

**KWAME NKRUMAH UNIVERSITY OF SCIENCE AND
TECHNOLOGY**

SCHOOL OF MEDICAL SCIENCES

COLLEGE OF HEALTH SCIENCES

DEPARTMENT OF COMMUNITY HEALTH

**DESCRIPTION OF THE PRIMARY CAUSES OF STILLBIRTH AS
PERTAINS IN THE OFFINSO SOUTH MUNICIPALITY OF THE
ASHANTI REGION**

**BY
EDWARD DEBRAH**

MAY, 2010

**DESCRIPTION OF THE PRIMARY CAUSES OF STILLBIRTH AS
PERTAINS IN THE OFFINSO SOUTH MUNICIPALITY OF THE
ASHANTI REGION**

KNUST

**A DISSERTATION SUBMITTED TO THE BOARD OF POST
GRADUATE STUDIES, KWAME NKRUMAH UNIVERSITY OF
SCIENCE AND TECHNOLOGY IN PARTIAL FUFILMENT OF
THE REQUIREMENT FOR THE DEGREE OF MASTER OF
SCIENCE IN HEALTH EDUCATION AND PROMOTION**



BY

EDWARD DEBRAH

MAY, 2010

DECLARATION

I hereby declare that, except for reference to other people's work which has been duly acknowledged, this work is the result of my own original research and that this work has neither in whole or in part been submitted for degree elsewhere.

Edward Debrah

.....

Signature

.....

Date

Rev. Dr. E. N. L. Browne

.....

Signature

.....

Date

Dr. Easmon Otupiri

.....

Signature

.....

Date

ACKNOWLEDGEMENT

I give thanks to the Almighty God for seeing me through this course successfully. I again thank my wife and my whole family throughout the period of this course

I wish to thank Dr. E. N. L. Browne, my academic supervisor for his guidance and objective review of this work

I thank Mr. Fancis Osei, Offinso South Municipal Health Director and all members of the MHMT for their support and co-operation during the field work.

Finally, I am most grateful to Doctor Easmon Otupiri, Professor (Mrs.) E. A. Addy, Dr. A. K. Edusei, Mr. Emmanuel Nakua and Mr. Dennis for all their support and encouragement through this course.



DEDICATION

I dedicate this work to my wife Sarah and my son Albert.

KNUST



LIST OF ABEREVIATIONS

G H S	Ghana Health Service
SIDS	Sudden Infant Death Syndrome
W H O	World Health Organization
UNICEF	United Nations International Children's Education Fund
WIFA	Women in Fertility Age



TABLE OF CONTENT

COURSE	PAGE
TITLE PAGE	ii
DECLARATION...	iii
ACKNOWLEDGEMENT	iv
DEDICATION	v
LIST OF ABBREVIATIONS	vi
TABLE OF CONTENT	vii
LIST OF FIGURES	x
LIST OF TABLES	x
ABSTRACT	xi

CHAPTER ONE

1.0 INTRODUCTION

1.1 Background Information	1
1.2 Problem Statement	2
1.3 Rationale of the Study	3
1.4 Conceptual Framework	3
1.5 Main Objective	6
1.6 Specific Objectives	6
1.7 Profile of Study Area	6

CHAPTER TWO

2.0 LITERATURE PREVIEW

2.1 Health and Nutritional status of respondents	11
2.2 Antenatal Care	11
2.3 Mode of Skilled Delivery	12

2.4 Socio-cultural conditions and practices	...	...	...	...	...	...	...	13
2.5 Other related factors	...	...	...	...	...	...	...	13
2.6 Level of Health Education	...	...	...	...	...	...	...	13

CHAPTER THREE

3.0 METHODOLOGY

3.1. Study Methods and Design	...	...	...	...	...	...	...	15
3.2 Data Collection Techniques and Tools	...	...	...	...	...	...	...	15
3.2.1 Administration of questionnaire	...	...	...	...	...	...	...	15
3.2.2 Focus group discussions	...	...	...	...	...	...	...	15
3.3 Study Population	...	...	...	...	...	...	...	16
3.4 Study variables...	...	...	...	...	...	...	...	16
3.5 Sampling Techniques	...	...	...	...	...	...	...	17
3.6 Sample Size	...	...	...	...	...	...	...	17
3.7 Pre- Testing	...	...	...	...	...	...	...	18
3.8 Data processing and analysis	...	...	...	...	...	...	...	18
3.9 Data handling	...	...	...	...	...	...	...	18
3.10 Ethical consideration	...	...	...	...	...	...	...	19
3.11 Limitations of the study	...	...	...	...	...	...	...	19
3.12 Study assumptions	...	...	...	...	...	...	...	19

CHAPTER FOUR RESULTS

4.0								
4..1 Background Variables	...	.....	....	....	....	....	....	20
4.2 Health status of respondents			...	...	...	...	...	22
4.2.1 Nutritional status of respondents				...	...	...	...	23
4.3 Antenatal care attendance of respondents					...	...	...	26
4.4 Socio- cultural practices of respondents					...	...	...	27
4.4.1 Perception of herbs usage					....	....	....	27
4.4.2 Medical facilities / Places patronized by pregnant women							...	28
4.4.3 Medical facilities where deliveries take place				...	...	...	...	29
4.4.4 Distances to Medical Facilities/Places				...		...	...	30

4.5	Level of satisfaction on mode of skilled delivery	...	...	...	30
4.6	Knowledge of respondents on stillbirth	...	...	...	31
4.7	Knowledge on causes of stillbirth	...	...	...	32
4.8	Source of information on stillbirth	...	...	...	32
4.9	Pregnant women practicing health education knowledge on stillbirth	...	...	...	33
4.10	Knowledge sharing on stillbirth by respondents	...	...	...	33

CHAPTER FIVE

5.0	DISCUSSION								
5.1	BIOGRAPHICAL DATA								34
5.2	Nutritional status	...	...	...	...	...	...	...	34
5.3	Level of Antenatal Care	...	...	...	...	...	...	...	35
5.4	Skilled delivery, place and duration	...	...	...	...	...	...	...	36
5.5	Socio-cultural practices	...	...	...	...	...	...	...	37
5.6	Level of Health Education	...	...	...	...	...	...	...	38

CHAPTER SIX

6.0	CONCLUSION AND RECOMMENDATION								
6.1	Conclusions	...	...	...	...	...	...	...	40
6.2	Recommendations	...	...	...	...	...	...	...	41
	REFERENCES	...	...	...	...	...	...	...	44
	APPENDICES	...	...	...	...	...	...	...	47

LIST OF FIGURES

Figure 1.1 Problem analysis diagram	...	...	...	...	...	5
Figure 4.1 Distribution of Nutritional status in terms of complete meal and incomplete meal	...	...	...	...	...	25

LIST OF TABLES

Table 1.1 Project Population	...	...	...	...	...	7
Table 1.2 Sub District Population						7
Table 1.3 Health facilities and location	...	...	...	...	...	8
Table 1.4 Sector wide indicators	...	...	...	...	...	9
Table 1.5 Selected maternal health indicators...	...	...	...	...	...	10
Table 1.6 Table of variables	....	....	....	...	....	16
Table 4.1. Background Variables				...	...	20
Table 4.2. Health status and individual disease				...	...	22
Table 4.3. Nutritional status	...	...	...	...	...	23
Table 4.4. Antenatal care attendance			...	...	.....	26
Table 4.5. Cultural rites performed for pregnant women in the municipality...						...
	...	...	...	...	...	27
Table 4.6. Herbs usage		...	...	...	...	27
Table 4.7. Perception of herb usage		...	...	...	...	27
Table 4.8. Medical facilities patronized by respondents					...	28
Table 4.9. Medical facilities in the municipality				...	...	29
Table 4.10 Distance of facility from home			...	...	...	30
Table 4.11 Quality and Level of satisfaction on mode of skilled delivery					...	30
Table 4.12 Hours spent on delivery	...	...	...	...	...	31
Table 4.13. Knowledge on stillbirth		...	...	...	....	31
Table 4.14. Knowledge on causes of stillbirth		.....		.....		32
Table 4.15. Sources of information on stillbirth				...	...	32
Table 4.16. Knowledge on stillbirth prevention				...	...	33
Table 4.17 Knowledge sharing on stillbirth			...	...	...	33

ABSTRACT

One of the major goals of the Ministry of Health, Ghana, is to reduce to the barest minimum, maternal and infant mortality and in achieving this, more effort and research need to be conducted into the primary causes of maternal mortality and infant mortality.

