutes and provide appropriate information to the women explaining any additional delay. In addition, attempt to distribute different appointments time for women but not at

one time. For example, attempt to organize appointments given to women into four different lots each day. Allow two hours for each lot, arrange 15 to 20 women in each lot and ask the first lot to attend their appointment at 9 o'clock, the second lot at 11 o'clock, and continue the same as to the remaining lots. In addition, more afternoon appointments with health providers should be made available to women to overcome their difficulties with the long waiting time at the clinic. The waiting time should be used to provide more health talks to women including contraceptive side effects as well as effective methods of contraception.

There is a need to increase or extend nurses' home visiting to women at risk of not receiving adequate antenatal care services at the clinic, particularly to single pregnant mothers. Single pregnant mothers need to be empowered, counselled, and encouraged in order to stop their feeling ashamed because they are known by others or by the community. They need to use the antenatal care services more frequently so that any complications or risks can be identified and advice on delivery given.

There is also a need for nurses to stop assuming that poor and lower socio-economic status women will accept discrimination in nursing practice because of the traditional behaviours linked to hierarchy and the power structure in Tonga. In many cases, women have started to question, complain, and report to higher authority people in the Ministry.

In addition, there is a need to join together the clients (community participation), the policy makers and the competent people in the MCH/FP, nurses and other health professionals, to advocate for women and give them a voice, so that their concerns and their input to policy may be heard and more practical and relevant services be established for them. Some of the other ways that MCH/FP nurses in Tonga could address women's health include developing education programs with teenagers and other women to address

addictions, violence and reproductive health, advocating for healthy public policy regarding women's health within Tongatapu's communities, and expanding their practices to address health issues in ways that are important for women in their communities. These initiatives fit well with recommendations for the improvement of women's health in Tongatapu in the Kingdom of Tonga. It also helps to empower women to speak up and adequately represent themselves. To improve the health of women in Tonga, changes must be made to how women are valued in society, as well as at the MCH/FP clinics, because how women are valued has a direct effect on their health. Changes that would improve the status of women include the strengthening of the social and economic conditions in which women live, the personal responsibility that women are able to take for their health and the lifestyle choices they are able to make, and their ability to access MCH/FP services. Maternal Child Health/Family Planning nurses as well as other women from Tongatapu communities must be included in these initiatives to ensure that services are effective, appropriate, and necessary. However, the researcher considers that more could be achieved with a coordinated and orderly management, and more openness and collaboration between all who have anything to do with how women are valued in Tongan societies.

For the MCH/FP services there is always a need to update services and resources (even limited resources) in order to meet the needs of women. For instance, as suggested by the World Health Organization, to bring or to distribute health services as close as possible to where women live in order to tackle their financial barriers, particularly for those who have no transport, are unemployed and have insufficient income. There were several areas of need that study results indicated as important and which are relevant for the health services.

Firstly, participants indicated that the nurses were not available to offer services after official hours and during week-ends. Participants have indicated their need for more flexible and better variety of MCH/FP services, such as modification of policies to increase the range of hours by allowing nurses to work over-time after official hours and during the week-ends.

Secondly, with the increasing number of teenage pregnancies, there is a particular need to establish an adolescent health program or health education which meets the needs of the local community, particularly relating to adolescence and the health care system. In addition, there is a special need to organize or to provide a separate antenatal clinic for single pregnant mothers alone in order to help them to stop feeling shame because they are known by others.

Thirdly, to address the increase in maternal mortality in the population (Table 1, p. 11), there is great demand for more and better MCH/FP services including action to be taken to alter the social, economic, and health status of women. The death of a woman in childbirth signifies far more than the tragic loss of a single life; it can threaten the survival of the whole family, especially the newborn baby and other young children (Royston & Armstrong, 1989). The results indicated that there is in all likelihood a need to improve the MCH/FP services to diminish the risk of maternal mortality.

Fourthly, regarding the influences on family planning and contraception used, the results reflected the need to establish a health education program or health education campaigns for the male partners and men in general to address the benefits of family planning. The women's religious and cultural beliefs regarding the use of contraception should be respected as strongly supported by the theoretical framework. Although women do have strong religious and cultural affiliations, they also need effective counselling services regarding the importance of family planning and contraception, and the benefit of

contraception to their own lives as a whole. In addition, the use of family planning methods should be encouraged to prevent unplanned and high-risk pregnancy.

