Community and Health Service Responses to Culturally Safe Tuberculosis Ward at Atoifi Adventist Hospital, Solomon Islands

A thesis submitted in partial fulfilment of the requirements for the degree Master in Leadership and Development

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Abstract

East Kwaio community is a remote region in the island of Malaita, Solomon Islands. Health services for the people of East Kwaio are provided by Atoifi Adventist Hospital (AAH) of the Seventh-day Adventist Church. Geographically, socially, culturally and spiritually, East Kwaio is divided into coastal and mountain dwellers. Most people who live in coastal areas follow introduced Christian religion. Most people who live in mountain areas follow Indigenous Ancestral religion. Historically, services being provided at AAH have not been sensitive to the culture and beliefs of people living in the mountains who practice Ancestral religion. This has caused a major disparity in access to health services. This means, coastal people have more access to health services than mountain people. Tuberculosis (TB) is a major health issue that has changed the lives of many East Kwaio people.

To effectively address the TB burden in the area, a Culturally Safe TB Ward (CSTBW) was jointly established by the community, health service and church administration. It is an innovation that promotes a cultural intervention for TB control in the East Kwaio community. The aims of this study were to explore community and health service responses to CSTBW and to make recommendations for the CSTBW to be culturally sensitive to both coastal and mountain people and, to ensure that it is sustainable.

Three focus group sessions with 8 participants each were conducted. Face-to-face interviews with 15 participants were added as some may not be able to disclose their views within peers. Participants were from both coastal and mountain communities. Participants were health administrators, nurses, local TB managers, Provincial TB staff, nursing students, TB patients (currently on treatment or with history of TB),
Residents of coastal villages and residents of mountain hamlets. Responses were thematically analysed and reflective of community and health service perceptions of CSTBW.

The study revealed four aspects of Culturally Safe TB ward which are: i) Reasons for Relocation and Re-development, ii) Operational challenges of Culturally Safe Tuberculosis, iii) Opportunities for positive impact and iv) Factors for sustainability. Ensuring the effective management of the Atoifi TB Control and Treatment Program was also a major theme in the study. Participants highlighted that sustainability of CSTBW is the prime goal. This can happen through collaborative intervention between AAH, the community and professional stakeholders including Atoifi health workers and provincial TB staff.

Despite the range of participant responses there was an overwhelmingly positive attitude towards improving and sustaining the CSTBW in AAH. This means, informants recognise and appreciate that improving the CSTBW is a way forward to addressing the health disparity between coastal and mountain dwellers in East Kwaio. Participants discussed both challenges and opportunities, demonstrating they are willing to improve the TB ward so it becomes a workable health system that provides equal benefits for both coastal and mountain dwellers. As a result, a newly defined collaborative intervention reflective of “Connected Leadership” was developed. It is proposed that this be the appropriate leadership development framework for the sustainability of CSTBW. The framework involves three components: health, religion and culture.
Dedication

This thesis is dedicated to AAH and James Cook University TB team for their enthusiasm and commitment in bringing to fruition the establishment of the CSTBW for the local communities in East Kwaio. Their positiveness and willingness in becoming the agent for change gives new hope to minority groups in East Kwaio. It was through them that bridging the gap between western health and cultural health was finally established.

I also would like to dedicate this thesis to my dear daughter, Adia Amanda Asugeni, 19, who was willing enough to take the risk in looking after herself during her final years at high school with the understanding that mummy is doing her master’s program when I’m most needed. Azmond Otana Asugeni, 14 who was patient enough to be there for the whole family when the going gets tough. He was the one person I could never stop thank for carrying the role of a father, a mother, a friend when there seems to be no one in the home. MacLen. F. L. Asugeni, 5 years old, for creating a musical atmosphere that turns the stress and discouragement into an enjoyable and pleasant environment, and our wonderful Troy R.K Asugeni who is now turn 5 months old. My heart is filled with joy for having a wonderful husband and a friend, James Asugeni who is ever present by my side. He has been a constant guide in maintaining the family basic physical, social, mental and spiritual needs.

With humble heart, I would like to thank my heavenly Father for bestowing wisdom, knowledge and understanding upon me. It is His divine strength that enables me to complete this thesis. May all glory be given to Him.
Acknowledgement

This thesis is dedicated to great people who willingly committed in supporting and providing professional guidance, to those who proactively and innovatively put their effort into improving the TB control program in Atoifi and the surrounding communities.

Firstly, I would like to thank my two supervisors, Associate Professor David MacLaren and Professor Rick Speare. I would also like to thank Dr Peter Massey and Michelle Redman-MacLaren for their belief that I could be a significant agent in initiating sustainable change pertaining to the culturally safe TB ward through this study. It was their passion, encouragement and support of integrating culture with a TB intervention and their continuous fight with the local community to promoting acceptable and accessible health care among the minority group of East Kwaio community that greatly influenced the successful achievement of this thesis. Their positiveness toward this thesis was demonstrated through the field trip that together we made to the mountain of East Kwaio.

The relationship displayed between me and my supervisors and the rest of East Kwaio community including Atoifi health service has been a tremendous link created to improving TB burden in this remote community of East Kwaio in Solomon Islands.

I am indebted to many, of which I am so grateful indeed for their cooperative spirit, enthusiasm and patience during the process of this study. With this, I wish to thank Dr. Lalen for her understanding and continuous words of encouragement that keeps me going.

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I wish to thank the JCU and Atoifi TB team for their commitment and innovative ideas in putting together the concept of the CSTBW. They are Esaau Kekeubata, John Laete’esafi,
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In the same way, I would like to acknowledge PAU Ethics Committee, National Health Research Ethics Committee, Ministry of Health and Medical Services, Solomon Islands and AAH Ethics Committee for issuing the performance to conduct this piece of study. Without their support and approval, this thesis will not be easily achieved as expected.

Lastly but not the least, my sincere thanks goes to community and health service for making this thesis become a reality. Without their participation and willingness to share their views, this thesis will not be made possible.

My dear brother –in-law, Lester and Hettie Asugeni and the kids for their never ending support while doing my study. Their genuineness and faithfulness to step in when help is most needed reflects a true family bond in Kwaio culture. I also wish to remember my parents in faithfully supporting me through their prayers.
<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
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<tr>
<td>AAH</td>
<td>Atoifi Adventist Hospital</td>
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<td>ACON</td>
<td>Atoifi College of Nursing</td>
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<td>AAHREC</td>
<td>Atoifi Adventist Hospital Research and Ethics Committee</td>
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<tr>
<td>AI</td>
<td>Appreciative Inquiry</td>
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<td>AUC</td>
<td>Australian Union Conference</td>
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<tr>
<td>CSTBHS</td>
<td>Culturally Safe TB Health Service</td>
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<td>CSTBW</td>
<td>Culturally Safe TB Ward</td>
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<tr>
<td>DOTS</td>
<td>Directly-Observed Therapy –Short course</td>
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<tr>
<td>HIV</td>
<td>Human Immuno-deficiency Virus</td>
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<td>AIDS</td>
<td>Acquired Immuno-deficiency Syndrome</td>
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<td>JCU</td>
<td>James Cook University</td>
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<td>PAUREC</td>
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<td>PHC</td>
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<td>PICSTBW</td>
<td>Positive Impacts of Culturally Safe TB Ward</td>
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<td>PNG</td>
<td>Papua New Guinea</td>
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<td>SOCSTBW</td>
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Glossary

Abu: Sacred

Community: refers to people in local villages including coastal and mountain people of East Kwaio

Culture: A historical lived community, and the societal values, beliefs and practices that holds it together.

Culturally Safe TB ward: A culturally designed TB Ward with culture–oriented services appropriate to both coastal and mountain people.

Health disparity: There is no equal health care services received by mountain people and also services are insensitive to East Kwaio culture

Health service: Refers to health professionals, health management, services and its stakeholders

Health equality: Defined as equal distribution and benefits of quality health care services among different ethnic groups.

Health equity: Health care services that are distributed on the basis of need, particularly sensitive to Kwaio culture practiced by mountain people.

Tuberculosis: A communicable disease caused by Mycobacterium Tuberculosis. It is transmitted when a susceptible individual inhales air containing droplet nuclei carrying the tubercle bacilli.
Chapter 1: Introduction

1.1. Introduction

Providing health services that meet the needs of local communities is essential to reducing disease and improving health. Establishing a profound understanding of the new Culturally Safe Tuberculosis (TB) Ward (CSTBW) at Atoifi Adventist Hospital (AAH) in East Kwaio will inform health programs and benefit the indigenous Kwaio community. Incorporating traditional culture within TB interventions is accelerating around the world and is relevant across many developing countries including Solomon Islands. For instance, Gibson et al. (2005) concluded that the need for accessible and culturally appropriate health education about TB in the high risk group is of paramount importance especially in developing countries.

Historically, the overpowering of western health intervention over indigenous society has challenged the role of culture and taboos in health. Culture was barely incorporated in the designing and implementation of western health systems in the Pacific. This was characteristic of the Christianisation and Colonisation process across Solomon Islands. AAH was established at Uru harbour in East Kwaio, Malaita Province in 1965 by the Seventh day Adventist Church. When the hospital was established western health systems were prioritised by church leaders. There was very little understanding or incorporation of indigenous Kwaio cultural ideas or practices into health services. This has historically caused a disparity between different groups within the East Kwaio community.
The people of East Kwaio all speak one language, but have been divided through the process of Colonisation and Christianisation in the 1900’s into coastal dwellers and mountain dwellers. Most people now live in coastal areas and follow introduced Christian religion. The people who live in mountain areas have chosen to follow their Indigenous Ancestral religion. Because the health services provide at AAH have not been sensitive to the culture and beliefs of people living in the mountains there is a major disparity in access to health services. Coastal people have more access to services than mountain people. This has resulted in differential patterns if disease and caused antagonism between the mountain community and AAH. Tuberculosis (TB) is a major health issue that has changed the lives of many Kwaio people and is a major health disparity among coastal and mountain people.

Health systems in the Pacific with introduced western leadership and management system have created persistent challenges that have led to health disparity between groups who follow the western system and other minority groups who retain traditional world views. AAH is a good example of this in Solomon Islands. However this is starting to change. In 2012 and 2013 AAH recognised the problems with the existing TB services and a Culturally Safe TB Ward (CSTBW) was jointly established by the community, health service and church administration. This CSTBW involved a dramatic change from the past and a complete re-development and re-location of the TB ward at AAH. It is an innovation that promotes a cultural intervention for TB control in the Kwaio community.

The physical existence of the CSTBW at Atoifi is then seen as the appropriate framework to improving health disparity. However, the rapid work on the physical development of the CSTBW raised interesting questions such as: what impact does
this CSTBW have on the community and heath service? What are community and health service responses to this new change? How can TB control, prevention and treatment function be effective in this new ward? What power will rightly determine this CSTBW and how sustainable will this new change be as far as leadership is concerned?

These specific questions raised the intensity to closely look into the CSTBW through contemplation with community and health service responses. The newly developed CSTBW at AAH is an interesting phenomenon of study. It creates deeper understanding of how functional a CSTBW could be within a health system in Solomon Islands that has historically based on a western health system.

1.2. Background

TB is one of the leading infectious causes of death worldwide. The World Health Organization (WHO, 2013) reported an estimate of 8.7 million new cases of TB (13% co-infected with HIV) and 1.4 million deaths from TB in 2011. Progress is being made to control TB globally with the use of Directly Observed Therapy- Short course (DOTS) as a recommended TB control strategy by WHO since 1990s (Dye, Hosseine and Watt, 2007). However, despite the WHO has noted remarkable progress towards global control in TB prevalence, (WHO, 2012) the global burden of TB remains enormous.

TB is a leading cause of death and disease in the Pacific region. The Australian Aid (2011) reported that “PNG has the highest TB burden in the region with over 14,893 new cases diagnosed a year and an incidence of 346 per 100,000 people.
Other authors like Maaren, Tomas, Glaziou, Kasia and Ahn (2007) also confirmed that Papua New Guinea is among the seven countries within the Western Pacific Region with a high burden of TB.

Daiwo (personal communication, 2012) reported that the total number of increased TB infection in Solomon Islands in 2012 was 402 compared to 394 new reported cases in 2011. The estimates of tuberculosis incidence in Solomon Islands in 2011 by the World Bank (World Bank, 2012) was 103/100,000 population. According to the National TB program (A. Ben, personal communication (2013) the Island of Malaita has the highest rates of TB (115/100,000 people) with a low detection rate (50%), particularly in the central and eastern regions served by AAH.

AAH is located in East Kwaio, and implements TB services within guidelines of the national TB program. The number of TB admissions was four (4) in 2009 increasing to thirty-four (34) in 2012 (Massey et al 2013). This however is an under-representation of the number of TB cases in the community. Massey et al (2012) documented that culture was one of the barriers as to why cases of TB in mountain hamlets were not well represented as reported through hospital data. MacLaren (2006) in his study on AAH health care system documented that poor recognition of culture resulted in poor access of health service by mountain people who maintain many indigenous cultural practices.

Being aware of the growing burden of TB in the area, research capacity strengthening activities between James Cook University (JCU), AAH and Community leaders decided to focus their attention to TB issues in the mountains of East Kwaio. As a result of the findings, Massey et al. (2013) identified innovative measures including; i) building a new TB ward that is culturally safer; ii) providing food for TB
inpatients; iii) conducting active TB case detection; and iv) funding for projects to develop TB health promotion materials.

As this paper points out, the infrastructural design of the existing health care services was not culturally sensitive to East Kwaio communities who still follow ancestral religions. MacLaren (2006) in his studies concluded that mountain people do not have equal access to services because of cultural taboos. Massey et al. (2013) further confirm this by saying that most mountain people who are sick with TB delay coming to hospital because of cultural issues. Violation to such cultural taboos angers ancestral spirits with compensation of high price. It is because of this concern that bush people delay or refuse to attend Atoifi hospital. Thus, under representation of TB cases in Atoifi hospital is an issue as there are cases undetected leaving out there.

From this foundation, the study presented in this thesis has assessed a community–based innovative strategy for TB control. It investigated the community and health services responses to the culturally safe TB ward at AAH. Equitable participation and contribution from community, families, and individuals about health services has been important and informed the approach used in this study. Further, it enables TB control measures to be responsive to local needs of East Kwaio community through a culturally safe environment.

1.3. Research Objectives and Questions

The main research question in this study is: What are the Community and Health Service responses to the culturally safe TB ward at AAH?

The objective questions are as follows:
(1) What are the effects of the CSTBW on the community and health services at AAH?

(2) What are the barriers to effective TB control programs in AAH?

(3) What type of leadership is appropriate to sustain the new change?

(4) What are the recommendations for the operation and management of the new TB ward to ensure it is culturally safe for consumers and delivers best practice?

1.4. Problem Statement

A new culturally designed TB ward was built in 2013 as a strategy to incorporate local cultural norms in East Kwaio into TB control and prevention in this high risk area (Massey et al 2013). Although the new TB ward may be seen as a successful development for TB control in this remote area, it is unclear whether both the coastal and mountain communities are prepared to use the TB ward. In the same way, it is yet to be established who will be responsible for the day to day running of the ward to ensure it remains culturally safe. Furthermore, it is uncertain as to how culturally competent the TB ward and its services will be sustainably managed. Therefore, in order to provide a culturally safe health service, it is important to develop understanding about the perceptions and recommendations towards the new TB ward of (i) TB patients, (ii) East Kwaio community leaders from the mountain and coastal areas, (iii) local and provincial TB managers, (iv) registered nurses and health administrators. This will inform a culturally safe TB health services that is accessible and acceptable for both mountain and coastal people. In this way, incorporation of cultural leadership roles for TB control and prevention with western health system can be ascertained.
1.5. Rationale of the Research

This study aims to explore community and health service responses to the relocation and re-development of CSTBW. It purposely looks at the various impacts involved in the dramatic change experienced by community and health service in AAH and surrounding communities. It focus on the ongoing challenges associated with TB prevention and control program implemented in the hospital and between coastal community and mountain hamlets in East Kwaio. Identifying of an appropriate leadership approach that can be used by western health system in AAH to ensure sustainability of CSTBW is also of great importance. The outcome of the study results form a framework that promotes cultural competency of the CSTBW with sustainable leadership for future benefits of younger generation.

1.6. Significance of the Study

The burden of TB has changed many lives in East Kwaio. Differences in cultural values and taboos and the worldviews between the health providers and community members have been one of the great influences to health disparity in the area. The health providers follow introduced Christian belief and practices and deliver introduced western biomedical interventions. Community members facing the greatest burden of TB follow Indigenous Ancestral beliefs and practices and maintain Indigenous Kwaio socio-cultural models of disease causation and treatment. In order to be successful in TB prevention and control, a culturally appropriate management strategy needs recognition at health care system, community and individual level.
The concept of culturally sensitive TB health services is essential to improving case detection and treatment rate of TB in East Kwaio. This principle can also be applied to other discipline through health system and policy-makers.

1.7. Context of the Study

A broader view of CSTBW will be precisely outlined in this section in order to establish better understanding among readers. These include the following; i) geographical and demographical aspect of Solomon Islands, ii) East Kwaio and the culture, iii) the emergence of culturally appropriate TB Ward at AAH.

1.7.1. Geographical and demographical features of Solomon Islands.

Solomon Islands is a Sovereign country made up of many large islands. It is a collection of Melanesian Islands. It covers a land area of 28,400 square kilometres (Solomon Islands Geographical Features, 2012) and lies to the East of Papua New Guinea and Northwest of Vanuatu. The first European visited the country in 1586 and in 1893 United Kingdom established a protectorate over what then known as the "Solomon Islands". In 1976 the country gained its independence. Missionaries began visiting the Solomon Islands in the mid-19th century. However, little progress was achieved at first because of "blackbirding" that involved brutal recruitment resulting in series of massacre. Labour ships entered the Western Pacific waters first for kidnapping and then recruiting islanders to serve in plantation of Germany, British and French colonies (Hilliard, 1969. Solomon Islanders served at sugar plantation in Fiji and Queensland by which East Kwaio was believed to be the intensely recruited area of Malaita (Akin, 1993 as cited in MacLaren, 2006). This was the period in which
Malaitans earned the title of “The most blood thirsty reputation” of all the Solomon Islands. Such fierce reputation was earned for the killings of any Europeans as revenge for those recruits who never returned. For Kwaio, the revenge could be based on the time of kidnapping where unknown numbers of East Kwaio men were killed resulting in blood bounties of pigs and shell money for killing of any European and even boycotting of Labour Trade Union through Ma’asina Rule (National Statistic Office, n.d.) movement. The traumatic history of blackbirding experiences is still alive in the hearts of Kwaio people even today.

In the traditional culture of the Solomon Islands, age-old customs are handed down from one generation to another, mainly from ancestral spirits themselves, to form the values of the Solomon Islands.