This study was undertaken between July and October, 2008, to describe the primary causes of stillbirth and the level of health education in the Offinso South Municipality of the Ashanti Region.

A descriptive cross sectional study was carried out to determine the factors have contributed to the problem of stillbirth and the level of health education in the municipality. Primary data were collected using in-depth interviews, open-ended questionnaire administration and focus group discussions.

Since certain category of women were targeted for data collection, convenience sampling methods were used to select the respondents, health personnel and the participants for the focus group discussions. A total of two hundred (200) female adults and twenty four (24) health personnel were interviewed.

The outcome of the study indicates that the nutritional status of the pregnant women in the municipality which was assessed using the dietary method of nutritional assessment by recall methods was quite encouraging; since most of them were eating to some extent a well balanced diet.

The antenatal care attendance was ok since according to W.H.O, (2002) the minimum number of attendance should be six and above, depending on the condition of the pregnant woman; The results of the analysis showed that majority of the respondents representing 99 (49.50%) claimed they attended antenatal clinic four times

throughout the period of pregnancy which could be described as okay for safe delivery and survival of both the child and the mother.

Furthermore, the study established that a far larger percentage of 94% of respondents used local herbs to either prepare food or enema few weeks to delivery with the belief that it would help ensure safe and smooth delivery (which is very risky, looking at the effect some of these herbs could have on the fetus).

KNUST



CHAPTER ONE

1.0 INTRODUCTION

1.1 BACKGROUND INFORMATION

Stillbirth, according to Masay et al (1995) is the expulsion or extraction from its mother of a product of conception which does not at any time after birth breathe or show sign of or expulsion or extraction from its mother after at least twenty weeks of pregnancy.

Stillbirth has been on a steady increase globally. According to the World Health Organization, over 130 million babies are born every year. Out of this, 8 million results in stillbirth (WHO, 2006). A lot of children die much more frequently from the complications of pregnancy as well as other pregnancy related factors. Furthermore, incidence of stillbirth in Africa has witnessed an alarming increase over the last few years from 3 to 6% annually (Say et al, 2006).

In Guinea Bissau, out of 1572 deliveries that took place in March 2005, 8.2% resulted in stillbirth which is something that needed urgent attention (Sodemann et al, 2006).

In Ghana, the infant mortality rate is at 58 per 1000 live births while stillbirth rate 62 per 1000 live births (GHS, 2007). It is imperative that efforts be made to unravel the primary causes of stillbirth and find possible remedy to the nagging problem of stillbirth in the country.

Fortunately, the significance of this and the need to gain a greater understanding of its causes has been recognized internationally and a number of international studies are being carried out into it and health education programmes are being organized, all with the view to finding a lasting solution to the problem.

Health Education on the other hand is defined as the principle by which individuals and groups of people learn to behave in a manner conducive to the promotion, maintenance or restoration of health (Wikipedia free encyclopedia, 2008). It is a profession that is devoted to the facilitation of beneficial and willful changes in

peoples' behaviour leading to improvements in their health. Health education improves the health status of individuals, families, communities, states and nations. It further enhances the quality of life for all people and reduces premature death due to its preventive nature.

Health education plays an important role in ensuring improved health for the individual; An individual or group of people who have an in-depth knowledge on health issues tend not to suffer from certain obvious diseases or health complications due to care and proper maintenance of their bodies.

In the same vein, if pregnant women or mothers in general are given the needed education on what stillbirth is, its causes, effects and other positive practices that the pregnant women can do during pregnancy, especially during antenatal clinics, it is believed can go a long way to reduce the alarming rate of stillbirth (Pawlowsky, 2006).

1.2 STATEMENT OF THE PROBLEM

The death of a baby before or immediately after birth is a loss of a life time opportunity for the child and a tragedy for the family. However, figures quoted globally, (8 million stillbirths per year) indicate that stillbirth has received very little attention, even though some efforts seem to be made to address the problem (WHO, 2006). All these alarming figures have been brought about partly as a result of inadequate knowledge with respect to their health or low level of health education on what stillbirth is at all, its causes, effects and what pregnant women should do in order to prevent the frequent occurrence of this problem.

In New Zealand, the number of stillbirths is a growing cause of concern with over 400 stillbirths a year which is sometimes higher than the number of babies dying from Sudden Infant death Syndrome (Ngoc, 2007).

According to Chalumeau et al, (2002) at least four million stillbirths occur yearly, the vast majority in Africa.

In Ghana, the last five years have also recorded a steady increase in stillbirths. As at October 2006, the rate of stillbirth stood at 40 per 1000 births (Ghana Health

Statistics, 2006). According to Ghana Health Service, the incidence of stillbirth was 65 per 1000 births nationwide, (GHS, 2007). Records available in one of the largest hospitals in the Offinso municipality indicate that 925 stillbirths were recorded in 18 months (2007- June, 2008). (Statistics Department, St. Patrick's Hospital, 2008). The Municipal Health Administration states that stillbirth is really a problem that requires urgent attention and solutions.

1.3 RATIONALE OF THE STUDY

For the past five years, Ghana has recorded a steady increase in stillbirths. In the Offinso municipality, the records available at the Municipal Health Directorate indicated that out of every 200 deliveries that took place in the various health facilities in the municipality, not less than 10 resulted in stillbirth. These high values are way beyond the acceptable range in the WHO/UNICEF document (WHO/UNICEF, 2006), which is $^{10}/_{1000}$. This, thus, calls for a search to unravel the primary or the risk factors associated with the high rate of stillbirth in the whole municipality and the country at large.

The findings of this study with respect to the risk factors that are responsible for high stillbirth rate and the level of health education on stillbirth in the Offinso municipality would serve as a guide to design appropriate control measures and interventions to curtail the high incidence of stillbirth in the municipality. This would also help the Ministry of Health and other relevant bodies to formulate policy on maternal and infant health in the Region and the nation at large. Finally, recommendations based on the findings would serve as tools for further search in the subject matter, to ensure that acceptable and lasting solutions are found.