Next, concerning the barriers to utilizing MCH/FP services indicated in the results, there is a need for health policy makers to strengthen the utilization of primary health care approach as recommended by the World Health Organization, for implementing or planning of programs for the MCH/FP services. In addition, based on one of the barriers to utilization of the MCH/FP services as suggested by participants, that they feel ashamed of exposing their body to doctors for physical examinations, there is a need to employ female doctors rather than male doctors. For the lack of availability of child-care, there is a need to arrange or provide on-site child-care to help women receive adequate antenatal care.

Moreover, as indicated in the results, some pregnant women preferred home delivery because of their low-income. With the increase in home deliveries that were attended by the traditional birth attendants (Table 1), there is a need for a formal medical training provided for traditional birth attendant practitioners to ensure the safety of mother and baby. In turn, this is consistent with the theoretical framework, which suggests that cultural care combines professional nursing care with generic folk practices, and to change areas in both health care providers and generic folk practices.

Another recommendation is that transportation assistance, such as bus or taxi vouchers or volunteer drivers, seems necessary to help women receive adequate care. The availability of such assistance should be publicized to all women through the outreach programs and health education messages to the public.

Finally, there also needs to be an annual audit of the programs, activities or services provided to assess how successful they are and to identify problems. Hopefully these recommendations will assist Tonga Health Authority, particularly MCH/FP section

policy-makers to develop more effective strategies and services, which are responsive and accessible to women who utilize the MCH/FP services. Additionally, these recommendations should assist MCH/FP policy-makers in setting up some sort of audit mechanism to assess its services and find weaknesses in the system, which can then be addressed.

5.5 Theoretical framework

Leininger's Sunrise Model (Figure 1, p. 37) which was chosen as the central theoretical framework for this study, was generally helpful in visualizing where the perceptions of women of services provided by the Tonga MCH/FP centre fit into the overall picture of health care delivery. This framework provided a structure in which to explore and view the social, economic, and political structure, religious and cultural values and beliefs, and ways of life of the Tongatapu communities. It also provided a guide to a holistic view of social structure factors such as religion, politics, culture, economics, and the interrelationships among them, and depicts the factors that can potentially influence the ability of women regarding their utilization of MCH/FP services.

What this framework proposes is that if there is a consideration and close relationship between caregiver's beliefs and care receiver's beliefs and practices, clients' care outcomes will be health-promoting and satisfying. Close relationships with health providers contribute to the client's satisfaction and it is a powerful healing force for quality healthcare. The close relationship, in turn, may assist in removing or reducing complaints about the long waiting time to see the doctor and discrimination in nursing practice for instance, freeing women to continue utilizing the MCH/FP services. However, in Tongan culture the concept of care and caring is to show respect, love, presence, and assistance for others. Tongan people expect health care providers to treat every client equally. Consequently, there appears to be a shortfall between the

expectations of the people and the health providers. For instance, sometimes when the poor and the lower socio-economic people come in for treatment or to access a service, in most instances, they accept without question what is offered, because they do not know any better and they are not enlightened at all by the health professionals. They are also treated with little respect by the health professional who sometimes tend to ignore patients because they are poor and uneducated. This is acceptable behaviour by both sides because of the power structure in Tonga. Further work needs to be done to establish the influence of the cultural and social factors on women's health. Further work also needs to be done with the theoretical framework, as the majority of concepts and their relationships have not been addressed or tested in a systematic way in this study.

As previously mentioned, because the Kingdom of Tonga is almost homogeneous, this study did not intend to test relationships between all concepts of Leininger's framework. But this study endeavoured to use some parts to explore the social structure and ways of life of women in the Tongatapu communities, and their perceptions of services provided by the MCH/FP centre at Vaiola Hospital. Further research is required to test relationships within this theoretical framework. However, throughout the study, it was clear that social structure and related cultural values and beliefs and ways of life of participants influenced their ability to utilize the MCH/FP services.