The country’s population from 1999-2009 (National Statistic Office, 2009) is now approximately 515,870. There are nine (9) provinces with 74 different languages and 64 dialects. Malaita province is the largest island of Malaita province with the population of 137,596. There are 12 languages in Malaita province of which East Kwaio is one of them. Like the rest of other provinces, Malaita strongly relies on subsistence economy of fishing, gardening, raising of pigs, traditional artefacts and crafts.

Solomon Islands is known for its Christianity growth and was referred to as one of the Christian country with 95% of citizens considered themselves Christian. Yet, there are various parts of Solomon Islands that denies religious transformation instead these people still upheld their traditional ancestral religious system. For instance, there are mountain people in the Island of Malaita who are currently practising traditional worship or sacrifice to their ancestors.
Figure 1. A map of Solomon Islands: Malaita and East Kwaio Source: http://www.pazgara.com

Fig 2. A map of Malaita and East Kwaio: http://www.janesoceanina.com
1.7.2. Atoifi Adventist Hospital.

AAH is located on the shores and above the slopes of Uru Harbour in East Kwaio. AAH sits at the centre of the east coast on the island of Malaita. AAH is a 90 bed facility providing basic health services including basic surgeries, paediatrics, medical services, obstetrics and gynaecology and, TB services. Specific additional services are; non-communicable diseases, eye-clinic, Mental Health, Infant welfare clinic, family planning and antenatal clinic. AAH serves a population of approximately 50,000 to 60,000 of eastern coast and mountain of Malaita.

AAH was established in 1966 under the administration and approval of Australian Union Conference (AUC) of the Seventh-day Adventist Church. The planning and designing of the hospital infrastructure was led by a white missionary named Lester Hawkes (MacLaren, 2006). However, it is interesting to realise that though Hawkes had spent a number of years in PNG and exposed to many Melanesian cultures, he made no attempt to involve local Kwaio people in the planning and designing process. The cultural values of the Kwaio people were not deeply represented within the colonised health system established by the white missionaries at the early beginning. The approach of the health service is two-fold including hospital-base and community-based services. The Atoifi College of Nursing is located on AAH campus. It prepares and equips young nurses to serve in both hospitals and remote parts of the country. The hospital also delivers community health services such as immunisation, antenatal services and disease outbreak investigation.
1.7.3. Geographical and demographical features of Kwaio.

Kwaio is home to approximately twenty thousand people according to 2009 National Census as cited in MacLaren (2006). It is geographically divided into three natural passages all inhabited by people. These three natural passages portrays a geographical design of East Kwaio community. These passages are known as Yuru, Sinalagu and Oloburi harbour. People are identified from the three main zones. Oral tradition is a major form of communication with most traditional knowledge being passed down from generation to next. Most East Kwaio people rely on subsistence economy of gardening, fishing, gathering seafood, and raising pigs or chickens. East Kwaio people hold many traditional practices and several thousand have made a deliberate decision to uphold the religion of their ancestors and not to follow the introduced Christian religion. Fierce resistance to "development" that the outside world offers is experienced in this area, particularly in the central mountains of East Kwaio.

1.7.4. Culture.

Two distinctly different communities have emerged within the people of East Kwaio in response to the imposition of colonial government and Christian missions during the late nineteenth and throughout the twentieth century. The largest group within East Kwaio is the "coastal or Christian" people who live in villages along the East Kwaio coastline. These coastal people have embraced introduced developmental practices and Christian religion and accompanied biomedical treatment models of care. The second smaller group of people are known as the "mountain or custom" people and have made deliberate decisions to maintain cultural practices and ancestral
religion. This group of people maintain many practices that have underpinned the Kwaio way of life for the past 1200 to 2000 years (Keesing & Corrie, 1980). Their uniqueness is seen and known to many who come to East Kwaio because of their cultural autonomy grounded in Kwaio values, beliefs, ancestral religion and practices that governs their everyday life. Mountain dwellers to this day face difficulty in being admitted for TB treatment at AAH because of the physical placement of the TB ward to the obstetric ward. Women are regarded taboo when giving birth or during menstruation because of the spiritual power of blood. It is therefore taboo for a man to be in an area where a woman is menstruating, and even more taboo for an adult male to be in an area where a woman is giving birth. In the mountains it is taboo for a man to even see the house where a woman will deliver a baby. Breaking or denying such traditional taboos is an act of violation resulting in causing anger to ancestral spirits. This explains why not many mountain people were not willing to attend to TB ward. Therefore, the intervention of involving cultural factors in the re-designing and the physical layout of TB ward is vital for increase access and acceptability to TB health service as it improves health disparity of minority group of people.

1.7.5. The emergence of a culturally safe TB ward.

The long lasting battle for equal access to routine TB health care for mountain people is being currently resolved in partnership with brilliant and determined mountain leaders together with Atoiifi health service. A new CSTBW was designed to deliver culture sensitive TB services for both coastal and mountain people. It is an intervention to fight increased TB burden in the area. The new TB ward was started to be built in early April, 2013 by the Australian Volunteer Team to Atoiifi according to
approved plan and design by mountain, coastal people and health administrators. The building of the new TB ward continued through 2013 and is due to be opened in 2014. The involvement of various parties indicates joint-effort in the development of the CSTBW at the community level. However, there were gaps that need to be explored in order for new TB ward to be culturally safe. Now that it is almost ready to use, there are questions being raised such as; whether all the necessary thing to improve access to TB ward is achieved? Is the new TB ward going to fulfil what it is designed for? Are there yet other things needed to improve cultural appropriateness apart from the physical building itself? What does the CSTBW means to coastal and mountain people? Who is responsible for the CSTBW to remain culturally safe? What are the perceptions of health professionals and health system managers about this new TB ward?

The outflow of these questions urged me to formally investigate these issues as they strongly influence the success of this new strategy. Careful assessment and evaluation of the newly established model to fight TB is required to ensure the best possible outcomes for AAH and the East Kwaio community.

1.8. About the researcher

I am proud to reveal myself as a grand-daughter of a Kwaio man who was looked at by community as an outcast during the colonial days because of the disease he contracted known as leprosy. He spent all his early years of life living in a cave which he called his home. Prior to isolation strategy during those days, my grandfather was moved from Abitona, one of the coastal villages in East Kwaio of Malaita province to a leprosy clinic at Kolombangara in Western Province. There he met a
western lady from Western Province who later gave birth to my father. During my childhood days in Marovo Lagoon, I began to learn about my patrilineal connection with East Kwaio people of Solomon Islands without any direct contact with the people. At the end of 1995, searching for my originality, I finally set foot at Abitona village for the first time whereby I met my grandfather’s family. Six months after the visit, I returned to the village after I got married to the love of my life who knows my heart and gives me what my heart desires. Having never dreamt of my new home, I finally realise that Kwaio becomes the forever perfect paradise for my beautiful children.

I spent the first year of my marriage life living with Kwaio people especially Christian people. My first experience with East Kwaio community, the way of life, cultural norms and practices was indeed of great challenge compared to a society I was part of since my childhood days.

At the end of 1998, having completed a 3 years nursing program in general nursing, at Atoifi School of Nursing, I became a qualified registered nurse. Working as a health professional and as an insider living in East Kwaio over the years, I then became aware of the existence of health disparity experienced among local communities. The unequal distribution of health care services rendered to East Kwaio community through western health system was becoming an issue to local health consumers. I also began to realise that there were two separate communities referred to as coastal and mountain (or locally referred to as bush) with different treatment received by them. At the end of 2006, I earned a degree qualification in nursing administration and education from the University of Papua New Guinea and returned
to Atoifi as a junior lecturer at ACON in 2007 and 2008. In early 2009, I was appointed as a Director of Nursing Division of AAH.

During these remarkable years, I started to develop my relationship with community leaders, chiefs and mountain people with the aim of bringing health services closer to them. Amongst the community leaders are people like Esau Kekeubata, John Laete’esafi, John Maenaa’adi, Jimmy Sui’lamo from the mountains of East Kwaio. One good example of the outstanding relationship with mountain people is the formulation of TB team who worked together in developing innovative approach that is culturally sensitive to addressing TB burden in the area. It was because of the support and enthusiasm of both the coastal communities and the mountain people that enabled the building of the Culturally Safe TB ward. Having understood the basic socio-cultural aspect of health in Kwaio society through my patrilineal lineage with Kwaio people, through marriage and my health professional relationship with Kwaio society, I am passionate about engaging and challenging the health discourse at Atoifi and in the East Kwaio community. This is where I see myself as an insider representing traditional worldviews and as a researcher with western worldviews trying to weigh the balance for appropriate health care services that can improve health of local communities in the area.

1.9. Scope of the Study

This study focus on the impacts of the Culturally Safe TB ward to community and health services in Atoifi Adventist Hospital of Kwaio. It aimed at exploring community and health services’ views and opinions about CSTBW. The outcome of the study will help community and health services to develop a mechanism that will aid in the sustainability of the CSTBW.
The study sample included participants who are from the coastal community and mountain hamlets of East Kwaio. The sample included health service personnel including nurses, TB managers both locally and from provincial health. Health administrators were also part of the study as it concerns East Kwaio community and health. Cultural issues were highly considered when conducting the study at mountain hamlet. Data collection was restricted on Saturday for those communities who are Sabbath keepers.

1.10. Overview and Summary of the Study

This thesis consists of six chapters. Chapter 1 begins with the background and introduction to the need for the study. Chapter 2 present literature reviews that reveals and support the significance of the Culturally Safe TB Ward of AAH. Literature review incorporated TB as a global disease burden with WHO control strategy. Community involvement and cultural intervention were the key focus areas as factors in the control of TB. The methodology used in this qualitative study is outlined in chapter 3. Chapter 4 present the main findings obtained through face-to face interview and focus group from the community and health service at AAH and the surrounding communities. These findings are further discussed in chapter 5. Chapter 6 draws up the conclusion of the study with recommendations. It also identifies the gap and limitation emerged from the study that may require further researched in the future.
Chapter 2: Literature Review

2.1. Introduction

Research studies on TB have been a global focus for centuries. This review covers intersecting literature that narrows down to reported significance of global TB on global health report by World Health Organisation (WHO, 2012), global TB control (Raviglione and Pio, 2001; Dye, Maher, Espinal and Raviglione, 2006) and the cultural aspect of TB control (Orr, 2011 and Ho, 2004). It reveals the background and variations of worldviews which are of significance to the primary goal of the study. It is divided into three main sections of which the first reveals global TB situation; TB in the Solomon Islands; global control of TB; cultural aspects and TB control; community and TB control.

2.2. Tuberculosis: Global Overview

Globally, the growing burden of TB remains a persistent challenge worldwide. The "Global health Tuberculosis report recently released by the WHO (2014) reported that 9 million developed TB in 2013 resulting in 1.5 million deaths and 3 million people are still missing because either not diagnosed or diagnosed but not reported.

TB has great variations among race and ethnical minorities. The worldwide prevalence of TB during 2007 was higher in Africa and European regions (Jassal & Bishai, 2010). Authors like Gibson, Cave, and Doering have argued that despite TB control progressing well (WHO, 2012) the prevalence remains high in sub-population such as immigrant and aboriginal populations in Canada. TB although occur more in
men than women, it is concluded that it is also one of the top killers of women worldwide (WHO, 2014).

In Asia and the Pacific TB is the most widespread of diseases in the region with the highest incidence rate in Cambodia, Myanmar, DPR Korea and Papua New Guinea at approximately over 300/100 000 population in 2010 (OECD/WHO, 2013). TB remains a key priority for the World Health Organization. Continuous efforts are being made to find new preventive and control methods to be included into the already known effective technological, biomedical treatment and program of controlling TB.

In indigenous populations, one of the many potential methods of controlling TB is the integration of cultural aspects (Ho, 2004). Ho, argues that culturally safe health services are an important dynamic identified to control TB among indigenous populations. Orr (2011) supported the idea by demanding TB care to be cultivated through culturally appropriate intervention at health system, the community and individual level.

2.3. Tuberculosis in the Solomon Islands

Like many other Pacific island countries Solomon Islands is faced with a considerable burden of TB. In 2010 the incidence rate of TB was estimated at 108 per 100,000, down from an estimate of 155 per 100,000 in 2010 (WHO, 2013). However in 2011, WHO estimates an incident rate for TB (all forms) of 130/100,000 population (WHO, 2013). This national incidence may not be uniform across the country. B. Alele (personal communication, 2011) from the National Health TB program, reiterated that the incidence rate of tuberculosis at the provincial level shows great variations across the country. The remarkable increase of TB cases in rural and remote
areas was also confirmed by World Vision (2013) and prior to the article entitled “Communicable Diseases” (2014) of which, Australian indigenous at remote and rural areas were identified as having increased TB burden. This means that TB control activities in many remote areas such as East Kwaio on the island of Malaita need to be culturally appropriate to address the needs of local people and decrease the burden of TB. In a study by Massey et al. (2012) cost, sociocultural practices and geographical remoteness were factors that influence people’s choices when considering seeking TB services at Atoifi. The current TB rate in Solomon Islands is lower than neighbouring PNG and concerted efforts to improve access and improve cultural safety will ensure TB does not reach the level in PNG and prevent the associated morbidity and mortality. TB is still regarded a major national health issue in Solomon Islands that needs multisectoral partnership to reduce the burden of TB.

2.4. Global Tuberculosis Control

A global framework for controlling TB is known as Directly Observed Therapy-Short Course (DOTS). It was first developed by Dr. Karel Styblo during 1980’s and was first introduced in Tanzania and China. Through the use of DOTS framework, phenomenal results that doubled the cure rates among TB infected population was obtained. WHO under the leadership of Dr. Kochi adopted the framework as a global TB control strategy, in 1990’s and WHO developed a concise “Framework for TB Control” with five components that was branded into the complex public health intervention. These were:
- Government commitment (including both political will at all levels, and establishing a centralized and prioritized system of TB monitoring). Case detection by sputum smear microscopy

Standardized treatment regimen directly observed by health worker or community health worker for at least the first two months

- A regular drug supply
- A standardized drug recording and reporting system that allows assessment of treatment results

During this period the emphasis was strongly focussed on DOTS as directly observed therapy with the use of combined TB medicines. Later in 1995 WHO again improved the TB framework by developing a promotion strategy turning the word “dots” upside down to spell “Stop” which latter appear as “Stop TB, Use of DOTS”. The WHO then later put to global market the DOTS framework for public health decision makers. After decades WHO finally confirmed the framework to be vertically focused when examining the managerial policies for TB control during 1848-2001 (Raviglione & Pio, 2001). Therefore, recommendation was made for DOTS strategy to be returned to the political agenda of governments to replan for a much effective integrated services delivery.

Having an awareness of the WHO commitment towards universal TB control, the United Nations Millennium Development Goals also specifically targets TB under Goal 6: Combat HIV/AIDS, malaria and other diseases. It lays out indicators and targets to measure the progress of DOTS strategy that will guide TB control through
to 2015. The WHO Member states, under the framework of United Nations Millennium Development Goals, set two targets for global TB control to be reached by year 2015 including: i) Increase detection rate to at least 70% of all new cases and ii) to cure at least 85% of those detected (Dye et al., 2006). Meanwhile, despite intensifying the global use of the DOTS strategy and associated positive progress of TB control, other authors like Schluger and Burzynski (2006) continued to argue the tremendous suffering that TB still cause in many parts of the world. Therefore, establishing an understanding of control strategies for TB is vitally important, particularly in developing countries. It helps in the identification of what works and what does not work according to various setting. It also helps in the development of control and preventative methods that are specific to different countries in order to be effectively achieved when branded into the already effective DOTS control strategy.

2.5. Cultural intervention for Tuberculosis Control

Although the control of tuberculosis for many year was centred on biomedical treatment and effective DOTS strategy (Grifith & Kerr, 1996), cultural aspect is important in effective control strategies for TB (Rubel & Garro, 1992). They argued that “A knowledge of health culture of their patients has become a critical tool if tuberculosis control program are to be successful”. p. 626. Other authors, including Carey et al. (1997), defined cultural factors to be one of the educational needs of the patients. This was revealed in a study of tuberculosis belief among newly arrived Vietnamese refugees in New York, resulting in misconceptions about the appropriate treatment methods. Education needs of patients are considered an important tool in the control of TB to address misconceptions about the prescribed TB treatment regimen and for further culturally appropriate health interventions (Vecchiato, 1997; Gibson et
Gibson et al. (2005) further concludes that this can be achieved in collaboration with lay people, particularly patients recovered from active TB, the family members and health workers from the community. Stone (1992) confirmed this base on his study of villagers’ responses toward Primary Health Care (PHC) Services in Nepal with three identified issues including:

i) Villagers’ values and their perceived needs were not recognised by Primary Health Care services in Nepal.

ii) PHC services viewed Nepal culture as a barrier to health education.

iii) PHC services assumed that rural Nepalese passively believe in health education without putting into practice the health messages. They obey traditional practitioners more than health education. Therefore, PHC services believe that such attitude lead to failure in meeting the felt needs of the community in Nepal.

Studies in Solomon Islands by MacLaren (2006) and Massey et al. (2012) recommended the need for cultural approach as an effective strategy to improve the health of minority groups such as the Kwaio people. The cultural strategy of TB control for this specific group of people are designed through TB educational materials and building of the culturally safe TB ward. Our recent work (Massey et al., 2013) confirmed that cultural approach to control TB is relevant to the Kwaio people through re-design and relocation of the new TB ward that is culturally safe to meet the socio-cultural and health requirements of the Kwaio people. Furthermore, projects to develop TB resources using traditional story-telling model of education and communication using modern technology is also highlighted.
2.6. Community and Tuberculosis Control

Community participation in controlling tuberculosis is also important especially in indigenous community and remote areas. Akramul et al. (2002) confirmed through survey on the cost-effective use of community health workers under a non-government organization using DOTS strategy with the same budget in rural Bangladesh that an experimental TB program showed achievement with a cure rate of 85%. Another experience by (Neher et al., 1996) in a feasibility study in Kathmandu in Nepal also confirmed that integrating TB control with short – course chemotherapy through involvement of basic community health services is feasible. With strong conviction on community participation, Gibson et al. (2005) emphasized that effective DOTS strategy can be achieved in collaboration with lay people, particularly recovered patient from active TB, the family members and health workers from the community.

Community participation has been a visionary statement emphasized during the international Conference on Primary Health Care in Alma Ata on 6 – 12th September 1978 emphasizing full and organized community participation and ultimate self-reliance with individuals, families, and communities assuming more responsibilities for their own health (Hall and Taylor, 2003). While researchers discuss global DOTS strategy to control tuberculosis worldwide, very few authors have reported such cultural aspects of controlling tuberculosis in Solomon Islands.
This study explored community and health services responses toward cultural strategies involved in controlling tuberculosis in East Kwaio, of Solomon Islands.