1.4 CONCEPTUAL FRAMEWORK ON THE DESCRIPTION OF THE PRIMARY CAUSES OF STILLBIRTH AND THE LEVEL OF HEALTH EDUCATION

According to literature, the possible risk factors or determinants of stillbirth include: Distant factors: Socio-economic factors such as Income level, employment status and other socio-cultural practices such as prohibition of the eating of certain kinds of food. The use of herbs during pregnancy and smoking have been identified to be

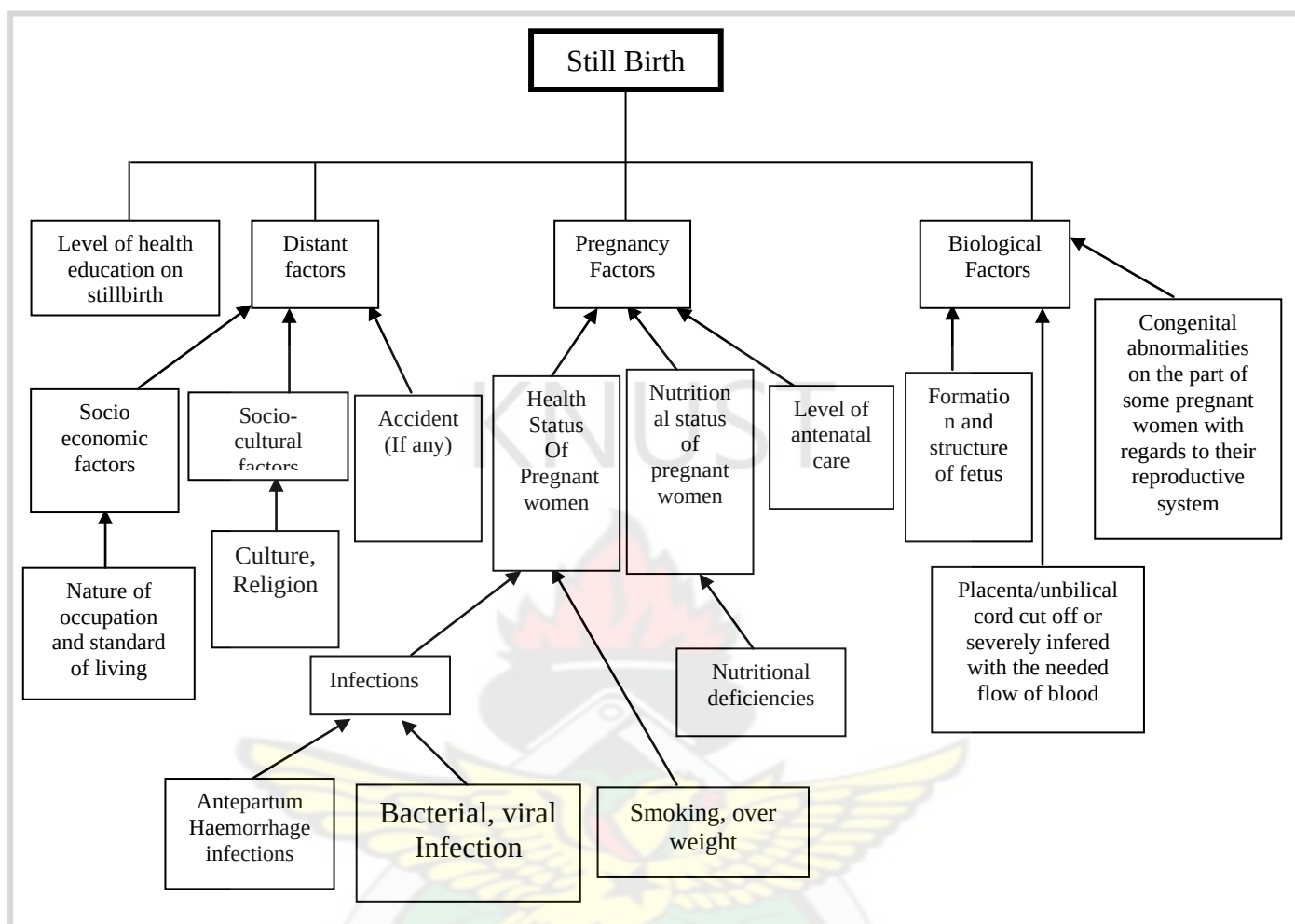
some of the determinants. Furthermore, the degree of religiosity and adherence to religious views has been identified to contribute to the occurrence of stillbirth.

Pregnancy related factors: The health and nutritional status of a pregnant woman; that is, when the woman is not healthy (enough and also looking) malnourished can affect the very survival of both the mother and the fetus. This is because for pregnant woman to have stillbirth free delivery, she must be very healthy and have all the needed nutrients required for the proper growth and development of the fetus. Likewise, the level of antenatal care is very important. Regular antenatal attendance helps to monitor the mother and the fetus. Relating to this is the issue of infections. Regular antenatal attendance helps to address the problem of infection by providing professional advice and guidelines.

Biological factors: The formation and structure of fetus can be said to be a contributory determinant. This normally occurs when the umbilical cord is sometimes severely infarcted with the needed flow of blood. Also congenital abnormalities on the part of the pregnant woman with regards to her reproductive system can lead to the death of the fetus.

Finally excessive smoking and over weight could also be determinants of stillbirth.

Figure 1.1 CONCEPTUAL FRAMEWORK



1.5 MAIN OBJECTIVE

The main objective of the research was to describe factors that may be associated to the primary causes of stillbirths and the level of health Education as pertains in the Offinso South Municipality Of the Ashanti Region.

1.6 SPECIFIC OBJECTIVES

1. To assess the health and nutritional status of the pregnant women in the municipality.
2. To determine the level of attendance to antenatal care in the municipality.
3. To describe the socio-cultural practices associated with stillbirths in the municipality.
4. To determine the prevalence of skilled attendants and the duration of delivery in the Municipality.
5. To describe the level of Health Education on stillbirth in the Municipality.
6. To make recommendations to the appropriate quarters for follow up action.

1.7 PROFILE OF THE STUDY

AREA (OFFINSO MUNICIPALITY)

Offinso is one of the few municipalities in the Ashanti Region. It lies between longitude 1.6° W and between latitudes 6.45° N and 7.25oS. It shares boundry with seven (7) other Districts; Tano South, Techiman, Nkroransa (all in Brong Ahafo region), and Afigya Sekyere, Atwima Nwabiagya, Ahafo Ano South Ejura Sekyeredumasi in Ashanti region. The towns that make up the Offinso Municipality include Offinso, Anyinasuso, Abofour, Bonsua, Kyebi and Nkenkansu.

POPULATION DISTRIBUTION

TABLE 1.1 Project Populations - 169,842

Growth Rate - 3.4%

Target Group	Percentage (%)	Population
0 – 11 months	4	6780
0 – 23 months	7.9	13390
0 – 5 years	16.5	27964
24 – 59 months	8.66	14575
WIFA	23.2	39320
EXPECTED PREG./DEL.	4.0	6780
SCHOOL HEALTH	36.4	61691

Source: Offinso South Municipal Health Directorate, 2007

TABLE 1.2 SUB-DISTRICT POPULATION

Name of sub-district	No. of Communities	Population
Offinso Central	70	53,236
Bonsua	16	11,255
Abofour	30	27,925
Nkenkasu	24	30,436
Akomadan/Afrancho	21	32,497

Source: Offinso South Municipal Health Directorate, 2007

The distribution of the growth rate in the Offinso municipality shows that the growth rate has been on the study increase since the last five (5) years. This is because the growth rate with its corresponding population as at June, 2004 stood at 3.12% with a population of 148,951 (Offinso MHMT, 2004).

The distribution further shows that school health has seen a remarkable improvement, registering a growth rate of 34.4% with a population of 61,691 followed by women in fertility age(WIFA) which has growth rate of 23.2% with a

population of 39,320. This is also followed by those from birth to 5 years, then 0 to 59 months in that order. The category that experienced a gradual growth rate is the children from birth to the 11th month. This category of children has a growth rate of 4% with a population of 6,780 which is closed to that of expected pregnancy and delivery, with a growth rate of 4.0% and a population of 6,780.