In Tongan culture, poor and lower economic people are sometimes discriminated against by subtle preferential care and treatment provided to nobles and those holding high rank in the government. As Tonga is a very small island country and everybody knows who everyone is, when a noble comes to the hospital, the medical staff will attend to him at once, leaving others of a lower status waiting. The nurses follow suit by making sure that everything is done for the noble to be comfortable as possible. In addition, Tongans culture always impacts on people if there is a need to see a nurse or a doctor of

the opposite sex. When discussing sensitive issues such as sex or other medical problems that require a physical examination, Tongan women often feel shy, uneasy and uncomfortable, because the body is often perceived as sacred, and therefore exposing it to a doctor or nurse of different sex is considered culturally inappropriate. In addition, in Tongan culture, discussions on sexual health care are considered not appropriate and people often feel inhibited about their sexual health problems when in open discussion with other people. Talking about one's sex life is culturally restricted - it is not discussed openly in a public place, school, or amongst sisters and brothers or between parents and their children because of the cultural taboo.

5.6 Limitations of the study

This study was conducted at one point in time on a convenience sample of women attending the MCH/FP services at Vaiola Hospital, Tongatapu, therefore cannot accurately be applied to the entire population. The extent to which findings from this study may be generalizable to other women in other MCH/FP clinics remains to be established by further research. Also this study focuses on women's perceptions and no observations were undertaken to identify if perceptions are evident in practice. The womens' observations may also be biased based on their own perceptions of health utilization and beliefs. In addition, women's self-reports depend on their memory and accuracy of reporting which may vary from one to another. The findings of this study should therefore be treated with care when applied in other contexts.

5.7 Suggestions for further research

Larger scale investigations are indicated to confirm the findings of this study. Research efforts are required in exploring proper interventions to reduce barriers to utilize MCH/FP services and promote the health of women who utilize these health services.

There are a number of areas in which future studies may prove helpful. Future research should include peripheral MCH/FP clinics in rural areas and women who live in rural communities and have not yet received help from the MCH/FP centre. Strategies that would assist in recruiting these women in the rural communities would include advertising for volunteers through radio programs or via television (subjects who meet study criteria), and through health officers and community health nurses.

Other needs focus on the negative attitude of staff mentioned by participants in this sample. These include discrimination in their practice, displaying that they are the more knowledgeable people at the clinic, and sometimes ignoring others when they talk to high ranking people, and should be included in a future survey to confirm or to call for an end to discrimination against women and for changes that perpetuate the low social status of women. From the results of this study, it may be concluded that barriers to using family planning and contraception, and barriers to utilizing MCH/FP services are not sensitive enough to obtain standard information regarding such services. To elicit further information about these barriers, qualitative interviews with women who utilize MCH/FP services may need to be undertaken in order to obtain more in-depth information with respect to their experiences. With barriers to using family planning and contraception such as husband's objections to contraception, there is a need to include men or male partners in any future study. The combination of quantitative and qualitative methods is highly recommended and, indeed, useful in that it can contribute to a fuller understanding of the real world of women and their perceptions for services provided by the MCH/FP centre in Tonga. It is recommended for future study to combine quantitative and qualitative methods.

As indicated from the results of correlation, age, marital status, and age of participant at birth of the first child are related to barriers to using contraception as well as to barriers to utilizing MCH/FP services, but they are weak. The reasons for this variation remain unexplained but may reflect personal beliefs and efficacy in managing health. Recommendations for further study include the identification of other variables that may predict other barriers and a determination of how these variables might help explain the variation in barriers.

It is important that any educational and supportive interventions developed from the findings of this study be practically tested. A clinical trial could be developed to test the effectiveness of educative-supportive interventions provided by the MCH/FP nurses. Such a trial should test the services provided, such as antenatal clinics, obstetric services, and family planning services as well as the remainder of MCH/FP services. The figures provided in the MCH Annual Report are very helpful, but do not say much about patient satisfaction, how promptly complicated pregnancies are being detected, causes of neonatal and maternal deaths, barriers to using contraception and barriers to utilizing MCH/FP services and so forth. In addition, this report does not say much about the reason why the annual target objectives proposed are not being achieved; this may be caused by the barriers identified in this study. As shown in the present study, the overall findings point to the multifaceted, complex and subjective nature of women's health needs.