2.7. Chapter Summary

The review gives an overview of the literature describing how destructive TB is globally and locally. It discusses biomedical fight with TB disease in order to improve its burden in many parts of the world. Global intervention for TB control known as DOTS was WHO recommended intervention worldwide. However, despite the use of DOTS many developing countries still experience the devastating impact of TB. Some authors therefore, considered cultural factors as the important component to be globally recognised for successful TB control in this present century. One of many cultural factors include perceptions about TB and the high demand to identify culturally oriented approach of educating and effectively communicating TB disease to the most affected population. The literature further acknowledged community participation to be the most important strategy in the successful control of TB at the community level. Recognition of culture and community involvement in the control of TB gives the health system the leadership role to intersect these two factors that will work sideline with biomedical control of TB locally, nationally and globally.
Chapter 3: Methodology

3.1. Introduction

This chapter discusses the methodological approach used to investigate and analyse the findings of the CSTBW in AAH. The outcome of the analysis will inform recommendations that will govern the functioning of the CSTBW in order to secure its cultural competency.

Various anthropologists and public health researchers have brought to surface parallel conclusions about the Kwaio culture and the law of their societal well-being as briefly discussed in chapter 1. It was discovered that its production and reproduction is entirely dependent on social boundaries that gain its value through conforming to ancestral guidance. Hence, creating deep understanding about the connection of Kwaio culture and modern health care as a factor for societal well-being is vital. The researcher was informed by the philosophy of Appreciative Inquiry (AI) to approach the investigation of issues about the CSTBW at Atoifi. Subjects were chosen by purposive sampling. Methods employed were face-to-face interview and focus group discussion. Inductive Approach of analysis was used to analyse the data obtained from respondents.

3.2. Rationale and Significance of the Study

This section outlines the title and rationale of the study and conclude with significance.
3.2.1. Rationale of the study

The title of the study is “Community and Health Service Responses to Culturally Safe TB Ward at Atoifi Adventist Hospital, Solomon Islands.

This study explores the impact of CSTBW among East Kwaio communities and Health Service Providers. The reason of tenaciously uncovering the impacts of the new established cultural TB ward is to; i) document the perceptions and responses to CSTBW on community and health service, ii) barriers to effective TB control program in AAH, iii) Identify the style of leadership development that will sustain the CSTBW, iv) Develop recommendations that will promote the Culturally sensitive TB health service for those affected.

Generating such information based on the systemic approach of producing valued data is important for indigenous and minority society. Simultaneously, documenting of such rich information will benefit the current and future generation to obtain equal health access.

3.2.2. Significance of the study

TB disease has been a major burden among minority societies worldwide. It has changed many lives with great influences to health disparity in the entire globe including Kwaio society as it is part of the bigger world. People from Kwaio mountain hamlets have experienced poor access to TB health service for years ever since the invasion of western health system to the area (MacLaren, 2006 and Massey, 2012).

Literatures have exposed such gaps with the intention to bridging the culture and health that would appropriately benefit this specific group of people (i.e. the mountain people). This study aims to support and provide evidence-based knowledge of the
significance of culturally appropriate health service such as TB services. It is important as part of historical evidence for future generations.

### 3.3. Research Aims and Object

The aim of this study is to explore and document (1) the responses of community and health service toward the new TB ward at Atoifi Adventist Hospital, (2) explore barriers to control and TB treatment function at AAH, (3) community health service perceptions to sustainable leadership and management of CSTBW and its services and develop recommendations that will promote the Culturally sensitive TB health service to those affected.

The research question for this study is “What are Community and Health Service responses and recommendations toward a culturally safe TB ward at AAH?

The objective questions are;

1. What are the impacts of CSTBW among community and health service in Atoifi and East Kwaio community?
2. What are community and health service opinions about TB control and treatment function at hospital, community and individual level?
3. What are the community and health services perceptions for sustainable leadership and management of Cultural TB health service in AAH?
4. What are the recommendations that will promote cultural sensitivity in TB health services?
3.4. Research Methodology

In this study, a qualitative approach is employed to explore community and health service responses to a culturally safe TB ward at AAH in Solomon Islands. Qualitative approach is one in which the inquiry often makes knowledge claims based on constructive ideas derived from individual experiences socially and historically constructed. The acquired knowledge is often built into theory or pattern. Therefore, is assumed to be relevant in this specific study because individual and all other stakeholders’ thoughts were collected based from their lived experiences. The knowledge developed theory or pattern of CSTBW so it is culturally competent and functionally at all levels. Berger and Luckmann (1966) argued that reality is socially constructed. Berger and Luckmann further point this out by saying that “The idea it expresses has become an “Object” of consciousness for people in that society (objectivation) and has developed a kind of factual existence or truth, it seems to be out there; Other authors including Alston & Bowels (2012) and Denzin & Lincoln (2011) also supported qualitative framework to be more interested in understanding social reality.

Kumar (2011) concludes that, “qualitative research is used to understand, explain, explore, discover and clarify situations, feelings, perceptions, attitudes, values, beliefs and experiences of a group of people”. This concludes that reality of community and health services perceptions about culturally safe TB ward at AAH is a part of a debate out there and can be brought to existence through processes and meanings using technique governed by qualitative method.
3.4.1. Research Design

This qualitative study is informed by Appreciative Inquiry (AI) (Cooperrider and Whitney, 2005). Inductive thematic analytical approach was employed for data analysis (Kings and Horrocks, 2010).

3.4.1.1. Appreciative Inquiry.

Appreciative Inquiry (AI) is an appropriate research design that philosophically informed this qualitative study. AI has enabled this study focus on a change that involves all stakeholders of CSTBW including individual, community members, employees of health organisations and other hierarchal levels for its success. Hall and Hammond (n.d) expressed that AI is a philosophy that engages all stakeholders and systems through inquiry approach to explore what works. AI according to Fien and Maclen (2009) was first developed in the 1980s for positive and sustainable change that involved individual, employees, organisation and community. Whitney & Trosten-Bloom (2003) claims AI inspires people and brings about high performance. It is an appropriate method that encourages people to study, discuss, learn from and build on what works well instead of focussing on what is going wrong. Boje, Burnes and Hassard (2012:93) reiterated that AI interests not "only on the best of what is, but engages all stakeholders in a process re-imagining what could be and taking ownership for what will be”. Barret and Fry (2005) believes that AI is a progressive tactic to developing cooperative capacity. Cooperrider, Whitney and Stavros (2004) highlighted that AI invites people's participation in dialogue and sharing stories about past and present achievements. It is based on lived values,
traditions, expressions of wisdom, insights into the deeper corporate spirit and soul and visions of valued and possible futures can identify a "positive change core". p.3.

3.4.1.2. Inductive Approach.

Qualitative data is best analysed using Inductive Approach especially when the researcher develops codes directly from the data. Inductive Approach allows for emerging data that addresses research questions and objectives. The theory is developed through cycle of going backward and forward. It creates meanings about participants' responses drawing conclusion of the findings based on the data emerging from the study. King and Horrocks (2010) explained the analysis process in three stages involving: i) descriptive stage in which the researcher read through the transcript in order to make sense of the participant's point. Making sense out of text and image data. It is about moving deeper and deeper into understanding the data or making an interpretation of the larger meaning of the data. Creswell (2009) described, "Data analysis involves collecting open-ended data based on asking general questions and developing an analysis from the information supplied by participants”. p.184. The researcher then highlighted something of importance in the transcript that might help understand the participant's views, experiences, and perceptions related to the topic and lastly the preliminary comments were defined with descriptive codes. ii) With second stage, the researcher grouped together descriptive codes that almost share similar meanings and creating an interpretative code that captures it. iii) the third is discovering an overarching theme of which the derived themes are conveyed into a whole set of data. Relationship diagram then constructed between levels of coding in
the analysis. The data analysis process used in this study is indicated in Table 3.1 below.

![Figure 3. Stages in the process of thematic analysis -Source: King and Horrocks (2010, p. 154)]

### 3.5. Sampling Design

Two study techniques were used including focus group and face-to-face interview. Face to face interview was used during sampling in order to get meaningful data from those who were illiterate and cannot able to talk to each other in a group. Focus group is selected in this case as a strategy to discover opinions or perceptions (Kumar, 2011). For instance, performing a free and open discussion through interaction between the researcher, the community and health service at AAH is all
about conducting a focus group discussion. Facilitation of group discussion about the issues and situation were raised by the researcher. Researcher then asked or used probing questions to stimulate discussion among members of the group until the saturation point reached.

Interview is also a form of data collection that involves repeated face-to-face interactions between the researcher and the informants and seeks to understand the latest perspectives (Kumar, 2011). Researcher interviewed participants individually and make sure repeated interaction between the two parties occurs. The participants’ opinions expressed in their own words and were recorded by making written hand notes.

A digital recording device was used to record responses from respondents. This is important because of language barriers and in case there is failure in equipment used. A local research assistant helped out in the interview to explain questions more clearly as well as explained participant’s responses. Most common reason for the male research helper was to attend to male respondents. The research assistant has been a member of a health research team work for many years. He was given brief orientation on the issue and the questions that need to be explored. Kwaio language was used during the interview with mountain people. Pidgin and English were used for coastal people and health workers. Data were transcribed and later translated for analysis. The findings were shared with the participants to ensure the data collected were correct and not deviating from the actual information abstracted from the informants.

Participants were selected using non-probability sampling of which purposive and snowball techniques were used. Minichielo, Sullivan, Greenwood, and Axford (2004) explained that to “handpick” cases to be included in the sample is useful in
circumstances when the researcher has specific knowledge about the population. Likewise, using of snowball approach is a convenient measure when useful sampling frame is not available. Health workers were selected prior to their experiences with the Kwaio culture and the people and their knowledge on TB burden. Community and mountain participants were identified based on the key role they play in the community.

3.5.1. Recruitment and selection of participants.

Participants including male and female purposively selected from the age range of 18 and above. The participants were chosen based on the key reasons; i) They are from Kwaio coastal communities and mountain hamlets whether community members participants with recognised leadership roles in most cases ii) encompass cultural knowledge about traditional taboos related to health aspects, iii) health professionals with TB knowledge and experiences in TB ward and administrative roles and, iv) TB patients with rich experiences towards TB health services in AAH.

The researcher herself, since she knows the study setting and the population for almost 20 years, pre-determined community and hospital participants. She worked with the community to see that selected participants are around or present in their respective villages and places of work. Once the selected participants are not available at the agreed time, new participants from the surrounding community was approached and recruited during market days or when visiting hospital service. Hospital staff were approached during their off hours while others prefer having interview done during official hours. The participants were interviewed at Atoifi Conference room to provide them with privacy to express their views. The participants were asked to answer
questions after being given correct information about the research with agreed consent. The rest of the participants were interviewed using semi-structured questionnaires. However, the questionnaires were piloted with two people with satisfactory outcome therefore there was no alteration done with the questions but the same questions were used as appear on the appendices. Protocols for interview was applied when collecting data (King and Horrocks, 2010).

3.5.2. Structuring of questions.

Research questions were constructed after a thorough review of literature surrounding the topic area of study. A complete draft of research proposal was submitted to two supervisors for critics and editing on several occasions until it was finally approved. The approved research proposal was then presented to PAU Ethical committee whereby it was given approval. Once the research proposal was approved, research questions were pilot tested for validity. In this case, the structured instrument were pre-tested before the actual use. The pilot test will assist the researcher in determining limitations or weaknesses of how instrument were designed. Kumar (2011) “The aim of carrying out this is to identify if there are problems in understanding the way a question has been worded, the appropriateness of the meaning it communicates, and to re-examine the wording to make it clearer and unambiguous”.p.159. After the research questions were approved for validity, it was then used as the instrument to collect data from the participants.
3.5.2.1. Time frame.

The researcher travelled from PAU, Papua New Guinea to Solomon Islands to conduct the research. The two supervisors flew from Australia to the study site to supervise the researcher. All participants from the study site were anticipating the actual performance of research activities as they were informed in advance by AAH health administration and local mountain chief. Provincial TB managers travelled from Provincial Health Headquarter to AAH to be part of this study. The research activity occurred in the month of August 2013 for two weeks as every participants were committed their time and effort for this study schedule.

3.5.2.2 Study setting and data collection site.

Study was conducted at AAH, in East Kwaio on the island of Malaita Province, Solomon Islands. Participants that were part of the study were from the villages half way up the mountain and hamlet villages in the mountain areas of East Kwaio. Since it is a health related study, health service including health administrators, nurses, TB patients, local TB managers at Kilu’ufi Provincial Hospital were also involved in this study.

Geographically, East Kwaio is divided into coastal people and mountain people. The researcher conducted focus group interview among coastal participants and health professionals at AAH conference room as the central place. Round table was the arranged seating position during the group discussion as everybody were given the equal sense of importance and respect prior to their views and values. One-on-one interview was carried out at AAH as well from TB patients, guardians who were representing each communities and from visiting community members. For
mountain people, the researcher and the two supervisors visited the mountain hamlets to actually conduct focus group with the help of mountain chief and cultural broker who was part of the study.

3.5.3. Sample size.

Four focus groups made up of 8 participants each were organized. Fifteen participants were interviewed through face-to-face approach. However, since the data saturation were achieved during the process of data analysis, only three focus groups consisting of 8 people and a total of fifteen people were interviewed. Since the researcher decided that the fourth focus group would add no new data, this group did not go ahead.

3.6. Risk Management and Ethics

Kumar (2011) warned researchers of certain behaviours that may cause harm to individuals, breaching of confidentiality, using of improper information with bias that can lead to unethical conduct in any profession. To avoid such, ethical approval was first obtained from the PAU Ethical Committee. Another approval was issued by Solomon Islands National Research Training Institute under Ministry of Health and Medical Services including local health hospital (AAH) ethical approval.

3.6.1. Informed consent.

Since data collection was conducted in the hospital premises, the researcher did briefing regarding the research activity that they soon to participate on in order to avoid any unethical conduct. The mountain participants agreed to participate after explanation regarding the study was given them. They told the researcher that they
don’t need to sign consent as everybody were happy to involve in the focus group interview. The researcher then, audio taped the verbal agreement among the mountain participants instead of written consent. For the rest of the participants, consent were then sought from the participants after the researcher had explained the study or participant read the information sheet.

3.6.2. Confidentiality.

Names were recorded in this study, but were only available only to the chief investigator and not publically revealed. Participants were given a unique code and this was used to identify their comments. All face-to-face interviews were conducted privately between the chief investigator, her assistant and the interviewee.

3.6.3. Management and storage of data.

Electronic copies of data were stored on hard-drives and secured with chief investigator. Electronic data were also stored on password protected computers by Chief Investigator. Hard copies of notes from interviews were stored or kept in secured cupboards, flash drives and computers that can only be accessed by the researcher.

3.7. Study Limitation

The researcher was faced with time constraints during the research process that extension was sought from the PAUREC. Distance, geographical location and culture of study site were became the real challenges though successfully overcome.
3.8. Chapter Summary

The guiding framework that embraced methodology in this chapter was Appreciative Inquiry (AI) using Inductive Approach (IA) for data analysis. There were two different techniques used in obtaining primary information from participants including focus group and face-to-face interview.

Prior to the nature of the study, three ethical committees were committed in guiding the study and issued ethical approval for the study to be carried out as carefully proposed. The three ethical committees were: i) PAU Research Ethical Committee, ii) Solomon Islands National Research Training Institute, Ministry of Health and Medical Services and, iii) Atoifi Research Committee.

The rest of the stakeholders were given informed choices with written consent as well as verbal consent upon which were taped according to their choice.

The result of the findings were presented in chapter 4 with further discussion of the findings presented in chapter 5 and later followed by conclusion with recommendation in chapter 6.
Chapter 4: Presentation of the Findings

4.1. Introduction

The reports on community and health service responses to the CSTBW are presented in this chapter. The study revealed variations of responses amongst the community and health services toward CSTBW relocation and re-development. For instance, re-establishment of new CSTBW was appreciated by both coastal and mountain people; however, while the mountain people are prepared to access the new TB ward, coastal communities and health professionals seemed to have great concern in using the new TB ward. There are five major themes obtained from the data that forms the body of this chapter: i) Reasons for Relocation and Re-development, ii) Operational challenges of Culturally Safe Tuberculosis, iii) Opportunities for positive impact and iv) Factors for sustainability. Ensuring the effective management of the Atoifi TB Control and Treatment Program was also a major theme in the study. The findings presented in this chapter demonstrate the potential for emerging theory and practice of the new change. The results will be further discussed in chapter 5. Chapter 6 draws conclusion of the study, establish recommendations and render gaps for future study.
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<td>Culture</td>
<td>This data refers to cultural taboos such as women and culturally related taboos, food taboos, language, space etc.</td>
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<td></td>
<td>Prevention and Control measure</td>
<td>Data represents participants’ understanding and attitude toward TB disease, its transmission and control and prevention approach</td>
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4.2. Culturally Safe Tuberculosis Ward: Reasons for Relocation and Redevelopment

It is important for the community and health service to have a fair level of knowledge and understanding on the re-established TB ward. In other word, having aware of each one’s understanding about the new change gives stakeholders a sense of direction regarding the operation of CSTBW. All participants expressed that relocation and re-development of new TB ward were based on three reasons: (1) Culture, (2) Control and Prevention Measure and (3) Equity and Equality of TB services.

4.2.1. Culture.

To mountain people, for many years, the existence of the old TB ward was an act of devaluing of their cultural taboos. Entering TB ward mean causing the ancestors to anger that brings death to all family members if there is failure to defend the wrongs being committed. This is because obstetric ward is regarded pollution because of the unclean women giving birth in the ward. Secondly, TB ward was culturally unsafe prior to physical connection to obstetric ward and the fact that all male and female are placed in a common room. For this reason, not many mountain people accessed TB ward compared to patients from coastal community. As confirmed by one of the health administrator, "The TB ward because it wasn't culturally sensitive to the community members so we've moved it from the old position which was right next to obstetric ward- which was a cultural taboo". (Female, Health Administrator, Interview).
This was further supported by community participant as illustrated,

_Last time hospital keepim olketa (mountain people) just next to the place wea olketa women give birth lo olketa pikinini yia. Lo culture blo Kwaio, dat wan hem very! very! very! taboo something nao yia. Olketa man even olketa women never go next to a place wea hemi dirty and hem a curse. Dis kind wea OB ward hem stay next door lo place wea olketa man live, hem samting wea hem no accept lo culture. (Female, Community participant 4, Interview)._

[In the past, hospital kept them (mountain people) just next to the place where women gave birth to their babies. In Kwaio culture, such situation is a very! very! very! forbidden thing. Men even women never live next to a place that is unclean or a curse. Having obstetric ward next door to the place where men live, is something that is not culturally accepted.]

In addition, nurses clearly pointed out the necessity for separate male and female TB ward. They continue to argue that having separate ward for male and female is equally as important as avoiding seeing mothers going in and out of OB ward.

"Samfala lo olketa male patient bae hard lo admit wantaem olketa female. Lo new TB ward yia, hem garem female seleva an male seleva". (Male, Nurse Probationer 4, Focus Group2).

["It is hard for male patient to admit with female patient. With new TB ward, it has a place for female and male ".]
4.2.2. Control and prevention measures.