The sub-district population table shows that, it is Offinso Central that has the highest number of communities (70) with a population of 53,236, followed by Abofour, Nkenkasu and finally Bonsua.

HEALTH FACILITIES

TABLE 1.3 HEALTH FACILITIES AND LOCATION

NAME	LOCATION	SUB-DISTRICT
1. St. Patrick's Hospital (Mission)	Maase-Offinso	Offinso Central
2. District Assembly Maternity Clinic (GoG)	Offinso	“
3. Anyinasuso SDA Clinic (Mission)	Anyinasuao	“
4. Bosua MCH/FP Centre (GoG)	Bonsua	Bonsua
5. Abofour H/Centre (GoG)	Abofour	Abofour
6. Nyamebekyere Clinic (Mission)	Nyamebekyere	“
7. Kyebi Clinic (Private)	Kyebi	“
8. Nkenkaasu Hospital (GoG)	Nkenkaasu	Nkenkaasu

Source: Offinso South Municipal Health Directorate, 2007

The Offinso Municipality has a number of health facilities numbering 8, as can be seen in the table above. Prominent among them is the St. Patrick's Hospital, which serves as an immediate referral hospital for the whole municipality. Another major hospital which has been very instrumental in providing quality health care for the people and beyond is the Nkenkasu Government Hospital, located in Nkenkasu. The

rest like the District Assembly maternity Clinic, Abofour health centre and Anyinasuso SDA Clinic are also providing some basic health needs of the people. It must be noted that the mission hospital and clinics comparatively have modern facilities within their premises.

SECTOR WIDE INDICATORS OFFINSO DISTRICT (2004 – 2006)

Table 1.4

	INDICATOR	2004 Actual	2005 Actual	2006 Target	2006 Actual
ACCESS	No. of functional CHPS Zones	0	0	0	0
	Child Survival				
	EPI coverage Penta 1	92.6	91.5	90%	88.1%
	EPI coverage Penta 3	72.1	81.7	90%	83.9%
	OPV 3	70.6	79.8	90%	83.1%
	EPI coverage Measles	62.5	71.2	90%	73.2%
	Total number of under five Malaria cases – Outpatients.	827	7937		10653
	Total number of Under five malaria cases – Admissions	695	1448		896
	Exemptions Granted (No. of Patients by category)				
	Children Under 5 yrs.	5592	5791	92%	80.5%
	Ante-natal	4920	5502	80%	72%
	Deliveries	6820	7034	90%	75%
	Elderly (>70yrs.)	6728	7145	90%	85.5%

Source: Offinso South Municipal Health Directorate, 2007

**SELECTED MATERNAL HEALTH INDICATORS:
2004- 2006 OFFINSO DISTRICT**

Table 1.5

INDICATOR	2004		2005		2006	
	TARGET	COV. %	TARGET	COV. %	TARGET	COV. %
ANC REG.	4% Total pop 6341	105 6657	4% Total pop 6556	94 6142	4% Total pop 6780	93 6279
SUP. DEL.	“	92 5822	“	84 5539	“	81 5475
PNC REG.	“	55 3477	“	48 3112	“	54 3547
FP ACCEPTORS NEW+ CONT.	24% Total pop WIFA 38045	7.6 2892	24% Total pop 39338	15.8 6227	24% Total pop 40676	17.9 7267
STILLBIRTH	Total Del 5822	2.2 127	Total Del. 5539	2.3 129	Total Del. 5475	2.1 117
MATERNAL MORTALITY	Live Birth 5695	1.4 8	Live Birth 5410	0.2 1	Live Birth 5358	2.1 11

Source: Offinso South Municipal Health Directorate, 2007

NB

The Supervised deliveries include data collected from Trained Traditional Birth Attendants (TBAs)

CHAPTER TWO

2.0 LITERATURE REVIEW

Stillbirth is a health problem which has now attracted a global concern in both developed and developing countries including Ghana. This chapter seeks to review literature on stillbirth to enrich the study in the Offinso Municipality. The review will be done under five headings namely: health and nutritional status, antenatal care, socio-economic / cultural , skilled delivery and level of health education

2.1 HEALTH AND NUTRITIONAL STATUS

The health of a pregnant woman is very vital in ensuring safe and stillbirth free delivery. As the pregnant woman goes about her normal daily activities, it is important that her health is regularly checked especially against certain pregnancy related diseases such as hypertension, fever, jaundice and malaria among others. According to Mackey, (2006), frequent incidence of malaria and hypertension during pregnancy tend to affect the health of the mother, thereby making her unable to go through the normal stages of pregnancy.

The nutritional status of the pregnant woman should also be taken seriously since lack of certain nutrients in the pregnant woman's body can affect not only her health but the health of the fetus as well. The fetus' growth and development can be hampered if it is not provided with the needed nutrients and in right quantities too. This can further lead to stillbirth. Nutritional deficiencies such as zinc and vitamin A deficiencies during pregnancy can expose pregnant mothers to stillbirth. Lack of nutrients during pregnancy can lead to labour and delivery complications which has the tendency of resulting in stillbirth. (Christian, 2003)

2.2 ANTENATAL CARE

Antenatal care is the health care and education given during pregnancy. Antenatal services are important part of preventive health care especially in the prevention of stillbirth and other complications during delivery. It is important because it promotes and maintains the physical and social health of the mother and the baby by providing education on nutrition, rest, sleep and personal hygiene. Antenatal

services help in detecting and treating higher risk conditions arising during pregnancy whether medical, surgical or obstetric.

However, lack of this important service has been identified as one of the major factors that contribute to stillbirth. A study conducted by the U.S National Institute of Health (2006) has revealed that better access to antenatal and obstetric care especially during labour should reduce the rate of stillbirth in developed and developing countries.

On the part of Di Mario et al (2006), antenatal care should be properly utilized or taken advantage of. Moreso, screening of diseases, conducting various tests and providing essential drugs for the pregnant women can go a long way to reduce the incidence of stillbirth.

Furthermore, infections during pregnancy and labour can also lead to stillbirth. There are a lot of bacteria and viral infections that can affect pregnant women. According to Li Z. et al, (2007), antepartum haemorrhage and infections can also lead to stillbirth.

2.3 MODE OF SKILLED DELIVERY

Pregnancy and its outcome represent a big change in the life of a pregnant woman and all other family members. How she and the family realize this change in a positive way determines the pregnant woman's chances of delivering safely, with herself and the baby surviving; for the pregnant woman to deliver safely depends much on the mode of skilled delivery. Stillbirth can easily occur when the pregnant woman in labour is not assisted by a competent health official with the requisite knowledge on delivery. A pregnant woman stands a greater risk of losing her baby if she is not properly helped by a competent midwife to deliver and early too. In the same vein, if the facility in which she is delivering is not well equipped with the necessary equipment so that should there be any emergency, the pregnant woman can easily be helped, then it can affect the chances of survival of the baby. Bryce et al, (2005).

2.4 SOCIO-CULTURAL CONDITIONS AND PRACTICES

It has been observed that due to poor socio-economic conditions under which some of these pregnant women find themselves, the kind of energy needed by both mother and the fetus to grow is affected. This point is buttressed by a study undertaken by a U.S National Institute of health (2006) which established that socio-economic disadvantage can be a major contributor to stillbirth. Another study

relating to this is by Dimorio et al (2006), who also concluded that poor living conditions could contribute to stillbirth .

Other factors such as socio-cultural practices increase the risk of stillbirth .