5.8 Concluding statement

This study describes women's perceptions of health and public health nursing practice at MCH/FP centre in Tongatapu. This study has also helped bring attention to barriers that inhibit women from utilizing MCH/FP services. A number of barriers have been identified that were important to both women and health providers and serve to highlight areas of deficiencies in the provision of services in the current health care

system (MCH/FP). The barriers to using family planning and contraception were seen as pointing to husband's objections, cultural and religious beliefs and women's limited understanding of contraceptive side effects. The barriers to utilizing the whole MCH/FP services were seen as most likely to focus on social, economic, cultural, and religious contexts of the participants. Health professionals need to be aware that individual needs of women may vary and what women really appreciate is help that is relevant and practical to their individual situations.

These results have contributed to knowledge relevant to nursing practice and the provision of health services. Several implications for research have also been discussed. As more nurses are assuming the responsibility for guiding and supporting women, a better understanding of women's situations and how to meet their different needs is essential. In order to set up community and nursing interventions to meet the different needs of women as well as to identify barriers that protect or delay their ability to utilize MCH/FP services, continued research is needed. Further enhancement of women's health and of MCH/FP nursing services, however, is required if the health of women in Tonga is to improve. Expanded roles for MCH/FP nurses, the improvements of MCH/FP services that focus on women's health in an interdisciplinary manner are ideas whose time has come. In brief, this research project serves as a pilot study to provide baseline information for Tonga health care professionals and arouse research concerns in this field.

Last but not least, the demanding, dedicated, and hard work of women as mothers should be specially recognized and honoured by the wider society. Women need more support and understanding from the general public as well as from the health services, particularly from health care providers, but most importantly, they deserve better services designed to meet their special needs. It is very important to recognize the importance of maternal health to the family and to the future health of the nation and to give greater

attention to women's needs. I hope this thesis has contributed to a developing body of knowledge through which nurses and other health professionals can be better informed about womens' needs, and that through this common understanding, positive changes will be made in the provision of MCH/FP services to enable women in the Tongatapu area to maintain balance in their lives as a whole.

References

AbouZahr, C. L. (1998). WHO in action: Lesson on safe motherhood. *World Health Forum, 19*, 253-260.

Albrecht, J., Maureen, D. L., Usha, S. and Diesfeld, H. J. (2000). Maternity care in rural Nepal: A health service analysis. *Tropical Medicine and International Health, 5* (9), 657-665.

Anandalakshmy, P. N., Talwar, P. P., Buckshee, K. and Hingorani, V. (1993). Demographic, socio-economic and medical factors affecting maternal mortality-an Indian experience. *The Journal of Family Welfare, 39*, 1-4.

Anderson, E. T. and McFarlane, J. (1996). *Community as partner: Theory and practice in nursing* (2nd ed.). Philadelphia: Lippincott.

Anderson, E. T. and McFarlane, J. (2000). *Community as partner: Theory and practice in nursing* (3rd ed.). Philadelphia: Lippincott.

Beanland, C., Schneider, Z., LoBiondo-Wood, G. and Haber. (1999). *Nursing research: Methods, critical appraisal, and utilization.* (1st Australian ed.). Melbourne: Mosby Publishers Australia Pty Ltd.

Beverly, L. (1999). Women's health and the practice of public health nurses in Northern British Columbia. *Public Health Nursing, 16* (4), 280-289.

Bhatia, J. C. and Cleland, J. (1995). Determinants of maternal care in a region of South India. *Health Transition Review, 5*, 127-142.

Bowling, A. (1997). *Research methods in health: Investigation health and health services*. Philadelphia: Open University Press.

Burns, N. and Grove, S. (1999). *Understanding nursing research* (2nd ed.). Philadelphia: W.B. Saunders.

Burns, N. and Grove. S. (2001). *The practice of nursing research: Conduct, critique, and utilization* (4th ed.). Philadelphia: W.B. Saunders Company.