To all health service providers and coastal community participants, having TB ward in its original site encourages the risks of transmission. Therefore it was seen as a huge threat to new born babies both in obstetric and paediatric ward, other sick patients, communities and even nurses. As clearly described by a nurse,

“Because sik yia hem wanfala air-borne disease, hem easy nomoa fo olketa pikinini lo OB ward tekem, bikos olketa nao no garem gud immunity, an even olketa children’s ward”. (Male, Nurse Probationer 1, Focus Group 2).

[“Because it is airborne disease, it is easy for children in obstetric ward to contract the disease because they do not have immunity and even children's ward”].

Another community participant, agreed and demanded that these TB patients be relocated,

“Putim olketa (TB patients) away so that environment surrounding olketa new born babies yia hem free from very dangerous sick olsem. So hem makem atmosphere blo olketa hem free”. (Female, Community Participant 4)

[“Put them (TB patients) away so that environment surrounding new born babies is free from dangerous disease as TB. So that the atmosphere is infectious free”].

4.2.3. Equity and equality in Tuberculosis health services.

Being aware of the inaccessibility to TB health services by mountain people over the years, all participants described this dramatic change as an effective intervention model that would meet health needs of mountain people. As explained,
Hem wanfala effective approach because, lo health care system blo u mi throughout lo past years ya... umi nating capturim nomoa need blo olketa pipol ya. So lo tingting blo mi, disfala new TB ward ya, mi believe that bae olketa pipol ya savvy accessim nao health service fo meeting health need blo olketa. (Female, Health Administrator 1, Interview).

[It is an effective approach because our health-care system throughout the past years, we did not capture the need of the people. So to my view, the new TB ward, I believe people will have better access to health service that will meet their health need.]

Another health administrator agrees with the understanding that new TB ward is the demonstration of fair distribution and benefits of health care services to different diversities and culture as stated in International nurses pledge,

“Because long International pledge blo u mi nurse ba, regardless to culture, religion, background, poor or rich pipol, u mi bae givim care nomoa”. (Male, Health Administrator 3, Interview).

[“Because of the International nurses’ pledge that says, regardless of culture, religion, different diversities, wether rich or poor, we will still provide care”]

It was then understood that cultural related issues, infection control and prevention, and health equality and equity were the reasons as to why Culturally Appropriate TB ward was built.
4.3. Culturally Safe Tuberculosis Ward: Operational Challenges

4.3.1. Disposal of sputum.

Nurses and health administrators identified a great challenge when comparing nursing practices and mountain practices with regards to safety disposal of sputum in CSTBW. What is seen as a proper way of disposing sputum by nurses is perceived as improper to mountain people and is a violation to their culture. Since TB is an infectious disease, it then creates great concern to health administrators in terms of promoting healthy environment as stated by one participant,

"Care of sputum, how they can be carefully disposed soolketa no can go disposim any hao hem nao mi concern lo hem. Because that one bae riskim moa environment bloolketa" (Female, Health Administrator 1, Interview).

["Care of sputum, how they can be carefully disposed instead of being disposed any how is my concern. Because the environment will be at risk").

In addition to this, another nurse pointed out the significance of defiling such cultural taboos with options to address.

Sputumolketa no allowim fo flashim lo toilet, u flashim lo dea, u compensation too. But ifolketa garem proper slush room foolketa sputum an explainim lo patient why nao no can takemolketa sputum den torowe olbaot hem gud (Male, Nurse Probationer 2, Focus Group 1).

[Sputum is not allowed to be flashed in the toilet, if this rule is broken then compensation claim will be provided by the defender. Having a proper slush
room for the sputum and giving proper explanation of why not to carelessly
discarding sputum is important."

Such dilemma if not cautiously addressed according to health service providers, will
promote the risk of increased health hazard practice in this new TB ward.

4.3.2. Lack of safety and security.

The fact that new TB building is situated outside of the hospital ground, the
distance that it creates from the main hospital to new TB ward is perceived unsafe by
most female nurses. As argued by one of the nurses,

_Hem stay faraway, if mi seleva olsem hem dangerous fo mi, if time bae mi go
night duty seleva. An mi fright nomoa no gud olketa man savvy cutcut tumas
bae cutim mi followim corridor taem mi go down lo ward. (Female, Nursing
student 2, Focus Group 1).

[It (TB ward) is far, it is dangerous for me, if I attend night duty shift. And I
am frightened because they (mountain people) can kill people and therefore
may kill me along the corridor when I go down the TB ward.]

One nursing student continue to say, "Lo day time olsem bae hem olraet but lo
night especially yia, unless u garem any one fo go wetem, bae mi no go bikos hem no
safe olsem (Female, Nursing student 3, Focus Group 2).

["During the day it is alright but at night, unless you have someone to accompany
you, for me, I will not go because it is not safe].
4.3.3. Poor accessibility.

The distance created from the main hospital building to new TB ward creates dissatisfaction among nurses and visiting family members of TB patients. One participant stated:

_Distaem nao mi lukim disfala TB ward yea, mi lukim hem no stret lo mi yia, bikos u mas stap closlu lo hospital ya, no fo go 100m away from hospital olsem new TB ward lo down ya...hem farawe tumas fo olteta visiting frens and doctors._ (Male, Coastal Community 1, Interview).

_[It is now that I can see this TB ward is not looking good to me, because we need to stay close to the hospital, not to go one hundred meter away from the hospital like this new TB ward down there...it is too far for visiting friends and even doctors. ]_

All health administrators commented that because of its distance from the main hospital it is important that proper road access is built as commented, _"Mifala struggle hao nao bae buildim bridge ya for kasim dat fala place ya"._ (Female, Health Administrator 1, Interview).

_[“We are struggling as to how we can build a bridge to reach that place”]._

4.3.4. Stigma and discrimination.

To nursing students and coastal community, the new TB creates perception of stigma and discrimination among various patients from different ethnic
groups. "Tingting blo mi, taem olketa putim isolate nao TB ward yia, bae olketa TBpatient say, mi fala outcast! ... bae olketa say, olketa ya rejectim mifala". (Female, Nursing student 4, Focus Group 2)

["My thinking is, if they isolate this TB ward, they will think of themselves as outcast...they will say, they (health service) reject us"]

One participant frankly told the researcher saying, "Bae olketa (TB patients) garem feeling that u mi (TB patients) no garem somebody hem care for olketa (Male, Coastal Community Participant 4, Focus Group 4).

["They (TB patients) will feel that they do not have somebody who cares for them"]

The isolation of TB ward itself generated negative perception to Christian communities. As expressed by another community participant, "Bae olketa (TB patients) tingim that kind idea blo Aids nao TB ward yia" (Male, Coastal Community Participant 1, Interview).

["They will think that such idea is similar to AIDS"]

In the same way, a TB manager at the provincial health level sees this as discrimination toward other ethnic groups apart from Kwaio community. In other word, not only the mountain people will be stigmatized but due to diversities in culture, the challenge of trying to live together is impossible. "...sapos mi lo different place, bae mi fright ya, bikos sometimes bae hem putim mi off too (laugh)". (Male, TB Manager 1, Interview)
“If I’m from a different place, I’ll be frightened, because sometimes I will be feeling out of place”.

One of the participants told the researcher that cultural TB ward is not as easy to accept. He continues to explain that there are differences that may not allow them to live together. For instance, there is a possibility of mountain people to dominate TB ward that may cause feeling of exclusion by various ethnic groups. He argued,

_Bae mi no go admit lo dea. Bikos everyone lo bush staka lo dea too, mi feel shame lo olketa too. Samfala samting mi hard fo doim lo dea bikos olketa occupyem place ya, olketa boss lo hem, olketa wokim fo olketa._ (Male, Coastal Community Participant 1, Interview)

[I will not admit there (TB ward). Because there are many bush people there, I am feeling ashamed of them. There are some things that will be hard for me to do because they occupy the place, they are the boss, it (CSTBW) was made for them.]

4.3.5. Women and cultural taboos.

All participants indicated to the researcher that women do have very strong alliance to cultural taboos. This seemed to be a barrier for female nurses providing optimum care to male TB patients.

_“Ol female bae olketa hard fo givim kaikai lo olketa (mountain people), but at the same time hem part lo nursing care too fo givim kaikai lo patient yia. So for female nurse feedim olketa hem wanfala challenge”._ (Male, Nursing student 5, Focus Group 1).
Female nurses are not to give food to them (mountain people) but it is part of nursing care to feed patient. So having female giving food to mountain people is one of the challenge.

Consequences in violation to such cultural taboos in Kwaio context is costly regardless of who the offender is as clearly expressed, "...if olketa find out disfala woman givim meresen ya, hem menstruate time givim meresen, compensation nao bae olketa askim and bae olketa nurse fraet fo waka lo dea nao" (Male, Coastal Community participant 1, Interview)."...If they (mountain people) find out that menstruating woman gave medication, they will ask for compensation and female nurses will be afraid to work there (CSTBW)."

Mountain participants confirmed such women related taboos by strongly warned health care providers to adhere to such cultural taboos as stated "Wane ola e toto’o mola, tee ola ne ame lea na lauta noni ani leka mai ani aga afuia ta agea maka tobi, ngaia na gila ki ame siria (Male participant, Mountain hamlet).

"All of us just the same... no one is higher than the other, however, ladies who are to take care of the TB patient must be free from menstrual period."

4.3.6. Communication barriers

Communication is of great challenge for most mountain people, nurses and other TB patients from other ethnic group outside of Kwaio district. For instance, almost 90% of mountain people do not speak and understand Solomon Islands pidgin and therefore become difficult to communicate among nurses and doctors regarding their illnesses and treatment. Likewise, majority of health care providers are from
other provinces and also lacks understanding about Kwaio language. This creates great concern in provision of quality care with optimum outcome. As argued, "...Bae mi fala needim too someone for explainim meresen lo olketa …and patient too need for explain lo mifala, for effective treatment (Male, Nursing student 4, Focus Group 1).

["...we would need someone to explain their medication to them… likewise patient also need to explain to us"]

A TB manager further points out that language in Kwaio culture is carefully spoken by using appropriate words. Using inappropriate words may also mean violation to cultural taboos. "Wat kind word nao u usim? olketa no go direct lo dat fala word but bae olketa usim a kind of word wea bae hem appropriate lo culture lo Kwaio"(Male, TB Manager 1, Interview).

"What words are you using? They (mountain people) do not use actual names but they use indirect statement or words that is appropriate and would prevent them from violating taboos"

4.3.7. Incapable Staff.

There is a great need for capable staff to work in this new TB ward apart from the current TB manager. Capable staffing refers to those nurses who are knowledgeable and skilful in the area of TB and culturally related issues. Recruiting more capable staff to take care and manage TB ward is necessary .TB staff must be familiar with the language, basic cultural beliefs and practices of Kwaio. A nurse points out that equipping new TB ward with capable staff is fundamental where
cultural complexity influence the effectiveness of TB health services and its environment. As suggested by a nursing student,

“Ating hem best for any student from this island or this part nao go train or school for olketa kam upholdim nao olketa culture”. (Female, Nursing Student5, Focus Group 1).

[“I think its best that student from this island (Malaita) or Kwaio undergo training to uphold those cultures”.]

4.4. Culturally Safe Tuberculosis Ward: Opportunities for positive impact

Though nurses and health administrators raised great concern about their own safety and security including those of visiting families and doctors, mountain people in comparison seemingly appreciate the new change.

4.4.1. Safety and security for mountain people.

Mountain people do not bring their belongings to the hospital as they get contaminated so instead, their practices for years were to hide their belongings and food in the nearby bushes. However, since the establishment of Atoifi Hospital, mountain people were having problem trying to secure their belongings. In other words, their belongings usually got stolen as they come to the hospital though most coastal people and nurses do not realise it. As described by one of the mountain participant,

...ame’eru miri siria ifi lo fou I Atoifi, duana miri saka kau wai ameeru nanai ma ‘u’ui melesini lo fou miri mongasia miri maasini ai, wai
ameeru e nanaii i ma meeru miri siria e baina .Ngai na miri siria ani lau noona no’o wai ameeru miri fea kau miri rufi ata’ata ai wane ngai ula lo fou arua mola kau mai meeru miri ame fefea na ifi lofou ngai na meeru miri siria ifi lofou. Ngaia na meru siria. Miri ame ufaria. (Female, bush participant 3, Focus Group5)

[We agreed with the relocation of the TB ward because we cannot bring our belongings such as basket into the current hospital setting, we always leave our basket outside the hospital building but sometimes get stolen by thieves. This is why we want the new TB ward. We do not disagree!]

4.4.2. Accessible and acceptable to both coastal and mountain people.

To coastal people, the new TB ward is not restricted to them. As commented by one female participant,

There should not be a big problem lo u mi pipol lo solwata because, u mi no garem any restriction lo disfala new TB ward bae hem move lo dea .Bae hem still ok nomoa. hem should cater nao fo u mi pipol both solwata an okleta saed lo bush. (Male, Coastal Community Participant 4, Focus Group 4).

[“There should not be a problem with coastal people because, we do not see any restriction to of moving this new TB ward there. It will still be ok. It should cater for both coastal and mountain people”]
Regarding male and female TB patients, it is satisfying to finally have a TB ward that culturally accommodates men and women separately. A participant emphasises on the importance of having two separate rooms that separates men from women.

“Lo new TB ward yia, hem garem female seleva an male space seleva. Which is hem very gud nao dat wan yia” (Male, Nursing probationer 5, Focus Group 1)

["At the new TB ward, it has female and male space. Which is very good"]

4.4.3. Promotes cultural awareness.

Most health care providers lack knowledge and understanding of culture. However, establishing such culturally sensitive health service promotes cultural awareness among health care providers and professionals. It encourages all CSTBW stakeholders to appreciate the importance of the role that culture play in the world of health. For instance, recognising the need for developing and equipping themselves with knowledge on basic cultural norms and taboos, nurses recommended mountain leaders or chiefs to help teach them basic cultural principles and practices of nursing local patients from the surrounding communities.

“...leader (mountain leader) ya nao bae hem orientatim olketa students or other RN fo u mi adjust according lo culture blo olketa lo dea. hao bae u mi treatim olketa, hao bae umi care fo olketa olsem in a way, bae hem no makem olketa feel out...” (Female, Nursing student 2, Focus Group 1).

["...leader (mountain leader) will orientate students or registered nurses so all of us will adjust to their culture. How we should treat them, how we should care for them in a way not to make them feel out"]
A health administrator further recommends,

*I think there needs to be education sessions for the normal staff, and regular updates, because things might also changing, might have new staff coming, also, I think if we have some more manuals, because of their working there, they need to know, how can you look after a patient. (Female, Health Administrator 2, Interview)*.

### 4.4.4. Promotes team work.

All participants recognise that involving community and health service in planning and implementing health projects and programs is seen as a perfect strategy. It promotes team work. It also allows community to develop a sense of ownership and respect toward health service.

*One of the greatest thing that I saw, when the TB ward was done, we had women carrying 20kg bag of cement on their shoulders. We had bush children carrying wood to the TB ward because that mean something to them. (Female, Health Administrator 2, Interview)*.

### 4.5. Culturally Safe Tuberculosis Ward: Factors for Sustainability

Sustainability of the Culturally Sensitive TB Ward is crucial for lifelong health and well-being of mountain people and the rest of Kwaio populace. Participants described sustainability based on the following factors; i) Appropriate Leaders and leadership, ii) Culture-oriented problem solving, iii) Qualified staff ii) Physical development of TB setting iii) Logistical issues iv) Trans-cultural communication v)
4.5.1. Appropriate leaders.

All participants believed that having a new change that is sustainable is what they are interested to see. Participants agreed that identifying appropriate leaders for this unique cultural TB setting is fundamental. A nurse probationer in response, boldly suggested the inclusion of mountain people representatives to become members of the new culturally TB ward as leaders.

“Olketa should advicim nao olketa gang wea stay kam lo bush yia, olketa should involve lo makem idea blo olketa fo fair wantaem blo u mi”. (Male, Nurse Probationer 1, Focus Group 1).

"They (health administrators) should advice those people from the bush, they should involve in sharing their ideas equal with our ideas".

All mountain participants knew that since health service established in Kwaio, they were excluded in the planning and implementation process until today. Therefore, they believed that their participation in leadership and management of the new culturally TB ward would be a brilliant approach to effective provision of TB health care and services specifically to those whom they represented. As stated,

_Gwaa alata nga Atoifi e eta ma ola e eta mola na mission lofou. Lauta gula adauru la eta tooto, ma tala aga sua ai. Na alata loori, ne'e lea fana wane_
Lefu nga loori taku orisia lau adauru, wane ni dai adauru agoru kwatea ani nanaii feeniga? (Male, Mountain participant 5, Focus Group 5).

[Even when Atoifi was first established, it was started by the mission (Seventh-Day Adventist Church) themselves. If we were involved at the beginning, they (Health Administrators) should have better understanding. (Understanding of culture and planning of new TB ward). It would be good if one represent us to work with them. One who is willing and active in working with them?]

However, in response to question on leadership, a coastal community participant clearly identified leaders that should directly responsible for the leadership of culturally sensitive TB ward. These are referred to as, “teachers, community leaders, woman’s group, youth group, everybody” (Male, Coastal community participant 4, Focus Group 4). A nurse participant agreed and adds,

Olketa leaders wea need fo involve, olketa leaders lo hospital, olketa lo province, even government too fo luksave lo diswan. Fo improvim health side, hem bae includim every one, hem no business blo wanfala man nomoa, hem business blo every one lo Solomon nao yia (Male, Nurse Probationer 5, Focus Group 2).

[Leaders that need to involve are hospital leaders, provincial leaders and even government leaders too. To improve health, every one need to involve, it is no one man’s business but it is every body’s business in Solomon Islands]
With growing interest on the question, a TB manager further reiterated,

*Pipol u mi really focus lo hem nao olketa komuniti ya, bikos service blo u mi bae kasim olketa. So leaders within that certain community or within that certain society olketa bae involve. Leaders ya hem meanim pastors or teachers, or big man, chief, a women's leader or youth group olketa nao bae involve, every one nao bae involve. (Male, TB Manager 2, Interview).*

*People we are focussing on are those in the communities, our service would be to reach them. Therefore leaders within these communities are to involve in the leadership role of this new change. These leaders include pastors, or teachers, or big man, chief, a women’s leader or youth group. They are the one to involve. (Male, TB Manager 2, interview).*

### 4.5.2. Appropriate leadership and management system.

While all participants affirmed to the researcher of community members involvement as change agents, another health administrator recommended a leadership style that she believes to be the appropriate style used in culturally sensitive TB ward. She expressed her view saying that,

*The right leaders are those with public health and community health oriented leadership experiences. Leaders who are willing to discern and work things through people and community. Leaders who do things through bottom-up approach and not top-down approach. Leaders who look at the community needs and try to build communities! rather than telling them what to do or leaders who abuse the right of the community. They can be church leaders who understands the need of the community because they are the head of the*
institution. Therefore, at the management level, church leaders are the ones needed to be recognised leaders for the new change. (Female, Health Administrator 1, Interview)

Another community church leader directly described the type of leadership that would be appropriate,

Mi like fo lukim more liberal leadership into this because you don't have to break rules but hem needim more blending and for a conservative leader, ah, blending bae hem very very difficult that's why me go for liberal, someone that is open-minded, women's ministry, children's ministry, youth ministry, home affairs lo every levels. (Male, Community participant 2, Interview).