Many cultural groups in Africa in particular view pregnancy and child bearing as a major life event and facet of health, that is related to all aspects of a woman's life and so consider pregnancy not to be illness but a time of heightened susceptibility to dangerous elements. So pregnant women try to protect their fetus and themselves by various means ranging from anointing their abdomen with herbal oils, drinking of herbal preparations and giving themselves enema using local herbs

Certain cultural prohibitions such as not visiting a hospital or clinic during pregnancy, not taking certain medicines and not eating certain kinds of foods can affect fetal growth and development which can further lead to stillbirth.(Chichester, 2005).

2.5 OTHER RELATED FACTORS

According to Lanbe et al, (2006), other factors such as smoking during pregnancy, overage (average 40 years) can affect the proper formation of the fetus.

2.6 LEVEL OF HEALTH EDUCATION ON STILBIRTH

Health education which is basically aimed at helping people to improve upon their health has been identified as one area where very little is being done to ensure the proper health of mothers especially pregnant women. According to Gromadecka S,(2001) antenatal clinics are supposed to be the platform for this kind of exercise where health professionals can organize health education programmes to educate mothers and pregnant women in particular on the nature of stillbirth, causes, effects

and preventive measures. Organizing workshops, seminars and open fora for women in particular on the benefits of knowing more about stillbirth, can in the long run help to reduce its occurrence drastically. (Selmon, 2007).

From the references made so far, despite clear knowledge regarding stillbirth, there is much that is unknown and the area has been relatively understudied .More efforts need to be put in by way of further research into this health problem so that its alarming rate can drastically be reduced . There is the need for more proactive methods and designs to be able to unravel the mystery behind this unfortunate trend of affairs as far as stillbirth is concerned, so that, together, the world can witness relatively low incidence of stillbirth.



CHAPTER THREE

3.0 RESEARCH METHODOLOGY

3.1 STUDY METHODS AND DESIGN

The prevalence rate of stillbirth in the Offinso municipality over the years has been on the ascendancy. In order to access the primary causes of stillbirth, and the level of health education on it, a descriptive cross sectional study was carried out between July and October(2008) to describe the factors that are associated with stillbirth and the level of health education respectively in the municipality.

3.2 DATA COLLECTION TECHNIQUES AND TOOLS

The data collection techniques that were used included face-to-face interviews, focus group discussions and in-depth interviews. The data collection tools used included interview guides, questionnaires, tape recorders, note pads and pens, notebooks, checklist etc.

3.2.1 Questionnaire Administration

A structured questionnaire was designed for the women who met the criteria for the interview on their health and nutritional status, antenatal attendance, socio – cultural practices, knowledge on health education. An unstructured one was designed for in-depth interviews with key informants in the various health facilities in the municipality on their views on the causes of stillbirth in their facilities.

3.2.2 Focus group discussion

As part of data collection, eight (8) focus group discussions were held in some of the communities and each group involved between seven and twelve women with similar socio-economic status who have had at least one free delivery or pregnancy prior to the study, the subject matter was introduced to them after which their views were solicited to assist in the research. Contributions and suggestions were recorded using a tape recorder. They were guided by a moderator.

3.3 STUDY POPULATION

The study population included all pregnant women who have had a stillbirth before and those pregnant women who have had at least one free delivery. Health staff were also included in the study population.

3.4 STUDY VARIABLES

The study variables included the level of health education on stillbirth of the mothers in the municipality, health status of the pregnant woman, her nutritional status, her response to antenatal care attendance and instructions and socio-cultural practices. Another was the mode of skilled delivery at the health facilities.

Table 1.6 Table of variables on stillbirth

Study Variables	Operational Definition	Scale of Measurement	Specific Objective
1. Health status of women	This is the condition of the pregnant woman without illness and any pregnancy related diseases	The health status was measured using the routine clinical examination to determine the presence of any ill health and pregnancy related diseases.	ONE(1)
Nutritional status	This is the state of the pregnant woman living on food necessary for health and growth (balanced diet) both for the mother and the foetus	The nutritional status was measured using the recall method by assessing and comparing the meals/diet with recommended standard by WHO	ONE(1)
Level of antenatal care	This is the number of times the pregnant woman should attend antenatal care during her pregnancy as well the quality of ANC care.	The level of antenatal care was measured by counting the number of times pregnant woman attended ANC during pregnancy using the ANC Card against the recommended at least six(6 times by GHS	TWO(2)
Socio-cultural practices	This is social and cultural norms that either prohibit or make pregnant woman to eat certain meals, attend ANC etc. or undergo certain rites that can affect the pregnancy outcome.	The socio-cultural practices were measured by asking pregnant woman for social and cultural norms that are practiced which can negatively affect pregnancy outcome	THREE (3)

Mode of skilled Delivery	This is the manner by which the pregnant woman is assisted to deliver her baby by a trained and competent health professional	The mode of skilled delivery is measured by determining the satisfaction obtained by pregnant woman from health professionals during delivery	FOUR (4)
Level of Health Education	This is the basic knowledge on pregnancy dos and don'ts which all expectant mothers should know concerning the pregnancy outcome	The level of health education was measured by assessing the level of knowledge of pregnant woman on pregnancy outcome such as still birth	FIVE (5)

3.5 SAMPLING TECHNIQUES

Two types of sampling techniques were used. A convenience sampling which is a non-probability sampling technique was used to select women who may have had at least one stillbirth free delivery or pregnancy before at antenatal clinics. Women who were present at the time of study were selected for the interviews.

A purposive sampling was used for health staff who were present during antenatal clinics. Simple random sampling was used to select women at market and other places of gathering where there were other categories of women other than those who met the criteria for the interviews.

With focus group discussions a convenience sampling was used to select women who may have had at least one stillbirth free delivery or pregnancy before.

3.6 SAMPLE SIZE

A total of 200 female adults who met the criteria for the interview (those who may have had pregnancy or stillbirth free) were interviewed. The sample size was calculated using the prevalence of stillbirth of 15% and allowing for an error of 5% at 5% confidence interval.

$$N = \frac{z^2 pq}{d^2}$$

where;

$z = 1.96$ (95% C I)

$P = 15\%$

$q = 1-P$

$q = 0.85$

$d =$ error allowed 5% or (0.05)

$$N = \frac{(1.96)^2 \times (0.15) \times (0.85)}{(0.05)^2} = 195.92$$

To get a round figure for the research, 200 was decided on even though the answer was not up to the exact figure

The sample size of the health staff which is twenty four (24) was arrived at based on the number of health facilities in the municipality and the number of health staff who had in-depth knowledge on stillbirth prior to the study. For focus group discussions, eight (8) groups of between seven (7) and eight (8) women was decided on based on the sample size of the women interviewed and the effect focus group discussions could have on the study. (Corlien , 2003).

3.7 PRE - TESTING

The data collection techniques and tools were pre-tested in Afigya Kwabre District, in a town called Kodie which has similar characteristics to the study area in order to validate them and identify potential problems and make necessary adjustment .

3.8 DATA PROCESSING AND ANALYSIS

Information gathered from the questionnaire was coded and analyzed using a statistical package software stata version 9.0 Access. The results have been presented by means of tables and graphs.

3.9 DATA HANDLING

The data collected was stored in plastic bags to ensure safety and later kept under lock and key. Data collected were entered electronically for subsequent analysis.

Other available materials such as maps, note books, cassettes which were used for recording information were also kept under lock and key.

3.10 ETHICAL CONSIDERATIONS

Ethical clearance was sought from the Ashanti Regional Directorate of health services, Offinso Municipal Directorate of health services, chiefs and opinion leaders in the municipality. The objectives of the study were explained to the respondents, and consent obtained from them before soliciting information. Responses from respondents were kept confidential and used only for the research purposes.