Camphina-Bacote, J. (1998). *The process of cultural competence in the delivery of health care services: A culturally competent model of care* (3rd ed.). Transcultural Care Association.

Cartmail, K. St. (1997). *The art of Tonga*. Hong Kong: Everbest Printing Co. Ltd.

Copyright Secretariat of the Pacific Community. (1999). *Tonga population profiles based on 1996 census: A guide for planners and policymakers*. Noumea: Secretariat of the Pacific Community.

Coria-Soto, I. L., Bobadilla, J. L. and Notzon, F. (1996). The effectiveness of antenatal care in preventing intrauterine growth retardation and low birth weight due to preterm delivery. *International Journal for Quality in Health Care, 8*, 13-20.

Curry, M, A. (1990). Factors associated with inadequate prenatal care. *Journal of Community Health Nursing, 7*(4), 244-252.

De-Vaus, D.A. (2002). *Surveys in social research* (5th ed.). SRM Production Services Sdn Bhd: Malaysia.

Fawcus, S., Mbizvo, M., Lindmark, G. and Nystrom, L. (1996). A community-based investigation of avoidable factors for maternal mortality in rural Punjab, India. *Population Studies, 44*, 489-505.

Fortney, J. A., Susanti, I., Gadalla, S., Saleh, S., Rogers, S. M. and Potts, M. (1986). Reproductive mortality in two developing countries. *American Journal of Public Health, 76* (2), 134-136.

Freedman, R. (1982). Fertility decline: Theories In J.A. Ross (Ed.). *International encyclopedia of population.* New York: The Free Press.

Freund, P. E. S. and McGuire, M.B. (1995*). Health, illness, and the social body.* (2nd ed.). New Jersey: Prentice-Hall.

Gillis, A. and Jackson, W. (2002). *Research for nurses: Methods and interpretation.* United States of America: F.A. Davis Company.

Gulzar, L. (1999). Access to health care. *Image: Journal of Nursing Scholarship, 31* (1), 13-19.

Helman, C. (1994). *Culture, health and illness: An introduction for health professionals* (3rd ed.). Oxford: Butterworth-Heinemann.

Hertz, E., Herbert, J. R. and Landon, J. (1994). Social and environmental factors and life expectancy, infant mortality, and maternal mortality rates: Rates of cross-national comparison. *Social Science and Medicine, 39*, 105-114.

Hollander, D. (1997). Prenatal benefits improve birth outcome among working Mexican women. *International Family Planning Perspectives, 23*, 94-95.

Joyce, T. J. and Crossman, M. (1990). Pregnancy wantedness and the initiation of prenatal care. *Demography, 27*, 1-17.

Kaeppler, A. L. (1999). *From the stone age to the space age in 200 years: Tongan art and society on the eve of the millennium*. Melbourne: Australian Print Group.

Karlsen, S. and Nazroo, J. (2002). Relation between racial discrimination, social class, and health among ethnic minority groups. *Advances in Nursing Science, 2* (4), 624-631.

Kielich, A. M. and Miller, L. (1996). Cultural aspects of women's health care. *Patient Care, 30* (16), 60-90.

Kirwin, S. (1998). WHO reaffirms commitment to women's health. *British Medical Journal, 316* (7138), 1113-1121.

Kulwicki, A. and Cass, P. (1994). An assessment of Arab American knowledge, attitudes, and beliefs related to AIDS. *Image: Journal of Nursing Scholarship, 26* (1), 13-17.

Latu, R. (2000). *Family planning in Tonga: Barriers in family planning practice and contraceptive use*. Tonga: Ministry of Health.

Leininger, M. (1985). *Qualitative research methods in nursing*. Orlando, FL: Grune and Stratton.

Leininger, M. (1991). *Culture care diversity and universality: A theory of nursing*. New York: National League for Nursing Press.

Leininger, M. (1995). *Transcultural nursing: Concepts, theories, research, and practices* (2nd ed.). Hilliard. OH: McGraw-Hill.

Martin, J. (1991). *Tonga Islands* (5th ed.). Tonga: Vavau Press.