[I want to see more liberal leadership into this because you don’t have to break rules but it needs more blending while for a conservative leader, ah, blending would be very, very difficult. That’s why I go for liberal, someone that is open-minded, such as the Women’s ministry, children’s ministry, youth ministry, home affairs etc…at every level]

4.5.3. Conflicts and resolution.

With the CSTBW setting, problem is unavoidable especially at the initial stage. Thus, the need to understand and establish mechanism of resolving conflicts effectively is essential. The participant argues that identifying appropriate people to culturally-manage emerging issues among various patients and health care providers is important. As recommended,
Ating involvim wanfala as somebody wea hem barava savvy gud lo culture too, olsem chief or olketa nurse wea olsem barava originally from this place olsem, so that watever decision wea umi wokim fo stremim problem yia hem can be make sense lo olketa too. (Male, nursing student 6, Focus Group 1).

[I think involving someone who really have in-depth knowledge of culture, such as chief or nurses who are originally from this place, so that whatever decision we come up with to solve the problem does make sense to them as well.]

In response the participant suggested, "olketa chiefs, olketa leaders lo church lo village, olketa nao should be part lo disfala problem solving (Male, Nurse Probationer 2, Focus Group).

[" The chiefs, village church leaders, they should be part of solving problems"].

However, in response to the leadership questions another respondent clearly points out the existing mechanism that AAH established in dealing with conflicts among TB patients, community members and health service which can be applied to the new change.

We have chief liasing officers inside lo campus which, hem at the moment, Timothy and Ben nao ia. Any issue lo culture olsem, bae contactim olketa pipol yia, fo helpim u mi. Lo administrative level, ating bae u mi putim aside some kind of money olsem compensation thing. Fo insurance, just in case nomoa, bikos lo hia, no matter hao big problem, sapos u give money, everything hemi
solved nao. So something olsem nao mi tingim hem should be done fo protectim nurse an u mi. (Male, Health Administrator 3, Interview).

[We have chief liaising officers in the campus who at the moment are; Timothy and Ben. Any cultural issues emerge, they are contacted to help solve the problem. At administrative level, I think we need to put aside some money such as for compensation claims just in-case because here in Kwaio, no matter how big the problem is, supposing you give money, everything will be solved. Such things I think, should be done to protect nurses and us.]

While choosing and identifying the right leaders and appropriate leadership styles, it is also equally important that cultural rules and policies of the CSTBW is regular reviewed. It enables each one to keep tract of any recent changes that may occur in culture and taboos. As suggested by one of the female health administrator,

Ating regularly evaluating the situation bikos we cannot live it up to 1 or 2 years then u mi try fo lukim moa if this works or not... so that there is no stabling block but u misavvy continue sustainim or maintain CSTBW.

(Female, Health Administrator 1, Interview)

[I think regularly evaluating the situation because we cannot live it up to one or two years then we try to see if it works or not...so that there is no stabling block but we continue to sustain and maintain.]
Another health administrator adds,

*I think, um...my understanding, the TB coordinator has a very good relationship with the chiefs in the communities and he speaks Kwaio, I will be definitely involving him with any admission with the patients coming in, because if a nurse has upset them and I think he needs to be seeing those patients regularly. and also if the chiefs sit down or relatives and see if there's any problems and see if he can address that or at least with him there, the patients feel comfortable to say, you know they are upset about something so he can address some and make them feel comfortable. Then he can go back to the nursing staff and explain why that problem wasn't the most appropriate thing to do, but i think the key thing is to have the rights of the people working in there. I know sometimes that's not achievable but to try and have the right people, before they go there with the right understanding. (Female, Health Administrator 2, Interview).*

Settling conflicts or any issues that may arise according to all the respondents, involves all the CSTBW stakeholders. These include, patients, families of TB patients, TB managers and nurses, health administrators, chiefs and community leaders (church leaders). Again, establishing a mechanism of addressing such situation is also suggested as it is necessary in dealing with different levels of problems. For instance, if it’s a minor or major problem, there is an already existing process in place that could be referred to, in addressing the right level of problem that occurs. Culturally, it is highly appropriate that health administration secure some funds for the use of settling problems as it the most effective strategy as far as compensation is concerned.
4.5.4. Qualified staffing.

Qualified staff was understood by participants as health care providers who are culturally competent to work in TB ward. It also refers to enough staffing and gender equality at work place in order to provide quality TB health care. As stated by one of the health administrator, “Improvim TB services, u mi providim gud number of nurses. Increasim number blo TB nurse. Olketa students, probationers should roster go lo dea. (Male, Health Administrator 3, Interview).

["Improving TB services mean, we provide good number of nurses. Increase the number of TB nurses. Students and nurse probationers should be rostered there!"]

While agreeing to the idea of improved staffing, (Female, Health Administrator 2, Interview) warns hospital administration in making sure that there are enough nurses rostered on, or at least one of them on a shift can speak the appropriate language so that patients receive appropriate information. While talking on the required amount of nurses, she further describes quality staffing as stated,

*For me, setting up a new TB ward, I wanna have a good cross-section of nurses that gonna meet the needs of policies and guidelines that we gonna put in place so you wouldn't put all the nurses who can't speak Kwaio in there.*

(Female, Health Administrator 2, Interview).

Still focussing on the question of problem-solving, another nurse directly points out the need to recruit both male and female nurses as staff for TB ward is essential as suggested,
"Bikos hem cultural, I think hem need fo umi trainim wanfala female yia fo luk lo side lo culture because bae hem fair lo olketa patient" (Male, Nursing Probationer 5, Focus Group 2).

["Because it is cultural, I think we need to train one female on culture because it will be fair for the patient"]

4.5.5. Physical setting.

The physical setting was also mentioned by all participants as one of many other factors that has great influence toward sustainability of cultural TB ward. Physical setting for instance refers to i) physical design of the ward, the site in which the building is situated, the surrounding environment. As described by one of the community member, "Olketa mere and man, ating there is a need fo arrangement lo insaed lo TB ward. No gud charge thing bae hem happen". (Male, Coastal Community 4, Focus Group).

["Female and male, I think there is a need to arrange the inside of TB ward. Otherwise, compensation will happen"].

Other nurses and health administrators though agreed with the need for separate TB ward for male and female, they believe that the ward itself must be fully equipped with resources such as basic life support and installing of landline phone for emergency. One participant directly advice the health administration to reconsider improving road accessibility and the surrounding environment as indicated.
“...bae wokim footpath (cement road) kasim dat fala place.an may be bae plantim nice grass insaed, nice trees and putim light lo place yia bikos bae nurse walk from here go lo dea kam back olsem”. (Male, Health Administrator 3, Interview).

["Will build footpath (cement road) to reach that place and may be plant nice grass in the area with trees and put lighting on that place because nurses walk from here to there and back”]

4.5.6. Language and communication.

TB ward is comprised with different ethnic group with diverse cultures and languages. Establishing effective communication and deep understanding and knowledge of cultures and norms among mountain people, coastal people of various ethnic group is crucial for quality health outcome. As suggested, "communication mas be translated to them and from them to us, so that u mi understandim stret treatment and care". (Female, Health administrator 1)

["Language must be translated to them and from them to us, so that we know right treatment and care".]

A senior nurse suggested,

“U mi makem posters but mas be lo language lo East Kwaio, then u mi putim nao lo outpatient or lo ward blo olketa. Sapos u mi english, o pidgin but mas language lo East Kwaio too mas insaed”. (Male, Registered Nurse 5, Focus Group 3).
4.5.7. Food.

To all participants, improving and maintaining quality TB health services also include provision of food that is culturally acceptable. This was explained to researcher as an effective approach to achieving treatment compliance. As expressed by a male administrator, "For improvim TB services u mi start feedim olketa TB patient" (Male, TB patient 2, Interview).

Again, a nursing student further emphasise on provision of food as a positive instigator for treatment compliance.

Home blo olketa hem faraway tumas, taem ol se fo go back takem kaikai, samfala go fo gud nao, but aim blo u mi fo treatim TB case an cure . Fo effective lo cure rate ating hospital bae hem mas feeding patient nomoa nao yia. (Male, Nursing student 4, Focus Group 2).

"Their home is too far, when they go back home for food, some of them never return but our aim is to treat TB case and cure. To be effective on cure rate, I think hospital must the patients".}
4.5.8. Regular review of culture and nursing practice.

Regular and consistent evaluating of culturally-oriented nursing practice is important in order to ensure cultural TB ward is environment friendly. As commented by the health administrator,

*I think there needs to be some follow-up to get an understanding because we might, we are explaining it right, but at the end of the day they might have a different understanding, and I think if we follow-up with them, then that will, rather than wait for 12 months... did you understand that, then we can come back or revise anything than the policy or educate the nurses so that we are addressing those needs constantly rather than wait for 12 months or 2 years and why are people not coming and we could have addressed that earlier* (Female, Health Administrator 2, Interview).

4.5.9. Effective data and reporting.

Documenting and reporting data includes reports received from all levels including international, national and provincial level also important for sustaining CSTBW. Community representative in-charge of TB treatment at community, village and family level are as important as health service reporting. This was described by one of the nurse,

*Hem gud idea fo trainim wanfala lo home, if u mi no nap kasim lo dea moa yia, den hem nomoa lo dea, so hem nomoa doim check-up fo u mi. an hem too bae kam reportim back, fo u mi savvy garem gud record (Male, Nurse Probationer 4, Focus Group 2).*
[It is a good idea to train a member of a family (home), so when we are not able to reach them, he or she can do check-up on our behalf. And he or she too can report back to us, so we can have record]

This is again supported by the health administrator as,

...I think we need to be, um... reporting to the government all the time, reporting to the TB coordinators, updating them, sending them data, so they can see even if and also, then to support us (female, Health Administrator 2, Interview).

4.6. Atoifi Tuberculosis Control and Treatment Program: Ensuring Effective Management

Acquiring knowledge and understanding through careful evaluation of past and current TB control programs is essential. The success of new TB ward, TB control and its treatment program depend entirely on the lessons learnt from previous experiences on TB control and Treatment function. This section will discuss barriers emerging from the data obtained from participants regarding TB control and its treatment program.

4.6.1. Staffing.

TB ward at AAH has been faced with staff shortages over the years. For instance, TB ward has only two staff who takes care of patients in TB ward, at the same time are deployed to other wards most of the time due to shortages of staffing in other wards as well. These two nurses also runs follow-up and case detection program out in the community. Because of such load, there is great challenge for effective monitoring and supervision of TB treatment, follow-ups and case finding at community level. As confirmed by a nurse,
We have only two staff. Otherwise, one always work at Male ward. So when looking at the current situation, it looks as though no staff is working there (TB ward). Administration must look at this and create vacancy so that young nurses who are interested can apply and carry out the work there, to ease the burden.

A health administrator then reacted to this staffing issue and demanded by saying “ating fo fully staffing nao lo TB ward hem helpim nao monitoring blo ol TB treatment lo ward ya”. (Female, Health Administrator 1, Interview).

As reiterated by another health administrator,

Follow-up mi falla doim but, wanfala challenge blo mi fala is that , not enough personnel for doim follow-up, bikos wanfala nurse waka lo ward yia, rostered and at the same time hem go doim follow-up. So time hem should go doim follow-up but mifala short lo nurse, hem nomoa nao so, follow-up yia hem no plan properly. So sapos man yia hem doim follow-up full time, mi think bae bae hem really, really good. (Male, health administrator).
[We do follow-up but one of our challenge is not enough TB team to do the follow-up. Because only one nurse rostered at TB ward and at the same time conduct follow-up. So follow-ups are poorly planned and managed. Otherwise, if that one person engaged with full-time follow-up programs, I think it will be really, really good.]

4.6.1.1. Nurses’ attitude.

Apart from poor staffing, nurses and TB patients admitted that, patients were alone most of the time during hospitalisation. In such case, nurses from other wards were less responsible to provide support in TB ward at the absence of TB nurses. This means, medication could be delayed or missed for that day. As stated by one of the nurses,

“Samfala olketa patient yia no savvy drinkim meresen bikos u mi olketa nurse, mifala no savvy go go lo dea too yia”. (Female, Registered Nurse 2, Focus Group 3)

[“Some of the TB patients doesn’t drink their medication because we as nurses do not know ”].

This is confirmed by one of the patient saying,

“Olketa (nurses) givim meresenzi lo morning, olketa go olowe nao. Samfala something mifala likem but nomoa nao yia. Nurse stap wantaem sick man nao gud” (Male, Patient).

[“The nurses gave medication in the morning, they left and never return. There were things that we want that never given to us. Nurse stay with sick man is good”]
Once again, such failure to attend to TB patients and their need was proven according to a registered nurse.

"Samfala time olketa bed lo TB ward hem stay followim 2 weeks or 1 month olketa no savvy change no moa …” (Female, Registered Nurse 2).

["At times, patients' bed at TB ward were left unchanged for two weeks or, even a month they failed to change bed linen.”]

4.6.2. Education and awareness.

The focus of education and awareness is centred on TB disease, its transmission and control and prevention. To all participants, education and awareness are the foundation to improving TB treatment in such area where TB burden is mounting. TB education involves educating of TB patients and family members during hospitalisation for initial phase. It also refers to TB awareness and health talks at all levels such as family, community, schools, churches and public arena. However, in AAH, education on TB needs improvement. As stated by a nursing student, making sure TB patients know how and why they are taking medication is very important.

Ating hem best nao for trainim olketa (TB patients) for savvy nao hao fo tekem meresen. (Female, Nursing student 6, Focus Group 1).

["I think it’s best to train them (TB patients) how to take their medication".]

Another participant further explains the importance of health talks as an effective approach to address TB patients who absconded from the hospital.
"…u mi should go health tok lo olketa village, makem u mi involvim nao olketa chief, olketa church leaders, wat nao danger about TB makem taem any wan runaway, olketa nao bae help fo sendim kam back man yia" (Female, Registered Nurse 5, Focus Group 4).

["...We should go and conduct health talk at their village, so that we involve the chiefs, church leaders to understand the danger about TB so that when someone runs away, they (chiefs and church leaders) will help to send the patient back."

4.6.3. Food.

It is important that TB patients are well nourished while taking TB drugs. They need to have proper food when taking drugs. In AAH, shortage of food was an ongoing challenge TB patients faced ever since TB ward was in existence. It was a normal practice for patients to go home and returns with food that will last them a month though it is not encouraged. However, for some unclear reasons patients usually go home and never return. As confirmed by a nurse,

"Wanfala something hem no stret wea makem olketa patient savvy abscond nao is, food". (Male, Nurse Probationer 4, Focus Group)

["One thing that is not right that made TB patients abscond is, food"]).

4.6.4. Logistic support.

Conducting TB follow-ups, case detection among communities is a routine program however, nurses complained that, resources to be used during the tour is lacking. This made community -based programs became very challenging for the TB
teams including other health programs. Geographically, TB teams who are climbing several mountains need safety equipment for climbing in order to ensure TB programs reach mountain hamlets and at the same time nurses safety during the course of the program is guaranteed. As commented by one of the nurses,

*Follow-up* hem barava gud tumas nao. *Only thing* nomoa is *that administration* yia, hem have to meetim too need blo olketa man bae go out yia. Sometimes bae u mi have to wakabaot bikos most place lo here, bae u mi no go lo outboard motor yia. U mi by leg nao. (Male, Nurse2, FG).

*Follow-up is really good the only thing is for administration to meet the need of those who are going out. Sometimes we have to walk because most of the places, we will not use outboard motor but we will use our legs.*

Another nurse continues,

“Yeah, food, everything must supplyem, like shoe too, time u wakabaot yia, u needim diswan yia bikos sapos leg nogud bae u hao? wetem everything fo camp...” (Male, Nurse 5, FG).

*"Yes, food, everything must be supplied, like shoe too, you need this when walking because if there is problem with legs, what would you do? With every camping gear...”*
4.6.5. Community-based approach: inappropriate concept for mountain hamlets.

The most common approach for TB health programs is community-based approach. In this context, TB Health Officers plans and conduct TB activities that centred on community whether in coastal communities or mountain hamlets. During this time, TB teams conduct TB programs at one big community or rural health clinic and the rest of the small villages are expected to attend to this central community. However, this strategy is not appropriate for mountain setting as they do not operate as community but as family unit. Thus, conducting TB activities such as follow-ups using community-based approach for mountain people is inappropriate. In other word, those patient on continuous phase at home are not going to be reached during follow-ups. As confirmed by one of the community leaders,

"U mi lo village lo lotu nao umi savvy garem community but olketa lo bush yea, olketa no gat community yea, bikos women yea sapos hem go back, only husband an olketa pikinini nomoa i stap lo wanfala area. Olsem family nao mas honest. Sapos nomoa ba ufala no savvy lo hem ya (known TB patient..."

(Male, community 1)

"We as Christian village, we operate as community but those from the mountain, they do not. This is because when a woman returns, only husband and the children are there. For this reason, family must be honest. If there is no honesty, you will not be able to find her. (TB patient)."

Compliance to TB during the continuous phase is unpredictable. All participants believe that TB treatment is not well managed at the community level. As stated, “…problem nao is saed lo continuous phase, bikos mifala no savvy directly observim olketa. Dat wan nao ah, big challenge blo mi falla at the moment”. (Male, Health Administrator 3, Interview).

[“...problem is with the continuous phase, because we do not directly observe them (TB patient), that is our big challenge at the moment”.


Most TB patients admitted in TB ward were illiterate. They were not able to read and write. This becomes a major challenge for most of the TB patients as they were from the mountain. As verified by a TB manager, "Most illiterate TB patients can't understand how to tick the yellow book for TB treatment". This was further revealed by another community leader saying,

Ah, another ting lo here is that ah, literacy training yia, hao fo read yia, ah, lo other places like lo western part lo Solomon, adult literacy hem no need tumas. But lo here lo Kwaio, mi lukim literacy need. (Male, Coastal Community 4, Focus Group 4)

["Ah, another thing here is literacy training. Other places like Western part of Solomon Islands, adult literacy is not much needed but here in Kwaio, I see literacy is needed"]]
4.6.8. Patients' attitude.

TB patients are not faithful in taking their TB drugs at times. For instance, they sometimes leave TB ward during medication times or go home whenever they wish. For those who are taking treatment at home, fail to report back to hospital for continued treatments. This results in poor compliance with TB drug resulting in default. When asked why such behaviours occur, TB patients concluded with one reason and that is, each individual has the right to be faithful or not to be faithful. As stated by one of the patient, "Life blo you, you nao boss lo hem, I no law nao bae boss lo hem". (male, patient 3)

["Your life, you yourself boss your own life and it’s not law that boss you"].