3.11 LIMITATIONS OF THE STUDY

The study or the research did not cover all the possible causes of stillbirth. It was limited to five out of the lot namely; the health and nutritional status of the pregnant women, the rate of antenatal attendance, certain socio-cultural practices and mode of skilled delivery among the rest; some of which are infections, the age of the pregnant woman, smoking during pregnancy and biological factors.

3.12 STUDY ASSUMPTIONS

The basic assumptions in this study were that some pregnant women had some basic knowledge about stillbirth. It was also assumed that all pregnant women would voluntarily provide all information required to help address the problem to some extent.

CHAPTER FOUR

4.0 RESULTS

This part covers personal demographic information on age distribution, language, occupational and educational status.

4.1 Background variables

Table 4.1

Age Group	Frequency	Percent
< 25	8	4.00
25 – 34	115	57.50
35 – 44	72	36.00
> 44	5	2.50
Language Distribution		
Language	Frequency	Percent
English	1	0.50
Asante(Twi)	184	92.00
Others	1	0.50
Missing	14	7.00
Educational Distribution		
Education	Frequency	Percent
No Schooling	48	24.00
Primary	39	19.50
Middle School	30	15.00
Junior High Sch.	61	30.50
Senior High Sch.	14	7.50
Commercial	2	1.00
Tech/Voc.	3	1.00
Post Sec.	2	1.00
Others	1	0.50
Occupational Distribution		
Occupation	Frequency	Percentage

Farming	40	20.00
Teaching	3	1.50
Artisan	52	26.00
Trading	97	48.50
Clerical	2	1.00
Unemployed	3	1.50
Others	2	1.00
Missing	1	0.50

Source: Field Survey, 2008

The modal age group (57.5%) was the 25-34 years old group. Only (2.5%) were more than 44 years old. Most (92%) of the respondents were interviewed in Asante Twi while (0.5%) were interviewed in English. Nearly one-in-four (24%) had no formal education while only (3%) had commercial or post secondary education. Most of the study participants were either traders (48.5%), artisans, (26%) or farmers (20%).



4.2 HEALTH AND NUTRITIONAL STATUS OF PREGNANT WOMEN

Table 4.2 Health Status of Pregnant Women

Disease Suffered	Frequency	Percentage
Yes	68	34.00
No	95	47.50
Unsure	37	18.50
Total	200	100.00

Individual diseases and conditions

Malaria				Jaundice			
Malaria	Freq.	Percent	Cum.	Jaundice	Freq.	Percent	Cum.
Yes	44	22.00	22.00	Yes	1	0.50	0.50
No	66	33.00	55.00	No	107	53.50	54.00
Unsure	90	45.00	100.00	Unsure	92	46.00	100.00
Total	200	100.00		Total	200	100.00	
Hypertension				Fever			
Hypertension	Freq.	Percent	Cum.	Fever	Freq.	Percent	Cum.
Yes	1	0.50	0.50	Yes	38	19.00	19.00
No	107	53.50	54.00	No	70	35.00	54.00
Unsure	92	46.00	100.00	Unsure	92	46.00	100.00
Total	200	100.00		Total	200	100.00	
Dizziness Distribution				Other Diseases			
	Freq.	Percent	Cum.		Freq.	Percent	Cum.
Yes	25	12.50	12.50	Yes	1	0.50	0.50
No	83	41.50	54.00	No	147	73.50	74.00
Unsure	92	46.00	100.00	Unsure	52	26.00	100.00

Source: Field Survey, 2008

Nearly half (47.5%) of the pregnant women did not report falling sick during pregnancy, however 18% were not sure whether they had fallen sick or not.

Looking at the breakdown, (33%) of respondents did not suffer from malaria during pregnancy while (22%) did. (45%) could not recollect. With Jaundice, (53.5%) they do not get it while (0.5%) said they do. (46%) could not recollect properly.

For Hypertension, (53.5%) did not experience it during pregnancy while (0.5%) said they do. (46%) could not recollect properly, when it comes to fevers (35%) claimed they did experience during pregnancy while (19%) did not. (46%) said they were not sure. As to whether the respondents experience dizziness during pregnancy. (41.5%) answered in the affirmative while (72.50%) answered otherwise. On the issue of other diseases (73.55) said they do not get while (0.50%) said they do. The findings indicate that most of the respondents do not normally fall sick during pregnancy.

4.2.1 Nutritional Status

Table 4.3. Carbohydrate rich foods consumed by the pregnant women

Carbohydrate	Frequency	Percentage
Yes	138	69.00
No	62	31.50
Total	200	100.00
Protein rich foods consumed by the pregnant women		
Protein	Frequency	Percentage
Yes	110	55.50
No	90	45.50
Total	200	100.00
Fruits consumed by the pregnant women		
Fruits	Frequency	Percentage
Yes	109	54.50
No	91	45.50
Total	200	100.00
Green Leafy Vegetables consumed by the pregnant women		
Leafy Veg.	Freg.	Percent
Yes	132	66.00
No	68	34.00
Foods rich in Iron consumed by the pregnant women		

Iron	Frequency	Percentage
Yes	198	99.00
No	2	1.00

Source: Field survey, 2008

Table 4.3. indicates the nutritional status of the respondents interviewed. According to the UNICEF document (February, 1990) on causes of malnutrition, nutritional status of an individual can be measured using any of the following methods of nutritional assessment. These are Clinical methods which involves the observation of certain signs and symptoms on the person.

The second method is the biochemical which involves primarily laboratory tests of blood and urine samples to determine levels of specific nutrients. Anthropometric method is the third one and it also involves the measurement of characteristics of human body size, both the physical dimensions and the gross composition.

The next method of nutritional assessment is the Biophysical. This involves radiographic examination and tests of physical function.

The final method is the dietary method. This method examines the food intake either by direct observation or recall methods. The final methods of nutritional assessment is the one that was used to assess the nutritional status of respondents for this research due to the cost involved and the limited time used to collect data from the field.

More than half of the pregnant women (69%) confirmed they were eating carbohydrate rich foods. For fruits, more than half of the respondents often ate them while almost all the respondents (99%) ate foods rich in Iron.

Figure 4.1 presents the percentage of respondents who often eat all the major food nutrients at a goal; that is, a well balanced meal. According to Delecek et al, (1997), a complete diet or a well balanced diet is a diet that has all the major nutrients required in their right quantities for proper growth and development of a person. So, from the figure, complete represents those who eat complete or well balanced diet while incomplete represents those who do not eat a complete or well balanced diet. From the figure, (29%) eat a complete or well balanced diet often while (71%) represents those who do not often eat well balanced diet:

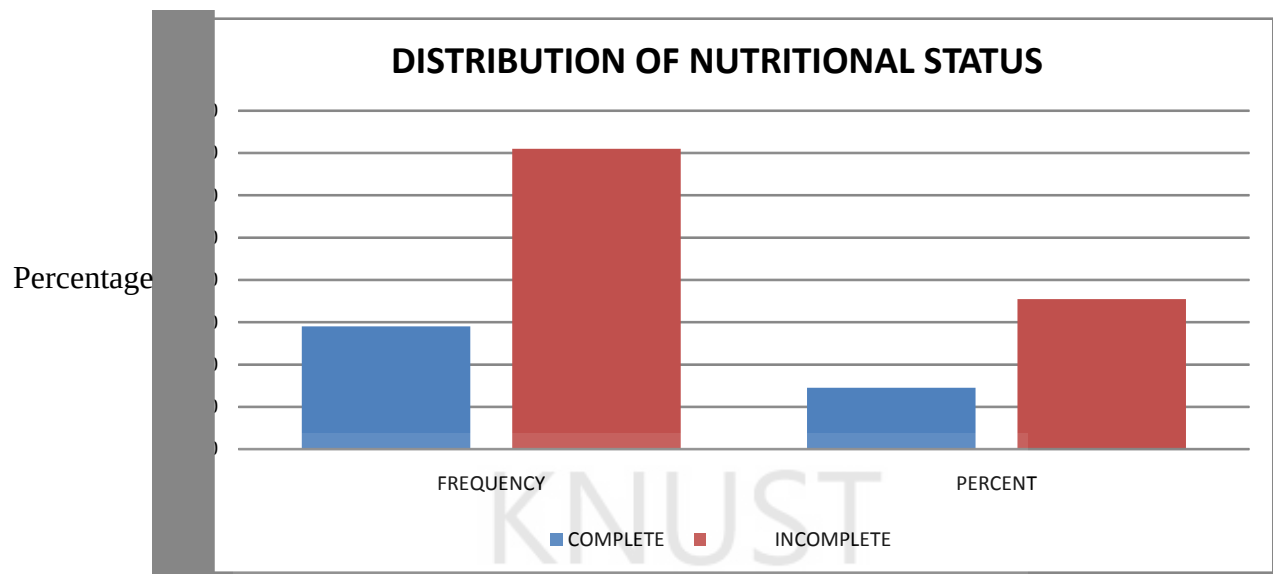
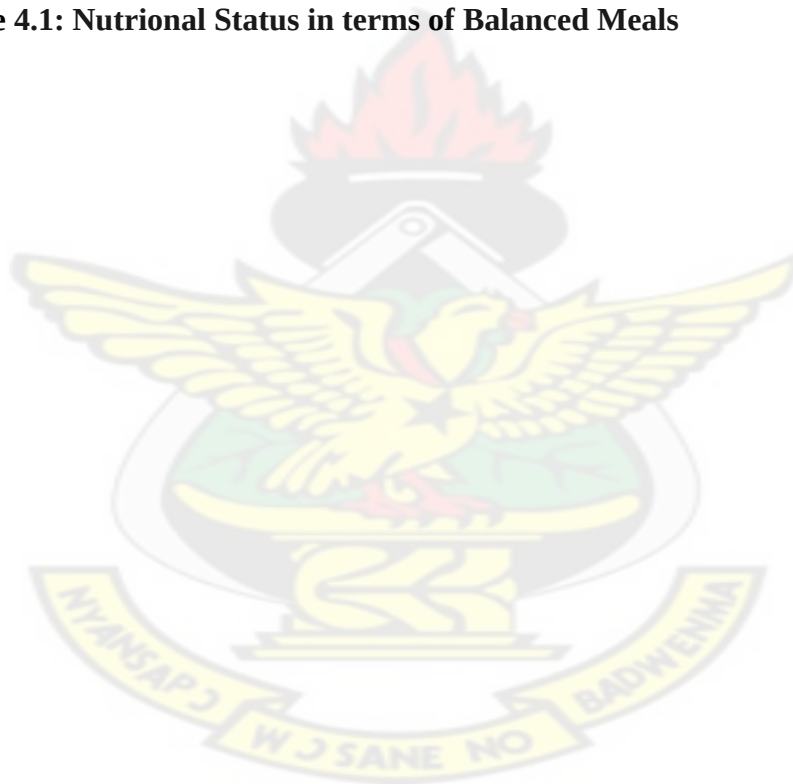


Figure 4.1: Nutritional Status in terms of Balanced Meals



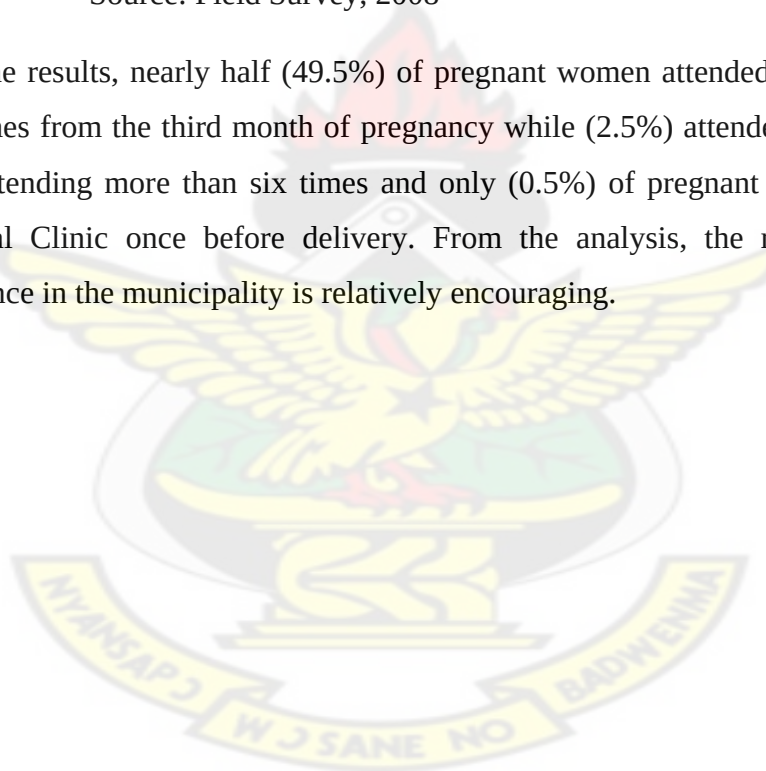
4.3 ANTENATAL CARE ATTENDANCE

Table.4.4 Antenatal care attendance from the third month of pregnancy

No of times	Frequency	Percentage
1	1	0.50
2	7	3.50
3	25	12.50
4	99	49.50
5	66	30.50
6	5	2.50
More than 6	2	1.00
Total	200	100.00

Source: Field Survey, 2008

From the results, nearly half (49.5%) of pregnant women attended antenatal Clinic four times from the third month of pregnancy while (2.5%) attended six times with (1%) attending more than six times and only (0.5%) of pregnant women attended antenatal Clinic once before delivery. From the analysis, the rate of antenatal attendance in the municipality is relatively encouraging.



4.4 SOCIO-CULTURAL PRACTICES

Table 4.5. Cultural rites performed for pregnant women in the municipality.

Cultural rites	Frequency	Percentage
Yes	155	77.50
No	45	22.50

More than half (77.5%) of the pregnant women claimed certain rites were performed for them during pregnancy while (22.5%) claimed nothing of that sort was performed for them.

Table 4.6. The use of herbs and other socio-cultural practices

Herbs usage	Frequency	Percent
Yes	188	94.00
No	8	4.00
Unsure	4	2.00

Almost all the respondents interviewed (94%) claimed they were using herbs in one way or the other, even few weeks to delivery while (4%) claimed they were not.

4.4.1 PERCEPTION OF HERBS USAGE

TABLE 4.7. Herbs strengthen the fetus

Fetus	Frequency	Percent
Yes	100.00	50.00
No	79	39.50
Unsure	21	10.00
Herbs strengthens the mother		
Mother	Frequency	Percent
Yes	78	39.00
No	101	50.50
A practice	21	10.50

Herbs helps in prevention from evil attacks

Prevention	Frequency	Percent
Yes	157	78.50
No	22	11.00
A practice	21	10.50
Mode of application of herbs		
Mode of Appl.	Frequency	Percent
Enema	101	50.50
Through the mouth	57	28.58
Others	42	21.00
Total	200	100.00

Source: Field Survey, 2008

Half (50%) of the pregnant women believed that the use of herbs strengthens the fetus, another (50%) of the respondents believed herbs strengthen the mother especially during delivery while more than half (78.5%) claimed it prevents the fetus from evil attacks.