McCormack, B. and Hill, E. (1997). *Conducting a survey: The SPSS workbook*. UK: International Thomson Business Press.

Mechanic, D. (1986). The concept of illness behaviour: Culture, situation and personal predisposing. *Psychological Medicine, 16* (1), 1-7.

Meleis, A. (1999). Culturally competent scholarship: Substance and rigor. *Advances in Nursing Science, 19* (2), 1-16.

Mikhail, B. I. (1999). Perceived impediments to prenatal care among low-income women. *Western Journal of Nursing Research, 21* (3), 335-355.

Miller, H. S., Lesser, K. B. and Reed, K. L. (1996). Adolescence and very low birth weight infants: A disproportionate association. *Obstetric and Gynecology, 87*, 83-88.

Munhall, P. and Oiler, (1986). *Philosophical foundations of qualitative research: Nursing research: A qualitative perspective.* (3rd ed.). Norwalk, Ct: Appleton-Centry-crofts.

Munjanja, S. P., Linmark, G. and Nystrom, L. (1996). Randomised controlled trial of a reduced-visits programme of antenatal care in Harare, Zimbabwe. *The Lancet, 348,* 364-369.

National Statistics Office and Macro International. (1993). *Philippines national motherhood survey 1993*. Calverton, Maryland.

Nieswiadomy, R. M. (1998). *Foundations of nursing research* (3rd ed.). United States of America: A Simon and Schuster Company.

Obermeyer, C. M. and Potter, J. (1991). Maternal health care utilisation in Jordan: A study of patterns and determinants. *Studies in Family Planning, 22*, 177-187.

Pacific Islands Information. (1995). *The public health commission's advice to the ministry of health*. Wellington: Central Health.

Polit, D. F. and Hungler, B. P. (1999). *Nursing research: Principals and methods* (6th ed.). Philadelphia: Lippincott.

Roberts, K. and Taylor, B. (2002). *Nursing research processes: An Australian perspective.* (2nd ed.). Singapore: Nelson Australia Pty Limited.

Royston, E. and Armstrong, S. (1989). *Preventing maternal deaths*. World Health Organization, Geneva.

Shen, C. and Williamson, J. B. (1999). Maternal mortality, women's status and economic dependency in less developed countries: A cross-national analysis. *Social Science and Medicine, 49,* 197-214.

Tolnary, S. E. and Christenson, R. L. (1984). The effect of social setting and family planning programs on recent fertility declines in developing countries: A reassessment. *Sociology and Social Research, 69*, 72-89.

Tomey, A. M. and Alligood, M. R. (2000). *Nursing theorists and their work* (5th ed.). New York: Mosby Inc.

Tsu, V. D. (1994). Antenatal screening: Its use in assessing obstetrics risk factors in Zimbabwe. *Journal of Epidemiology and Community Health, 48*, 297-305.

United Nations Children's Fund. (1990). *The state of the world's children 1990.UNICEF.* New York: Oxford University Press.

United Nations (1991). *The world's women 1970-1990: Trends and statistics*. United Nations: New York.

Vital Statistic Tonga. (1997-2001). *Public health section year-end review report*. Tonga: Ministry of Health.

Walker, G. J. (1986). Maternal mortality in Jamaica. *Lancet, 1* (8479), 486-488.

Ward, K. B. and Pyle, J. L. (1995). Gender, industrialization, and development. *Development, 1*, 67-71.

Wood, A. H. (1991). *History and geography of Tonga*. New Zealand: Border Morning Press.

World Health Organization. (1978). *Alma-Ata 1978. Primary health care: Health for all. Series No.1*. Geneva: Author.

World Health Organization. (1994). *Antenatal care: Report of a technical working group.* Geneva, 31 October - 4 November 1994.

World Health Organization. (1996). *Revised 1990 estimates of maternal mortality* - A new approach by WHO and UNICEF.

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Appendix A - Presentation of survey instruments utilized

Women's Perceptions of Maternal Child Health and Family Planning Services in Tonga

Part 1 – Demographic factors
Part 2 – Current MCH/FP services questionnaires

Part I: Questions about yourself.