This was further confirmed by another patient saying, "Hem worry blo hem yia. hem like die, letem hem die". (Male, TB patient 2)

["It is his problem, he wants to die, let him die"].

4.6.9. Establish relationships and team work among community and health service.

Building a strong relationship and partnership with the community was recommended by all patients. However, there needs to be in-depth understanding developed amongst both party in order for the new change to progress. A nursing student argues that there need to be understanding achieved amongst community and health service.
“...hospital should understandim wat nao like blo olketa lo community an olketa lo community too mas understandim wat nao hospital like fo achievim. u mi waka together nomoa”. (Male, Nurse Probationer 2, Focus Group 1).

[“...hospital should understand what the community want and the community must understand what does the hospital would want to achieve. We need to work together”.]

In addition to having common understanding about the health need of the community, to provincial health level, the need to see community and health service being able to work together is paramount in response to an interview by the researcher, Provincial TB Manager 1, indicated "...community pipol mas wok hand in hand wantaem ol hospital staff ".

["community people must work hand in hand with the hospital staff"].

A registered nurse identified these group of stakeholders as follows;

Administration, Laboratory technology, community nurses, community people, help together to achieve goals, and good link with Province and National TB Department. (Male, TB Manager3, Interview).

4.6.10. Financial support.

Financial stability was a major need for sustainability of TB health services. For instance, with the current TB project, there are existing areas that needs proper building and fixation so as to ensure quality TB ward is established. As revealed by the participant,
“Ah, ating main something nao finance yia, providim u mi lo funds olsem fo u mi go out or fo buildim nao olketa things wea u mi needim fo achievim nao needs blo olketa patient yia” (Male, Nurse Probationer, FG 2).

[“I think the main thing is finance, provide us with funds so we can go out or build whatever that is necessary so that we achieve the needs of the patients”.

### 4.6.11. Training.

Training is an important factor for sustaining the CSTBW. For instance, nurses need to undergo a specialised training program on TB care and treatment, training staff on TB screening and testing and on the control and prevention activities in the hospital and at community level. Training also include, learning local languages and cultural norms and taboos of local communities. This can also refer to the use of translator or cultural broker to help conduct short sessions at the hospital or School of nursing. Offering short sessions about basic culture of local communities especially Kwaio people is fundamental especially for new nursing students before actually getting in contact with patients. Moreover, village representatives or community health worker are encouraged to join in learning more about TB disease, what kind of disease is TB.

A health administrator suggested training of village representative to be advocators as stated,

You identifyem olketa pipol lo villages wea olketa bae savvy become health advocator fo hospital or fo clinic an then, u mi savvy callem olketa kam meeting wetem olketa, sendim olketa go lo village, setim up village
committees, hem nao waka blo olketa. Nara ting is, time ol less supportive, payem olketa, sapos u mi no garem seleni, no problem but bae the time u mi stop payem olketa, olketa stop waka so that's why, identifym pipol wea stap lo village, yeah, stap lo dea, bae wok one half lo u mi but then wok fo health blo ol pipol yia.

Training according to a church leader, involves literacy works that can be conducted through church-based programs in partnership with health service. He continues to recommend health administration to work alongside with other church groups, government and non-government organisations to approach this issue of TB and not to concentrate too much on health aspect.


Based on the data from the respondents, it is obvious that there is a great need to relook into the strategic approach of TB control and treatment program here in AAH. As recommended by all participants, there were gaps that prevents successful control and treatment program. Thus, recommendations were geared towards getting treatment closer to patients and not for patients to spent time, money and energy searching for TB drugs. As stated.

*Ating u mi putim nao olketa treatim or medicine yia lo nearest clinic. Fo u mi supervisim olketa time olketa takem. If u mi givim olketa then olketa go olowe lo home, mi no savvy, bae olketa takem too or nomoa. (Male, Nurse Probationer 1)*
[I think we should put the treatment (TB treatment) or medicine at a nearest clinic so we can supervise them when they are taking their drugs. If we supply them (TB drugs) to take home, I don’t know, whether they going to take the medication or not.]

Other areas that were previously reported in this chapter indicates the need for chiefs to get involve in addressing abscond cases instead of reporting to the police. Working closely with chiefs and families is greatly appreciated by participants rather than using force. Secondly, the TB program using community-base model that are both applied to coastal and even mountain hamlets is not a successful strategy. To become effective in case detection and cure rate with mountain people, it is wise to come up with a workable approach in collaboration with the mountain people themselves.

Another important strategy is to educate patients on TB treatment so they understand the importance of taking the drugs as prescribed and that will increase cure and case detection rate. This was recommended by one of the community participants.

_We need to educate them well. Because sometimes they took treatment for one month and then when they got better, they refuse taking continuous phase_
so it would be good for us to educate them well so thy continue with treatment until completed.

4.7. Summary

This chapter discuss the reasons for CSTBW re-establishment according to community and health services responses were due to; i) Culture, ii) TB control and Prevention, and iii) Equity and Equality. However, despite such understanding, there were variations of positive and negative impacts that were explored and brought to surface. For instance, the major positive impacts obtained from the data revealed: safety and security of mountain patients belongings, acceptability and accessibility of the CSTBW with conducive space for both male and female patients, demonstration of positive teamwork between health service and community and it promotes cultural awareness.

Again, community participants showed deep concern on the negative influence of CSTBW among community and health service. These include; i) the raising dilemma on proper sputum disposal, ii) Lack of safety and security for coastal communities and nursing staff, iii) stigma and discrimination of TB patients prior to geographical distance and isolation from the rest of the hospital staff and community members, It also refers to existing tension experienced by nurses having fear towards mountain people as they are known for killing people and lastly the fear of violation penalty (compensation) that swiftly occupying the minds of many all the participants including the mountain people themselves. iv) Women related taboos whereby, women are restricted to access and perform at this CSTBW during menstruation period, v) communication barriers encountered amongst individual patients, nurse-
patients and health administration and, vi) Incapability of TB staff to work in culturally sensitive TB ward.

Barriers to TB control and prevention was also an important issue highlighted by participants of which poor staffing with negative attitude towards TB patients was obvious. Other issues include; Lack of food, Poor education and awareness on TB, limited logistic support, inappropriate community -based approach associated with poor community-based treatment were revealed. Patients also contribute to poor outcome of TB control and treatment based on patients' attitude toward the drug and illiteracy of adult patients.

Having identified the challenges brought about from CSTBW development, participants established multiple factors to combat these confrontations. As argued by participants, unless such recommendations are approved, the CSTBW will not be able to survive. These factors include; Management of conflicts and resolution along with regular review of culture and practices, provision of qualified TB staffing to work in new TB ward, the need to ensure physical environment including structure is culturally reflected, establishment of relationship among stakeholders in working together with the new change, Food provision for TB patients who spent longer time in the hospital, Financially competent to address TB control and treatment program with improved model of family -approach concept at mountain hamlet of Kwaio. Training covers a wide range of areas including, adult and youth literacy workshops, local language and basic culture and norms of the people. The mechanism of carrying out reporting and data to the next level is very important.
Chapter 5: Discussion

"Not establishing key cultural beliefs and practices risks providing a health service that lacks relevance and compromises its efficacy for its recipients" Wilson (2008, p.1).

5.1. Introduction

This chapter discuss the findings based on chapter 4. The discussion will be centred on 3 key focus areas. Each key focus areas will be divided into three separate sections as follows; i) Culture ii) Religion and iii) Health. These three key focus areas are best described using a “Triangle Model” which the researcher refers to as the “Culturally Appropriate TB Health Triangle Model”. The Triangle Model with three equilateral corners represent the intersection between three major components including Culture, Religion and Health as depicted on Figure 4 below.

![Culturally Safe TB Health Triangle Model](image)

**Figure 4. Culturally Safe TB Health Triangle Model Source: Adapted from Bonnel and Smith (2014)**

Bonnel and Smith (2014) used the Triangle model in developing a conceptual theory for clinical projects. The three lines connect the points with a concept of purpose, methods and outcomes. In the same way, the concept of the CSTBW is
connected in three lines referred to as culture, religion and health. Bonnel and Smith reiterated the three lines delivering boundaries for the project simultaneously, it encompass the concepts involved and provides the overall consistency required for the project. Buse, Mays and Watts (2012) adapted this Triangle model for health policy whereby it simplify the complex and extreme nature of policy-making. There are other authors like Ancker, Kern, Abrahamson and Kaushal (2012) who recognised the use of Triangle model in evaluating the effect of health Information Technology on healthcare quality and safety.

The researcher adapted the Triangle model to demonstrate the intersection of factors (culture, religion and health) required to provide a framework for successful TB control programmes in Kwaio community. It is believed that there would be no inconsistency with the project but as long as the three lines maintains a shape of a triangle, the context provides a structure and grips CSTBW project together in a stanch and cohesive manner.

5.2. Cultural Factors

Culture according to this study refers to historically lived community and the societal values, beliefs and practices that holds it together. It is all about a balanced society with its inhabitant and the surrounding environment that displays its identity. Authors like Banwell, Jlijaszek and Dison (2013) recognised the significance of culture at such level and concluded that "culture has come to be seen a matter of what happens at a local level. It attends to life as lived and experienced by socio-historically located people", p.19. Culture though varies with different society, it plays a significant role of social stability in minority group of people worldwide. For instance,
according to all participants, culture is one of the factors to improve TB status of indigenous Kwaio community. As documented in chapter 2, Ho (2004) recommended culture to be integrated with the potential method of TB control. Fitzpatrick et al. (2001) also revealed that a barrier to TB control efforts was due to racial and cultural dissimilarities between Health Department Personnel and the affected community. Such challenge expressed by Fitzpatrick is parallel to AAH situation whereby TB control efforts was unachievable due to the unbridgeable gap between cultural tradition and health. In other words, cultural factors have direct influence on CSTBW in AAH but unnoticed for many years.

Culturally related issues in this context presents key issues in a more multifactor approach involving women related taboos, food taboos, sputum disposal, communication and languages. How each areas influence the health of individual and community level will be clearly explained in this section.

5.2.1. Women related taboos.

All community expressed that in order for the CSTBW to be accessible by both mountain and coastal patients, there needs to be separate wards for both male and female patients. Furthermore, a separate toilets and shower, separate tanks that supply water separately to male patients and female patients with a separate kitchen and laundry are culturally required (MacLaren, 2006). Women are required to take special additional care when working in both male and female ward especially during their menstrual period. The reason for such social boundaries is because women experience menstruation and therefore are different from men. Menstruation is considered pollution or violation to cultural taboos. Akin (2003) and MacLaren (2006) refers to
"menstrual taboos" as "menstrual blood" and is defined as female largely bodily waste including urine, faeces and vomitus which are all subject to rules zealously enforced by ancestors"(p. 308). A similar illustration of menstruation as pollution is found in Indian community as noted by Dao (2008). Dao explains that in one of the Indian community, menstruation is also regarded as pollution and can be temporary or permanent. For instance, women are generally polluted during their menstrual period as well as during delivery. Kitahara (1982) in his study showed that "menstrual taboos are more strict and extensive when hunting is more important as a source of food supply" (p.903).

In Papua New Guinea, the Engan community (Lindebaum, 1972, as cited in Dao, 2008) reiterated that men having sex with menstruating women will cause men to develop persistent vomiting, his blood will turn and wasting of his flesh and men will gradually die. Other authors like Stewart & Strathern (2003) and Hage & Harary (1981) also identified menstruation as pollution in the Highlands of New Guinea.

Having similar worldview about menstruation, women in the mountain people of Kwaio are to live in hut away from the common area when experiencing menstruation or giving birth to a baby as they are acknowledged abu in Kwaio society. This means, their need to be a purification process performed by these women before they can re-join their family. Akin (2003) further confirmed that "Menstruating women may under no circumstances enter a family or garden area, even momentarily" (p. 381). Such existence of menstrual taboos in Kwaio society clearly governs the social relation of various patients and health care providers in AAH.
In a study on ritual Ullrich (1992) affirmed that in some parts of South India especially among Havik Brahmin women, beliefs and observations in menstrual taboos. As explained by La Fontaine as cited in Buckley and Gottlieb (n.d),

_A menstruating (Gisu) woman must keep herself from contact with many activities lest she spoil them: she may not brew beer nor pass by the homestead of a potter lest his pots crack during firing; she may not cook for her husband nor sleep with him lest she endanger both his virility and his general health. A menstruating woman endangers the success of rituals by her presence…At first menstruation…she must be secluded at once from normal contacts, particularly from contact with men in the village, her agnates. During the time that she is menstruating she must not touch food with her hands: she eats with two sticks._ (La Fontaine 1972, pp. 164 & 165).

However, as revealed in chapter 1, the structural designing of TB ward to Obstetric ward in AAH instead violates such societal set-up as argued by MacLaren (2006) "Maternity services do not acknowledge the abu-ness of a woman delivering a baby in Kwaio society, or the purification rituals she will perform prior to returning to her hamlet " (p.35).

For such reasons, less mountain women and men were seen attending obstetric and TB services in AAH. However, mountain participants demanded that female services to TB ward be restricted during menstruation period or when in contact with a menstruating patient. It is because of the symbolic notion of cultural violation that TB ward must have separate ward for both male and female (MacLaren, 2006). The physical setting of the environment be reflective of mountain hamlet set up.
5.2.2. Disposal of sputum.

While women related taboos was seen a major issue by both coastal and mountain people, nurses and health administrators were concerned about the cultural practices of disposing sputum in CSTBW. Healthcare safe disposal of sputum and culturally accepted practice of disposing bodily secretions have been a longstanding dilemma among TB patients and nurses for decades. All mountain and healthcare providers identified this as an obscure to ensuring quality standard of infection control measures. Disposing male and female sputum using one slush or through toilet is violation to cultural taboos. MacLaren (2006) explained that when mixing substance from the mouth and excrement are flushed down the toilet, massive defilement then occurs resulting in ancestral purification or patients getting sicker and die. Thus, disposal of female and male bodily secretions were the nurses' great challenge that need careful attention and appropriate solution.

5.2.3. Language and communication.

Health administrators, TB managers and nurses recommended that Kwaio language is a vital component of culture and therefore should be paid high attention to if we are to offer culturally safe TB health service.

Having nurses from all over the country indicates greater need for increased understanding and knowledge about the local Kwaio language. In a statement by one of the senior nurses, he emphasizes TB educations using posters with symbolic pictures and TB messages in Kwaio language as the most effective mode of providing TB awareness and promotions in TB ward and at community level. The indication for
conducting a training on culture and language is highly recommended by all health care providers including health administrators and TB managers. According to Fitzpatrick, Villariel and Potter (2004), “language barriers have been linked to limited access to health services among racial and ethnic minorities in the United States” (p. 64). Recognizing language as one of the key element in the initial step to promoting culturally safe TB ward in AAH is an incredible approach for achieving Culturally Appropriate TB Ward. Kramsch (1998) helps explains the relationship of language and culture by saying that "language is the principal means whereby we conduct our social lives" (p.3). Kramsch further commented that, when language is used in contexts of communication, it is then bound up with culture in multiple and complex ways. The words uttered by people are referred to as common experience. They express facts, ideas or events that are communicable because they refer to a stock of knowledge about the world that other people share. Words reflect the speaker’s attitudes and beliefs, their point of view thus, language expresses cultural reality. In other words, through its verbal and non-verbal aspects, language embodied cultural reality. Prohibition of its use is often by its speakers as rejection of their social group and their culture.

One health administrator acknowledged the importance of getting acquainted with local language as it is part of addressing their feelings and emotions and that it prompted the healing process of individuals’ conditions. As clearly expressed by Sapir and Mandelbaum (1949), "the truth of the matter is that language is an essentially perfect means of expression and communication among every known people…Language is primarily a system of phonetic symbols for the expression of communicable thought and feeling" (p.11t is perceived that these cultural factors such
as women related taboos, disposing of sputum and bodily wastes and communication barriers were the major challenges of having CSTBW. Appropriately addressing these key areas will help improve health of the community.

5.3. Religious Factor

The study also identified religion as one of the most important components of the CSTBW at AAH. In this regard, there were few factors that health administrators believed to have influenced the existence of CSTBW and these include; administrative and management function to fulfilling mission focus of the church, provision of human resources, financial assistance toward TB health service. The health administrators expressed that, when religious factor is detached from the CSTBW, other factors will not be operational at such level. This philosophy was proven by Chikwendu (2004) in his study on the successful work of Faith-Based Organisations (FBOs) in Anti-HIV/AIDS communities among African youth and women. The study explained that,

*Church organisation have a long historical improvement in Africa. Christian church effort through health was proven to be successful at the end of 20th century through operation of many institutions providing social services including schools, hospitals, clinics and agricultural cooperatives in contrast with many African political and economic structures were collapsing and African governments were unable to run and equip their schools, the hospital had no drugs, and many national administrative structures were considered corrupt.* (pp.309-310).
While religion directly influence health of underserved communities, Scandett. Jr (1994) supported that religion also became a major component of health-behaviour of Black Americans.

*The use of religion as a support component in an effort to change the health-related behaviour of Black Americans is historical and pervasive. Political and social barriers that have deprived Black people of proper health care have been overcome through religious intervention* (pp.122 &123).

Other authors like Wuthnow, Hackett and Hsu (2004) on the study of Effectiveness and Trustworthiness on FBOs and other organisations confirmed that "mean effectiveness and trustworthiness are relatively high in FBOs"(p.14). However, some Christian or coastal community leaders objected the new change as it is not usual to stay together with mountain people who adhere to traditional ancestral beliefs and values. Although the coastal and mountain people are one people with same ancestors and with same cultural origin, Christian missionaries taught that people from the two communities cannot live together. They taught that no relationship should be established at all. This is because people who follow the introduced Christian God cannot live together with the people who follow their traditional ancestral spirits. This gap emerged during the introduction and acceptance of westernisation through the work of missionaries as stated in chapter 1, resulting in formation of two separate communities. Introduced religion drew a huge gap between the two communities. The two distinct communities now live a separate way of life carrying the trademark of ancestral and Christian religion. Until now they are separable with no intention to be together in almost everything.
Such gap between religion and indigenous communities is illustrated from a study by Ward, Kader, and Dankyau (2004) in African communities whereby the ambiguities of religious officials positions in the communities hinders the ability to provide appropriate and comprehensive sex and reproductive health services to the communities. For instance, doctors in Sub-Saharan mission hospital had difficulties education HIV clients as it is religiously forbidden to talk about condoms. In local context, the church officials’ position in relation to ancestral religion was also distorted. There was no transparent relationship between religion and culture among local community. Mountain people strictly exempted themselves from Christian environment as Christian society is seen a violation to traditional people. However, having recognised the gap between religion and culture, a church leader pointed out that appropriate approach for conducting religious activities in TB ward need high recognition by church hierarchies, church officials and or individual Christians. He further concluded that since AAH is a Christian institution, religion still play a major influence in the functioning of CSTBW. In order to avoid conflicts among mountain and coastal or Christian people, or violation to cultural taboos, he suggested that religious approach can be altered without major effect to the mission of the SDAC. He recommended that instead of incorporating prayers, singing and reading of bible stories into TB health programs as stated by Chikwendu (2004), the use of "apologetic approach" is suitable to fulfilling religious obligations and to ensure cultural sensitivity. In this case, nurses or Christian members from community level do not have to pray or read bible text before all patients. There is a common ground established among Christian communities including nurses and doctors to still perform religious practice. For instance, a nurse may offer a private prayer before giving the
drug or begin the days' work without being physically seen by patients. Applying such approach is proper as it does not offend or cause any violation to cultural taboos of mountain people in TB ward.