Question 1: I am in the age group (please tick the appropriate box)

a. 18 - 22 ☐
b. 23 - 27 ☐
c. 28 - 32 ☐
d. 33 - 37 ☐
e. 38 - 42 ☐
f. 43 or older ☐

Question 2: My current marital status is (please tick the appropriate box)

a. single mother ☐
b. married ☐
c. divorced ☐
d. widower ☐
e. defacto ☐
f. never married ☐

Question 3: My current occupation is (please tick the appropriate box)

a. housewife ☐
b. labour ☐
c. civil servant ☐
d. unemployed ☐
e. paid domestic work ☐
f. unpaid domestic work ☐
g. Other (please name) ☐
.....

Question 4: Please tick which Church you belong to (please tick the appropriate box)

a. Latter Day Saints ☐
b. Roman Catholic ☐
c. Anglican ☐
d. Free Wesleyan Church ☐
e. Free Church of Tonga ☐
f. Seven Day Adventists ☐
g. Other (please name)
.....

Question 5: I have… children (please tick the appropriate box)

a. 0 ☐
b. 1 ☐
c. 2 ☐
d. 3 ☐
e. 4 ☐
f. 5 ☐
g. 6 ☐
h. more than 6 ☐

Question 6: How old were you when you gave birth to your first child?

a. Less than 18 ☐
b. 18 - 22 ☐
c. 23 - 27 ☐
d. 28 - 32 ☐
e. 33 - 37 ☐
f. 38 - 42 ☐
g. 43 or older ☐

Part 2 : The current situation of the MCH/FP services

The following services are provided by the MCH/FP.

Question 7: Please tick ✓ yes or no to which MCH/FP services you are using today. You can tick more than 1.

		Yes	No
a	Promotion of maternal and child health		
b	Antenatal care		
c	Postnatal care		
d	Family Planning clinics		
e	Immunization clinics		
f	Child health care clinics		
g	General health education		
h	Breast feeding		
i	Counselling services		

Other Comments----------

Question 8: Please tick ✓ yes or no if you have used any of these services in the past 6 months. You can tick more than 1.

		Yes	No
a	Promotion of maternal and child health		
b	Antenatal care		
c	Postnatal care		
d	Family Planning clinics		
e	Immunization clinics		
f	Child health care clinics		
g	General health education		
h	Breast feeding		
i	Counselling services		

Other Comments----------

Question 9: How satisfied you are with each of these services you may have used in the past or are currently using? Please tick ✓your response from 1 to 5:

1- very satisfied
2- satisfied
3- dissatisfied
4- very dissatisfied

		1	2	3	4
a	Antenatal care services				
b	Promotion of maternal and child health services				
c	Postnatal care services				
d	Family Planning services				
e	Immunization clinics				
f	Child health care services				
g	Health education services				
h	Advice given by the MCH/FP nurses about my baby's development				
i	Information about MCH/FP nurses programs				
j	Breast feeding services				
k	Counselling services				
l	Attending to the needs of women visiting the centre/clinic				

Other Comments----------

Question 10: How accessible are MCH/FP services to you?

Please tick ✓your response to each question whether the services are:

1- accessible
2- unsure
3- inaccessible

		1	2	3
a	Nurses are available to offer services after official hours			
b	Nurses are available to offer services during week-ends			
c	I find it easy to get to services from where I live			
d	Services are available when I need them			
e	I can contact services at any time			

Question 11: These questions are about your use of family planning services and contraception

Please tick ✓your response to each question whether you:

1- agree
2- unsure
3- disagree

		1	2	3
a	I want to use contraceptives.			
b	I do not know what are the more effective methods of contraception			
c	I want to use contraceptive in between pregnancies.			
d	I do not want to face the side effects of contraceptives			
e	I am happy to use contraceptive but my husband is not			
f	My strong religious beliefs stop me using contraceptives			
g	My strong cultural beliefs stop me using contraceptives			
h	I understand that contraceptives have advantages and disadvantages			
I	MCH/FP staff have sometimes persuaded me to use contraceptives			
j	I am currently using an effective method of contraception			

Question 12: These questions are regarding how you feel about using MCH/FP services
Please tick ✓your response to each question whether you:

1- agree
2- unsure
3- disagree

		1	2	3
a	Nurses always make me feel welcome when I am going for consultations			
b	I trust nurses because they always keep my privacy			
c	I believe nurses are always honest and tell the truth if I have a serious condition			
d	I believe there is discrimination in practice provided by the MCH/FP staff			
e	The MCH staff usually showed that they are the more knowledgeable people at the clinics			
f	I understand that we are sometimes ignored by the MCH staff if they talk to high rank people			
g	The MCH clinics often experience shortage of resources such as contraceptives			
h	The MCH clinics often experience shortage of staff and contraceptive			

Question 13: These questions are about barriers to you using MCH/FP services
Please tick ✓your response to each question whether you:

1- agree
2- unsure
3- disagree

		1	2	3
a	I want to attend the antenatal check up but I am tired of the long waiting time to see the doctor			
b	I want to frequently attend the antenatal clinic but there is no one to look after my other children			
c	I do not need to attend all the appointments at the antenatal clinic because I have experience from my previous pregnancies			
d	I sometimes fail to keep my appointment because I do not have transport			
e	I want to attend the antenatal check up but I do not have enough money			
f	I want to attend the antenatal check up but I do not think there are benefits			
g	In our culture, we believed that pregnancy only occurs in marriage			
h	I feel shy to expose my body to doctors for physical examinations			
i	Single pregnant mothers attend the antenatal clinic late because they feel shame if the community knows about their pregnancy			
j	Some pregnant women prefer to have their babies delivered at home because of their low income			
k	Tensions between doctors and the nurses at the MCH/FP sections can sometimes cause barriers to attending health services			
l	I believe that most of our customs cause barriers to accessing to MCH/FP services			

Other Comments----------

Thank you for completing this questionnaire. Would you now place it in the envelope supplied and return it to:

Ana Havea
Master of Nursing student
School of Nursing
University of Ballarat

Appendix B

PLAIN LANGUAGE STATEMENT

Dear resident,

My name is 'Ana Fili Havea and I am completing a Thesis at University of Ballarat, Victoria, Australia as part of my study for a Masters in Nursing Studies.

The aim of this research is to examine the current programs of MCH/FP in Tonga. By finding out this information, we may be able to identify the best way to deliver the appropriate health programs which meet the needs of women in Tonga.

I would appreciate it if you could spend about 15 minutes completing the questionnaire and put it in the sealed envelope then into the box provided in the clinic.

The information you will provide to me will be collected in the MCH/FP clinics by the assistance of the Sister in Charge of MCH/FP and public health nurses. None of the information you will provide will be communicated to any other person. Your participation in this project is voluntary and the questionnaires do not contain any markings or codes, which might identify you.

Any questions regarding this project can be directed to the MCH/FP Sister In charge, Vaiola Hospital Tonga or to the researcher to Ballarat University.

Thank you for your cooperation

Yours Sincerely,

'Ana Fili Havea.

Appendix C

Ethic approval from the University of Ballarat Higher Research and Ethics Committee

Appendix D

Ethic approval from the Tonga Health Research and Ethics Committee

Appendix E

Seeking permission to conduct the Research at Vaiola MCH/FP centre

Chair

Research and Ethics Committee

Vaiola Hospital

P O Box 59

Nukualofa

TONGA FRIENDLY ISLANDS

15. 4. 02.

Dear Sir,

My name is Ana Fili Havea and I am completing a Thesis at Ballarat University as part of my studies for a Masters in Nursing Studies.

I am writing in order to obtain permission to conduct a survey in the MCH/FP section Vaiola Hospital (main hospital), including health centres and all the MCH/FP clinics on the main island (Tongatapu).

The aim of this survey is to assess women's perceptions of services provided by the MCH/FP Sections, and also to identify barriers, which may prevent women from utilizing the MCH/FP services in the Kingdom of Tonga.

Thank you for your assistance. Would you please write a letter of support so that we can attach it to the application form submitted to the Ethics Committee of the University of Ballarat. This letter may be faxed to 61 03 5327 9719, attention: Ana Havea.

Yours faithfully

Ana Fili Havea

Master of Nursing Student

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