The above implies the gap between Christian religion and ancestral tradition that could be clearly seen through social interactions. Some church leaders may be willing to entertain such possibility. In this context we may raise the question whether the church was prepared to allow Christian doctrine and organisation to be modified through contact with Kwaio culture.

However, since sustainability of CSTBW in the context of health administrators is entirely depending on the operating body which is the Seventh-Day Adventist Church (SDAC), recognition of Seventh-Day Adventist Church (SDAC) as the operating body of AAH is vital as in Chapter 1. In the same way, the willingness of SDAC to recognise local culture in collaboration with local community is essential to enable provision of TB health service that is culturally appropriate and safe.

5.4. Health

In this study health refers to the administrative function of CSTBW at AAH. It specifically deals with; i) Human-Resource Shortage Versus Professional Development ii) TB control, prevention and treatment function, and 3) leadership and management of CSTBW.

5.4.1. Human resource and professional development.

Shortage of TB nurses was one of the key findings from health care providers. In AAH same nursing staff working in TB health clinic were the ones attending to
patients in the general wards. They are still the same nursing staff carrying out community work. This was seen unacceptable by health service as it creates a wide range of implications as far as quality health care is being provided. Shortage of nurses is worldwide and is identified as the largest threat in health service provision as TB. For example, in a recent study in Sub-Saharan Africa, Zelnick and O'Donell (2005), described shortage of nurses as one of the major opponents to providing quality care of HIV/AIDS treatment.

Although there was no study done to uncover why AAH experienced shortage of human resources, Kalisch, Kalisch, and Clinton (1981) findings on an article titled "An analysis of News Flow on the Nation's Nurse Shortage" concluded that nurse shortage were most common including the Pacific. Kalisch et al. (1981) further commented that nurse shortage according to the findings was explained as the result of mal-distribution of nurses, poor salaries, deficient working conditions and lack of job satisfaction. TB patients who were admitted expressed their frustration when their needs were not met for the day. In the same way, nurses and health administrators also declared how often TB patients were abandoned during shifts. For this reasons, registered nurses strongly recommend that health administration need to get a closer look in addressing this issue in order for CSTBW to be successful. However, while nurses thought it is the health administration role to challenge this situation, Zelnick and O’Donnell (2005) confirmed that seeking nurses’ views and involving them in policy process could contribute to successful solution with improved quality of cultural TB health care.

All participants emphasised the need for improved staffing who are capable to work at TB ward. Poor staffing means failure to achieving community TB outreach
activities. As stated by nurses conducting TB control and detection program out in the community is not an easy task. TB managers and health administrators pointed out that recruiting of nurses with the help of provincial health staffing is appropriate. Addressing such situation may improve health of individual and community.

5.3.1.2. Professional development.

Professional development was defined in this locale as equipping registered nurses, TB managers and significant others of Kwaio culture as well as TB training needs. Registered nurses revealed that lack of cultural knowledge and norms, updated TB skills and knowledge is of great challenge in AAH. No training on cultural awareness has ever been conducted in the past. Likewise, registered nurses recommended the need to acquire updated knowledge and skills on TB. Training and constant reviewing of cultural changes from time to time is essential as Atoifi health service is staffed with different ethnic groups with diverse cultures. Updating nurses on current knowledge and skills of TB disease, its control and prevention and treatment management is vital as it improves quality of care. Dong et al (2007) from a study on improved TB care and HIV treatment, expressed the need for improved TB care and HIV treatment through the Integration of TB Education and Care for HIV (iTEACH) program at Edendale Hospital of KwaZulu-Natal province in South Africa. Boskovich (1994) reiterated the significance of training, spoke of a program training of 20 community health care, alcohol and substance, and social health workers to read TB tests after unsatisfactory result of TB screening and referrals was identified in Native-American TB case. Health administrators and TB managers recommended that nursing administration need to deploy capable nurses who are of sound knowledge
about TB and basic cultural norms to work in CSTBW. Dong et al. (2007) recommends that TB training programs with incorporation of local cultural beliefs and practices is vital for provision of quality TB health services at AAH.

5.5. Tuberculosis Prevention, Control and Treatment Function

Understanding TB control, prevention and treatment function in AAH is vital for effective TB care and management in CSTBW. There were various factors identified from the participants that need consideration. These include the following areas; i) Distance and Geographical factors, ii) Illiteracy, iii) Poor community relationships, and iv) Abscond v) Logistic support and vi) Health Promotion and Education.

5.5.1. Distance and geographical factors.

Coastal and mountain community revealed distance and geographical reasons to be the longstanding challenge encountered in seeking TB care in AAH. As pointed out in Chapter 1 (Massey et al, 2011) distance and geographical factors contribute to late presentation of patient with TB from the Kwaio mountain to AAH. Massey explained that most people use bush trail to get to the nearest hospital as it is the cheapest route though it's the hardest route for any seriously ill patient to take. As proven by authors like MacLaren (2006); Keesing (1969,1970a,1970b) some Kwaio-pagans still live scattered through mountainous central region of the islands in tiny homestead clusters, retaining their pagan religion and pre-European way of life”.p.992. Because of such adversity faced by these mountain people many were
reluctant to seek medical help even to revisit TB clinic for resupplying of monthly TB treatment.

5.5.2. Community-based and hospital-based TB treatment compliance.

Poor adherence to TB treatment during admission and at home was a major challenge raised by both community and health professionals at AAH. TB patients take two months initial treatment inpatient with continuous phase of four months treatment at home. Direct-Observation of TB treatment actively applied at the initial phase of treatment when patients were kept in the ward and not at community level. In preparation for take home drugs message, education about TB drugs and how to use the TB Treatment Card was delivered to patients and guardians. It was parents or family members who were providing treatment support at home. During community-based treatment, patients are sent home with a Treatment Card ticked daily for resupply of monthly TB drugs. However, TB managers argued that all TB patients from the mountain were having difficulty filling up the TB Treatment Card properly. For instance, when paying monthly visits for next drug supply, the Treatment Cards were found blank without a tick. This challenge the TB managers whether the patients' compliance to their drug can be trusted with new drug supply or just rely on their next sputum test result. For this reason, the TB managers concluded that using Treatment Card is not practical for illiterate TB patients especially among mountain people.
5.5.2.1. Poor relationship among communities.

The concept of community-based treatment and a treatment supporter or village health worker as part of a global intervention of TB burden in low income countries may lead to negative set back. As revealed by community participants having a community member to work in parallel with TB health team and villages as treatment supporter is again a great challenge though it seemed a better strategy. All coastal community participants believed that unhealthy relationship among community members contributes to poor treatment at community. The participants reiterated that there can be poor management of TB treatment when the family of TB health assistant had conflicts with other community families. The no care attitude or payback system toward the opponents or someone who wronged you is common in indigenous society like Kwaio that TB patients can be intentionally ignored for supervision of TB treatment. Such practice is expected to occur in any one community and thus will affect the treatment compliance of TB patient at community level. This is one challenging factor that requires close look when community-based treatment approach is undertaken in community like Kwaio.

5.5.2.2. Dealing with absconding TB patients.

Both community and mountain participants expressed their views as to how TB patients absconding from the hospital can be appropriately managed. As told to the researcher, mountain people shared their roles in assisting the TB teams to address such situation by saying that, when patients are running away from the hospital, it is appropriate that families and communities are informed instead of sending a police after them. A senior health administrator once responded to such action by saying that,
sending a police officer to recapture the patient is inappropriate. Otherwise, there are appropriate family members and community leaders who can bring such a person back to hospital. A mountain participant further responded to the researcher by posing a question of what would happen next when the person is forced to live his or her village and later dies in the hospital or somewhere. This may mean committing of cultural offence with complex cultural management of the problem. Therefore, involving family members and community leaders to address TB patients who are absconding is very important.

5.5.2.3. Logistic support.

Geographically, most outreach activities in Kwaio community of AAH were conducted in the mountain, halfway up the mountain and along the rivers of Kwaio. In order to achieve complete coverage of the community or TB sites, nurses have to carry out a week tour. Simultaneously, they were to reach even the difficult areas in the mountain by walking through rugged trails and flooded rivers at times. Nurses argued that such situation put them to risk as there were no proper gears provided for the tour. For instance, there were no proper shoes for climbing or no camping equipment to be used. One of the nurses continues to say that, engaging in such a trip is about putting themselves at risk as there was no safety gears provided for walking up the mountain. He went on to say that health administration need to consider this problem and provide proper action because if the team somehow fracture their legs from walking or sustain other injuries, it will cost the hospital and the one who is injured.

Nurses revealed that TB outreach programs cannot be achieved when there is no provision of logistic support.
5.5.2.4. Health promotion and education.

One of many challenges of obtaining successful TB treatment was the delivery of health promotion and education for indigenous communities. It was uncertain whether TB education and awareness were correctly perceived by patients who were illiterate or the family members and the community as a whole. Nurses recommended that conveying right information about TB to individual patients, family and community is essential for patients to make informed choices.

5.6. Sustainable Leadership of Culturally Safe Tuberculosis Ward

In this context leadership refers to the relationship between key stakeholders who depended on each other for the development and establishment of CSTBW. Eriksen (2001) described this as the relationship between actors who are dependent on one another to get things done. Ferding (2007) refers to such stakeholders and actors as sustainable leaders. Ferding reiterates that “sustainable leaders recognise the experience of change itself. It generates new thinking, discoveries and innovations that can revitalise the health of organisations and community.

The study identified that having a lasting leadership of CSTBW that involves collaboration with multiple sectors of all levels is essential. It is suggested that involving local community leaders, health service and multiple sectors is vital. For instance, working together with coastal village leaders and mountain chiefs and using of local resources, knowledge and skills is important for a new change at community level. Martin (2005) in his report on “The Changing Nature of Leadership” refers to this as “Connected-Leadership” whereby there is inclusive and collective networked
activity occurring throughout the organisation or whereby all core stakeholders are connected and share the leadership role in CSTBW.

Hooijberg, Blunt, Antonakis, Boal and Lane (2007) concluded that this approach recognizes leadership that emerging from organisation’s social networks, interdependent work groups through influence of meaning-making processes and the use of collective or shared leadership practices and belief system. Again, the “Connected Leadership” framework is based on three leadership level tasks that must be accomplished during the complex change challenges. The “Connected Leadership is depicted in Figure 5 below.

![Figure 5. Connected Leadership](image)

**Figure 5. Connected Leadership Source: Adapted from Hooijberg et al. (2007)**

Participating in decision-making and team up with health service was a demand of mountain participants for years after being excluded from health agendas for so long. They further explained that getting involved with health work and health
professionals concerning their health demonstrate a health service that is genuine in dealing with their health needs. Eriksen (2001) in a study on a reform process at Norwegian hospital concluded that successful leadership depends upon actors assuming a communicative mode of interaction that favours communicative leadership such as decentralisation, co-decision making and team leadership. Carson, Tesluk and Marrone (2007) expressed team leadership as shared leadership whereby leadership role is distributed among members rather than focused on a single designated leader. An article entitled “Public Health Leadership Development Recommendation for a Sustainable National Network” (2006) emphasized pervasive leadership culture within an organization creates environment where individual professionals may continue to seek out and act on partnership that will improve the performance of the organisation. A similar example of establishing Culturally Appropriate Family Planning Program for the Navrongo Experiment in Northern Ghana according to Nazzar et al. (1995) demonstrated “management system supporting the outreach workers by emphasizing the importance of peer leadership supervisory support and community liaison in the implementation of village-based services” (p.307). Twiss et al. (2003) in a study of promoting inclusionary and system approach to improving community health concluded that the success of community garden was resulted through many cities incorporating local leaders and resources, volunteers and community partners, and skill-building opportunities for participants. Health administrators and TB managers raised further concern that not only local health facility as AAH should create a close partnership with the local community instead it also requires provincial and national health level without disregard to international organisations. Roussos and Fawcette (2007) based on a review paper
"Collaborative Partnerships as a Strategy for improving Community Health in California" confirmed that community improvement can only be achieved when people and organisations from multiple sectors working together for common purpose. In other words, engaging local communities and other multiple sectors in the development of Culturally Safe TB Ward at AAH as explained in Chapter 1 is an outstanding strategy acknowledged by participants. Nissen et al. (2005) reiterated that leadership is already present in communities, it is relational and must be shared since it is already exists but often needs to be recognised and unleashed. Connected leadership is seen a positive step for effective and efficient delivery of TB health service for both coastal and mountain people. Mountain participants elaborated on teamwork by saying that, to have an accessible culturally Safe TB ward, the recommendation would be to involve coastal and mountain representative in health projects even at health administrative board is important. Working together with local health service according to mountain people gives them recognition as part of the entire health system with a sense of responsibility to help address their own health needs. On the other hand, allowing coastal and mountain representatives to partner with health service creates better understanding of health culture and traditional culture with appropriate intervention strategy.

5.7. **Implications of the Study**

This section describes the implications of the study obtained from the extensive discussion of the data collected.

The establishment of new TB ward (CSTBW) develops various reactions and perceptions among community and health service. For instance, though they have
better understanding on the re-location and re-development of CSTBW, they both have fear over the cultural impacts that CSTBW may cause. For instance, to some mountain people, the new TB ward was understood to be built for them alone and not coastal people or other ethnic group outside of Kwaio community. Having realised that CSTBW is to accommodate coastal and mountain people, coastal communities then refuse to admit in this new TB ward in fear of compensation. In the similar way, the mountain people are in fear of seeing coastal people and health providers violating their cultural taboos. With such responses from both coastal and mountain people, it is highly recommended that awareness program to avoid misunderstanding amongst community and health service be conducted.

More so, since lack of cultural knowledge and understanding is predominant among health service and coastal people, there need to be a cultural training and awareness done throughout the extended family. This includes, conducting workshops and in-service training on norms and practices, values and taboos of Kwaio local culture. Local language and appropriate mode of communication is also an important training need for nurses, other health professionals locally or internationals who are coming in to AAH.

AAH TB health service experienced a number of challenges when addressing TB burden within the hospital and with the surrounding communities. Health administration, stakeholders and the community are to work together in initiating a culturally appropriate intervention.

Again, leadership development is the most important factor for the success of this new change. In another word, creating and developing appropriate leaders and
leadership plays a vital role in the progress and sustainability of CSTBW. A leadership that is relational and shared among all stakeholders. A leadership that is community-base and strengthened by community members through skill-training.

This culturally appropriate TB intervention strategy needs recognition from local to provincial and national health level. Therefore, health administration is to work fairly closely with all health stakeholders including the Ministry of Health in getting this new concept recognised as the appropriate health care services for minority group of people such as Kwaio community.

5.8. Chapter Summary

This study proves that other authors confirmed women related cultural taboos plays a significant role in many societies worldwide. In Kwaio community, women determines the well-being of a society and at the same time influences disunity of a society. This is best illustrated through women's taboos preventing mountain people gaining access to the TB ward. Sputum and other bodily secretions, and communication were identified by participants to be of great challenges for health providers in providing quality care for patients.

Barriers in TB control and treatment program also have great influence in the success of CSTB services both in the ward and out in the community. For example, lack of staffing may result in poor provision of TB services. Likewise, poor logistic support can also lead to inactive TB programs. However, having recognised the impacts of new TB ward and barriers experienced with TB control and treatment program, there are recommended perceptions by all participants to ensure CSTBW is a successful cultural intervention strategy for TB disease among Kwaio community.
Again, according to the participants, leaders and leadership development of CSTBW is entirely dependent on leadership that is connected and shared among all CSTBW stakeholders.
Chapter 6: Conclusion and Recommendations

6.1. Introduction

This study reveals that the CSTBW is the appropriate intervention to address TB health disparity in East Kwaio communities. The three major elements; i) Culture, ii) Religion, iii) Health come together through Connected-Leadership Development that frame a new concept are believed to be the fundamental of CSTBW that is relevant for mountain people of Kwaio.

Culture conveys great influence in health accessibility of minority group of mountain people in Kwaio society. It is a major factor needing recognition by health administrators and stakeholders when making decisions or developing health policies. Religious factor was believed to be the generating power that empowers the CSTBW for its survival and sustenance. The Health factor determines and carry out what appropriate goals are to be set and carry out strategic management of key focus areas developed for CSTBW. "Connected-Leadership" engulf the inner framework of the new concept for its progress and sustainability.

The emerging concept which then called the “Culturally Appropriate TB Health Triangular Model” believed to bring about change in health for both coastal and especially mountain people. The development of a new concept of “Culturally Appropriate TB Health Triangular Model” was explained in Chapter 1 with supporting literature review in Chapter 2.
The four main objectives that shaped the framework of “Culturally Appropriate TB Health Triangular Model” as reflected from this study were; (1) To explore community and health service responses to CSTBW, (2) To identify barriers to TB control and treatment program at AAH, (3) To investigate community and health service perceptions for sustainable leadership and management and make recommendations of CSTBW and its services at AAH and (4) To create recommendations for the sustainable culturally sensitive TB health service in AAH.

The conclusion section is reflective of all the previous Chapters yet specifically, Chapter 2, previewed the literatures about Tuberculosis and culture in Kwaio society. Chapter 3 justify the research design employed to fulfil this study's aim. The Appreciative Inquiry framework complimented this qualitative study to accomplish the aims of exploring community and health service responses to CSTBW. Two data collection tools used were focus-group and face-to-face interview with both men and women, coastal and mountain people, and community and health service were participants in the study. Ethical clearance was obtained for this study from the Pacific Adventist University, the Solomon Islands Legislative body which is the "National Health Research and Ethics Committee, Ministry of Health and Medical Services with the research ethics No: HRC13/27 and Atoifi Adventist Hospital Research Committee (AAHRC). Chapter 4 focus on the results obtained from the data. It reveals the changes in social, physical, religious and the health system towards the CSTBW.
6.2. Conclusion


This study proved that culture greatly influence health status of Kwaio society. In previous study by Keesing, it clearly described how culture become an important factor to improving health of Kwaio indigenous through illustration of menstrual taboos and pollution. The Kwaio culture was then connected to a particular culture found in one of the African tribe. The cultural similarities of rituals were strongly connected. Again, Akin and MacLaren studies were also speaking about menstrual taboos resulting to poor access to health facility due to cultural insensitivity by western health system.

The study shows that the relocation and redevelopment of CSTBW provoke community and health services various reactions. Respondents from both male and female, coastal and mountain hamlets, community and health service providers expressed their views and feelings toward the CSTBW. Though all respondents demonstrated genuine reasons for re-location and redevelopment of CSTBW, various observations regarding impacts of CSTBW, barriers to TB control and treatment program and recommendations to sustain the new change were also brought out through data collected.

6.2.2. The shift of western health to Culturally Safe Tuberculosis Ward.

Chapter 1 introduces western health system that lacks cultural sensitivity. This was argued by MacLaren (2006) as a result of exclusion of community involvement in the planning and designing of the building itself. Chapter 2, shows several studies
(Grifith and Kerr, Orr, Ho and Massey) that recognises cultural factors to be integrated in TB intervention to improving TB burden globally.

Recognising the importance of culture in indigenous health and the growing health disparity of TB in mountain hamlets of Kwaio, CSTBW was successfully re-established in early 2013. It is believed that the new change will greatly impose positive improvement of TB burden locally.

6.2.3. The Culturally Safe Tuberculosis Health Model concept.

The concept of “Culturally Appropriate TB Health Triangular Model” as indicated in Chapter 5, Figure.5 becomes an important foundation in the framework of CSTBW. Historically, there was not a previous study that highlighted the need to re-engineer Kwaio health system using the concept of “Culturally Appropriate TB Health Triangular Model”. Instead, “Culturally Appropriate TB Health Triangular Model" was dimly appreciated by western health system and the church who is the operating body when first introduced in the early 21st century. Exclusion of “Culturally Appropriate TB Health Triangular Model” by a health system indicates denial of culture resulting in irrelevant health services that lacks efficiency to its beneficiaries. Recognition of “Culturally Appropriate TB Health Triangular Model" as fundamental for CSTBW is greatly recommended in this study. The concept of “Culturally Appropriate TB Health Triangular Model" is therefore, adds to the body of knowledge about Kwaio culture and its significance to improving TB burden in the area.
6.2.4. Impacts of Culturally Safe Tuberculosis Ward.

The CSTBW had various influence among community and health service in Atoifi and Kwaio community. Chapter 4 and Chapter 5 depict that CSTBW impacted community and health service during its early introduction in 2013 at AAH.

6.2.4.1. Cultural factor.

This study shows CSTBW has impact on culture. With the new change, women-related taboos was identified to be the great influence for CSTBW development as indicated in Chapter 4, section 4.2.1.1. and Chapter 5, 5.2. It revealed that women and culture-related taboos, proper sputum disposal, language and communication, physical structure of the building and the TB site itself. It needed high recognition to pursue in the designing of TB ward management and the operation of TB service in the local areas served by AAH.

6.2.4.2. Religious factor.

Church was seen as the sustaining agent of CSTBW in terms of various resources including staffing, physical resources such as medical equipment and supplies, financial assistance and for its administrative functioning.

Obtaining assistance from other stakeholders, non-organisations or international agencies are entirely dependent upon the approval and acceptance of the governing body which is AAH. Chapter 4, section 4.5.1, section 4.5.2 and section 4.5.3, reported church administration as one of the positive indicators responsible for carrying out culturally appropriate leadership and management role in the new TB ward.
Lack of recognition of religious authority converse incapable leaders with inappropriate leadership skills that does not reflect representation of culture-oriented leadership qualities. Religious factor therefore, is one of the components that not only administratively and manageably influential but it further recognizes the basic aspect of a patient's spiritual need. Clearly defining the role of religion in the operation of CSTBW adds to the knowledge of religious related health service among Kwaio community and AAH.

6.2.4.3. Health factor.

Health is the whole reason for encountering new change. Health was poorly experienced by most mountain people compared to coastal communities in Kwaio community as reflected in Chapter 1. Historically, the experience of health disparity was based on poor cultural sensitivity. However, data reveals that poor health among mountain people was due to having a failed health system. Chapter 5 on section 5.3 defines health factor in a more complex category. These health factors refer to administrative function of CSTBW that involves management of human resources, planning, designing and implementation of TB services and treatment programs in-patient and TB control and treatment activities out in the community. It addresses the need for various resources including funding and direct affiliation with other funding agencies or organisations for assistance. It ensures that equal distribution of TB health service is acquired with optimum results.

Failure to realize the significance of these factors leads to poor health delivery that is not pertinent to the community that it serves. Thus, having a health system that
is capable and administratively skilful in connecting with the community for its success is essential to combat the overwhelming TB burden among the minority group of people in Kwaio community.

This study shows community and health service consciousness of culture though it was not been part of the health system that was meant to be rendered to Kwaio society. Likewise, both community and health service have genuine understanding and reasons for relocation and re-development of CSTBW. They do have brilliant ideas and opinions as to how the new change can be tolerable and beneficial to community and health service. Respondents demonstrated positive attitude to change yet the biggest challenge seen between the community and health service was the fear of violations of culture and taboos and the possible consequences.

It is therefore evident that to establish a successful culture friendly TB ward, the three dimensions including culture, religion and health are to be strongly connected at the initiation stage of the process for change. These three factors determine the appropriate designing, planning and management of CSTBW. The connectedness of these factors underpinning sustainable leadership and functioning of TB clinic and its services referred to as ‘connected –leadership.’

6.3. Recommendations

As Director of Nursing at AAH and leader of this study I have the following recommendations based on results from this study, key learning from Master of Leadership and Development Program and professional experience at AAH.
• Awareness and education about CSTBW throughout Kwaio community and other ethnic groups is essential. Inform and educate communities and public the purpose of establishing CSTBW and who are to use the new TB ward.

• All community, health service, church leaders and provincial TB managers to collaborate in developing a mechanism of culturally sensitive TB services in each of these levels. This is to establish leadership development in carrying out skill-training for community representatives and sharing of roles and responsibilities in managing TB services.

• Formulation of Culturally Competent TB Services to persons from Kwaio community in Promoting Cultural Sensitivity: A Practical Guide for Tuberculosis Program. These tips are for TB program staff, including program planners, managers and providers who work for TB patients in CSTBW and the surrounding communities.

6.3.1. Interactions with Kwaio patients and families.

• Recognize that not all patients are ethnic Kwaio: Some may be from ethnic group from Kwar'a'e, Fataleka and Are'are with distinct languages and therefore needs special attention.

• Ensure that in all situation patients receive services using language they understand and do not assume that all patients can read and write English.

• Recognise the role of family, especially male as the head of the family in medical decision making. Involve family member in solving problem related to treatment compliance.
• Attempt to match female patient with female nurses during medical assessment in a room set aside for female patients.

• In all situations, female health workers and staff are to take extra precautions and avoid attending to male ward when experiencing menstruation period.

• At all times, be sure that bodily secretions including patient's sputum of male and female are discarded separately at the appropriate place as approved by both community and health service.

• Ensure confidentiality for all patients by providing a private setting.

6.3.2. Tuberculosis control and treatment program.

• Develop a cultural case management whereby patients are matched with bilingual or bicultural health worker for the course of the treatment for evaluation of treatment.

• Get the patients set up reminder system that involves family member or a friend so not to miss treatment but one is assisted on measures to keep the drug to be taken faithfully.

• In all situations, assess the barriers for not faithfully returning for monthly visits and taking a monthly recognition.

• At all times, be sure that bodily secretions including patient's sputum of male and female are discarded separately at the appropriate place as approved by both community and health service.
6.3.3. Social stigma.

- Consider that social stigma associated with TB may impact families in Kwaio community and other ethnic group.

- Health service providers including TB staff and nurses and the rest of coastal communities and other ethnic group may also develop fear associated with violation of cultural taboos.

6.3.4. Tuberculosis education and outreach program.

- Find out community's perception of TB disease so that right information is disseminated

- Create and design information and education materials that tailored according to Kwaio context.

- Develop culturally relevant TB prevention and community-based TB treatment

- With the help of local communities, implement TB education and outreach program that is culturally safe to Kwaio societal setup.

- Provide adequate and capable male and female staffing who are culturally sensitive to local culture and knowledgeable about TB disease, prevention and control program.

- In all situation, medical resources and equipment are constantly provided from appropriate medical supplier. Financial support for other priority needs are
secured in order to complete unfinished projects or ongoing TB programs and activities.

6.3.5. Professional training and development.

- Training may mean short courses or workshops for nurses on basic culture and norms using community leaders and chiefs.

- Incorporate culture class with Nursing school curriculum and allowing one or two classes for a local community leader or chief to teach culture to new nursing students before attending to patients.

- Appointing appropriate person to introduce local culture and taboos to outsiders or health professionals or medical students who may visit Atoifi Adventist Hospital.

- Training also refer to adult literacy training or workshops for illiterate TB patients and families about TB treatment measures.

6.3.6. Physical Environment and Structure of Tuberculosis ward

6.3.6.1. The Concept of “Connected Leadership”.

The concept of connected leadership be recognised as the Appropriate Approach in Sustaining CSTBW in Indigenous Health.
6.4. Study Limitations

As a research novice, the tendency of picking almost all the data for analysis was of huge challenge and time consuming. However, the limitation does not undermine the validity of the findings in regard to focus group and face-to-face interview prior to using of Appreciative approach whereby all possible stakeholders are participating in the interview.

6.5. Chapter Summary

The study indicated the impact of CSTBW among community and health service at AAH of Kwaio. Historically, distinctive indigenous culture of Kwaio society was seen as the single factor with great influence for provision of culturally appropriate health care. However, according to this particular study, there were two other factors including religion and health that crippled the provision of quality health service for minority group of Kwaio community. Thus, it is because of poor accessibility and acceptance to western health approach that paved the path for re-establishment of new TB ward that grounded by a framework referred to as the “Culturally Safe TB Health Triangular Model”. It’s leadership and management is governed by a more community-oriented framework of leadership referred to as the “Connected Leadership” that reflect all three factors of CSTBHTM. Adding to the existing knowledge of Kwaio culture and health, the new concept of CSTBW becomes the root of indigenous health framework in Kwaio community. Therefore, documenting this study provides better opportunity for local communities not only in Kwaio but the rest of the Solomon Islands to recapture culture as essential component
in the delivery of improving TB burden in Kwaio community. Academically, the
documentation of the two concepts which are; i) Culturally Safe TB services and, ii)
Connected Leadership be further considered for future study prior its sustainability
and efficacy over time.
References


Appendix A: PAU Research and Ethics Committee Approval

26 August 2019

Rowena Asugeni
Pacific Adventist University
Private Mailbag
Boroko, NCD

Dear Rowena,

Re: MLD Proposal: “Community and Health Service Responses to Culturally Safe TB Ward at Aotili Hospital, Solomon Islands”. Rowena Asugeni:

On behalf of the Pacific Adventist University Research and Ethics Committee, I would like to congratulate you for successful completion of your proposal on “Community and Health Service Responses to Culturally Safe TB Ward at Aotili Hospital, Solomon Islands.”

The Committee took the time to discuss your proposal and I am pleased to inform you that your study was approved and you can now start your preparation to collect your data. We encourage you to work closely with your supervisors to organize all logistics.

Do not hesitate to contact our office for assistance at any time.

We wish you all the best in your studies.

Sincerely yours,

Dr. Latem Simeon
Director of Research and Postgraduate Studies
Appendix B: National Health Research Certificate

Research Certificate

To: Ms Rowena Atugeni  
Pacific Adventist University  
Private Mailbag  
Baroko, NDC,  
PNG

The National Health Research Ethics Committee (NHREC) of the Ministry of Health & Medical Services, Solomon Islands has deliberated on November 27th, 2013 and has approved your application to do research on “Community and Health Service Responses to Culturally Safe TB Ward at Atwi Adventist Hospital, Solomon Islands”.

You are hereby granted permission to conduct your research in Solomon Islands as far as 2013. This approval is for the one-time conduct of your research and any repetition and/or extension of this research will need further NHREC approval. A progressive report is to be submitted to the committee by the end of this approved term of research.

Date: 25/11/2013

Chairman, NHREC

P. Tenihe Daliyanda  
Chairman, NHREC
Appendix C: AAH Research and Ethics Committee Approval

12th August 2013

TO WHOM IT MAY CONCERN

Ref: Approval from Ethical Committee on Ms. Rowena Asaiga’s Research Proposal.

This letter serves to inform you that the Atouli Adventist Hospital Ethical/ADCOM committee has approved Rowena’s proposal on the 12th of August 2013, for her to collect data from the hospital.

Thank you.

Yours Sincerely,

[Signature]

[Date: 12th August 2013]

Rowena Harrington
[Secretary - ADCOM/ Ethical Committee]
Appendix D: Questionnaire

Community and Health Service Responses to Culturally Safe TB Ward at Atoifi Adventist Hospital.

AN INTERVIEW SCHEDULE

PARTICIPANT NUMBER:  

Thank you for being one of the interviewees in this study. You will not be required to give any consent for this as you already signed on the consent form. It will take only 30 minutes of your time and I will make sure that we do not go beyond this time.

Section 1: Background Characteristics. The researcher is also interested in personal details of the participants.

1. What is your gender?________________________
2. How old are you?________________________
3. Which village do you come from?________________________
4. What church do you belong to?________________________
4. What is your current occupation?________________________

Section 2: Interview Questions with probing
The researcher make sure have a pen, a recorder and have two lines provided for each questions to record participants' responses.

5.0 Tell me about the new TB ward at AAH
Piggin: U nap talem hao nae luklu tio custom TB ward?
      5.1.1 In your opinion, what are some of the things that are done, that should not be done?
      5.1.2. In your opinion, what are some of the things that are not done, that should be done?
      5.1.3. Would you come to this TB ward to get treatment or to be treated?
      5.1.4. What do you think about where the ward is located, how it is designed and about access for patients and visitors?
      5.1.5. What do you think about the need for providing food for TB patients?
      5.1.6. What do you think about patients having to stay for long time in the ward?
      5.1.7. Would you come to this new TB ward to get help or be treated?
      5.1.8. Would you be willing to work in this TB ward? What reasons why or why not?

5.1. In your opinion what appropriate goals you would like to see in this new TB ward?
Piggin: Wat hao u leek for lukim hem minu hape lea distafa new TB ward?
      5.1.1. In your opinion, how would the goals be appropriately achieved?
      5.1.2. What would be done to achieve these goals?

By the community -
By the Hospital -
7.0. How would you sustain this change in a most appropriate way?

Piggin: Hao nac bae u help lo lukaotim gud distafa ntu custom TB ward?

7.1. How would leadership and accountability for sustained change be appropriate?
7.2. Tell me, what leadership would you like to see?
7.3. How would you like to see responsibility of new TB ward is shared with all key stakeholders in an appropriate way?
7.3. Who would be involved and how do you see this happening?
7.4. Do you think community leaders should directly involve in leadership roles regarding this TB ward?
  * In what ways?
7.5. How would you want to see community appropriately leading out in this new change?

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8.0. What do you think about this TB treatment program?

8.1. In your opinion what are some ways that TB treatment has not been so good?
   a. Hospital
   b. Home
   c. Patient follow-up
   d. Enforcement of non-adherent Patients

8.2. In your opinion what are some ways that should be considered for effective TB Treatment Program and how?
   a. Hospital
   b. Home
   c. Patient follow-up
   d. Enforcement of non-adherent Patients

8.2. Who should be part of the TB Treatment Program Partners? why and how?

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9.0. What else need to be done in the new TB ward to ensure it is both culturally safe and able to attain best practice standards?
9.1. What about ways that patients are managed or visitors included or food accessed or toilets used?
9.2. What about communication and language?
9.3. Tell me, are female nurses can also work freely in this TB ward? why

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10.0. What else can we do to improve TB services at the hospital and prevent TB spreading our villages?

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Thank you very much for your time. I would like to remind you again that the information will not be exposed but will be treated confident.
Community and Health Service Responses to Culturally Safe TB Ward at Atofi Adventist Hospital, Solomon Islands.

Information about the Study

This research project on new TB ward is part of TB project conducted in 2011 at Atofi Adventist Hospital (AAH). The purpose of this research is to explore community’s perception about new TB ward and factors to guide the cultural management of TB ward, its control and treatment in East Kwania.

You are invited to take part in this study by answering some questions on what your opinions are about the newly built TB and how its services should be culturally manage. This will take about 20-30 minutes to do. This discussion will be recorded on an electronic recorder and written out on paper so it can be looked at.

This information will help Atofi Adventist Hospital to plan cultural health services about Tuberculosis. It will also improve access and acceptability of health services to the least minority group of people. It is assumed to increase the detection and treatment rate of tuberculosis especially on those who are mostly affected. You can stop taking part in the study at any time and we will respect your decision. Results will be reported back during a meeting with the communities at Atofi Adventist Hospital at the completion of the research projects. Results will also be included in reports for the community, hospital, Ministry of Health, and other health professionals. Taking part in the study is voluntary and your name will not be recorded or used in any of the reports.

If you are concerned about the survey or want any more information you can talk to the researcher at Atofi Adventist Hospital.
Appendix F: Consent Form

Consent Form

I am willing to participate in this research project. I have had explained to me about the interview. I understand what is involved and I understand that I can choose to stop at any time. I am happy to be a part of this study.

I, .....................................................(name) consent to being involved in this study.

..................................................(signature or thumb print)
# Appendix G: Schedule for Data Collection

<table>
<thead>
<tr>
<th>Date Range</th>
<th>Activity Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>10&lt;sup&gt;th&lt;/sup&gt; July - August 2013</td>
<td>Seeking Ethical Approval from the National Health Research &amp; Ethics Committee, Ministry of Health &amp; Medical Services to conduct research in Solomon Islands.</td>
</tr>
<tr>
<td>15&lt;sup&gt;th&lt;/sup&gt; July - 13&lt;sup&gt;th&lt;/sup&gt; August 2013</td>
<td>Awareness for data Collection in AAH and surrounding communities. Identifying participants</td>
</tr>
<tr>
<td>9&lt;sup&gt;th&lt;/sup&gt; August - 18&lt;sup&gt;th&lt;/sup&gt; August 2013</td>
<td>Carry out focus group and face-to-face interview with participants in AAH and Kwaio bush</td>
</tr>
<tr>
<td>19&lt;sup&gt;th&lt;/sup&gt; August 2013</td>
<td>Return to PAU, PNG</td>
</tr>
<tr>
<td>21&lt;sup&gt;st&lt;/sup&gt; August - September 2013</td>
<td>Data Analysis</td>
</tr>
</tbody>
</table>
Appendix H: Request for Study Extension Approval

18 December, 2013

Mrs. Rowena Asugeni
C/-Postgraduate Studies
Pacific Adventist University
Private Mail Bag
BOROKO
National Capital District

Dear Rowena,

SUBJECT: REQUEST FOR STUDY EXTENSION APPROVAL.

The Postgraduate Studies Committee has had a look at your request for study extension and I'm glad to inform you that your request has been approved until end of February, 2014.

If you think you need more time, you are eligible to apply for a further 3 months study extension but this time, you must reside off campus.

I wish you all the best in completing your thesis by the end of February 2014.

Yours sincerely,

[Signature]

Dr. Lalen Simeon
Director
Research and Postgraduate Studies