On the mode of application of herbs, more than half (50.5%) used it for enema while (22.5%) used it to prepare food or take it as a drink. From the above analysis it can be said that the use of herbs by the pregnant women during pregnancy is very alarming looking at the percentage which is (94%).

4.4.2 MEDICAL FACILITIES/ PLACES PATRONISED BY THE PREGNANT WOMEN

Table 4.8 Medical facilities/places patronized by the pregnant women

Medical Facility	Frequency	Percent
Self Medication	34	17.00
Hospital	129	64.50
Clinic	30	15.00
Herbalist	1	0.50
Pray for me	6	3.0

Source: Field Survey, 2007

More than half (64.5%) of the respondents patronized hospitals, that is St. Patrick's Hospital, Maase-Offinso; followed by (17%) of respondents who self medicated while (3%) and (0.5%) of the women interviewed patronised pray for me and herbalist respectively.

It is clear that majority of the women who become pregnant visit hospitals when they are not well, others self medicate which has the potential of contributing to stillbirth.

4.4.3 MEDICAL FACILITIES WHERE DELIVERIES TAKE PLACE

Table 4.9 Medical facilities where deliveries take place

Medical Facility	Frequency	Percent
St. Patricks Hospital	87	43.50
District Assem. Maternity	13	6.50
Anyinasuso SDA	2	1.00
Abofour Health Cent.	1	10.00
Kyebi Clinic	6	3.00
Nkenkansu Hospital	36	18.00
T B A	3	1.50
Home	18	9.00
Others	12	6.00
Missing	3	1.50

Source: Field Survey, 2008

Offinso municipality has six health facilities and among the six where most of the pregnant women used to go and deliver is the St. Patrick's hospital. Almost half of the study participants (43%) delivered at St. Patrick's Hospital, (18%) had been going to Nkenkansu Government Hospital for delivery while (9%) and (1.5%) delivered at home and by Traditional Birth Attendants respectively.

4.4.4 DISTANCE TO HEALTH FACILITY

Table 4.10 Distance to health facility

Distance	Frequency	Percent
Less than 5km	163	81.50
5km	3	1.50
<10km	24	12.00
10km	2	1.00
>10km	5	2.50
Unsure	3	1.50

Source: Field Survey, 2008

About 3/4 (81.5%) of the Study participants had their houses less than 5km away from the health facilities, (12%) had their houses more than 5km from the health facilities while (1.5) were not sure of the distance. From the above analysis, it can be seen that most of the health facilities in the municipality are within the reach of the women.

4.5 SKILLED DELIVERY

Table 4.11 Quality and Level of satisfaction on skilled delivery

Level of Satisfaction	Frequency	Percent
Yes	181	90.5
No	11	5.50
Unsure	8	4.00

With respect to the quality and level of satisfaction on skilled delivery almost all the respondents (90.5%) were highly impressed about the quality of skilled delivery in the Municipality while (5.5%) were not.

Table 4.12 Hours spent on delivery

Hours	Frequency	Percent
<30mins	16	8.00
30mins	10	5.00
>30mins	58	29.00
<1hour	78	39.00
1hour	7	3.50
2hours	3	1.50
More than 2hours	23	11.50
Unsure	5	2.50

Source: Field Survey, 2008

Even though there may be complications during delivery (39%) of the study participants usually delivered within the first one hour. (8%) delivered in less than 30 minutes while (11.5%) usually spent more than 2 hours in delivery. So with this, one can say that relatively, the number of minutes/hours spent in delivering is quite encouraging.

4.6 KNOWLEDGE OF STILLBIRTH

Table 4.13 What stillbirth is

Stillbirth	Frequency	Percent
Yes	161	80.50
No	24	12.00
Unsure	15	7.50

More than two-thirds ($\frac{2}{3}$) of the study participants knew what stillbirth is, (12%) did not know what it is while (7.5) were not sure whether they knew what it is or not.

4.7. KNOWLEDGE ON THE CAUSES OF STILLBIRTH

Table 4.14 Knowledge on the cause of stillbirth

Causes	Frequency	Percent
Yes	101	50.50
No	67	33.50
Unsure	32	16.00

The results of a follow up question as to what some of the causes of stillbirth are shown in the table 4.14. More than half (50.5%) of the respondents knew some of the causes of stillbirth with (33.5%) claiming they did not know while (16%) were not sure.

4.8 SOURCES OF INFORMATION ON STILLBIRTH

Table 4.15 Source of information on stillbirth

Source of Information	Frequency	Percent
Radio/Fm	3	1.50
Television	6	3.00
Antenatal(ANC)	109	54.50
Church/Mosque	82	41.00

More than half (54.5%) had their Information on stillbirth through antenatal Clinics while nearly half (41%) got to know of stillbirth through health education campaigns. From the table it is clear that the major source of information on stillbirth for the pregnant women in the municipality is through antenatal attendance.

4.9 PREGNANT WOMEN WHO PUT INTO PRACTICE THEIR KNOWLEDGE ON THE PREVENTION OF STILLBIRTH

Table 4.16 Pregnant women who practice their knowledge in the prevention of stillbirth

Knowledge practice	Frequency	Percent
Yes	93	46.50
No response	7	3.50
Unsure	14	7.00
No	86	43.00

Nearly half (46.5%) of the pregnant women interviewed claimed they were practicing what they had been taught to do in order to prevent stillbirth and nearly half (43%) were not, while (7%) were not sure whether they were practicing or not.

From the analysis, it is obvious that the respondents to some extent followed the antenatal instruction.

4.10 KNOWLEDGE SHARING ON STILLBIRTH BY RESPONDENTS.

Table 4.17 Knowledge sharing on stillbirth

Knowledge sharing	Frequency	Percent	Cum
Yes	13	6.50	6.50
No	92	46.00	52.50
Unsure	95	47.50	100.00
Total	200	100.00	

Nearly half (46%) of the women interviewed did not share their knowledge on stillbirth with others; (6.5%) claimed they did, while others (47.5%) were not sure.

From the analysis, one can say that in terms of knowledge sharing, little effort is being made.

CHAPTER FIVE

5.0 DISCUSSION OF STUDY RESULTS

This chapter discusses issues arising from the findings of the study related to the set objectives.

5.1 BIOGRAPHICAL DATA

Education has been identified as a factor that has impact on the pregnant woman's ability to follow to the letter, any instructions, be they antenatal or any other that could go a long way to help address the problem of stillbirth. Our study found that nearly one-in four women had had no formal education. According to Gromadecka (2001), a person's level of education plays a vital role in his /her ability to maintain a certain level of hygiene and also be able to know any changes that may take place in her body (in this case the pregnant woman).

5.2 HEALTH AND NUTRITIONAL STATUS OF THE PREGNANT WOMEN IN THE MUNICIPALITY

The health and nutritional status of the pregnant woman is very important in addressing the problem of stillbirth. If the pregnant woman is always unwell and eats poorly, the fetus is very likely to be affected. According to Mackey (2006), frequent incidence of hypertension and other pregnancy related diseases tend to affect the health of the mother, thereby making her unable to go through the normal stages of pregnancy successfully. Nearly half (47%) of our study participants reported zero illness during pregnancy but when prompted by naming certain diseases and conditions known to affect pregnant women they replied in the affirmative. Malaria is a big problem for pregnant women particularly the primigravidae, when the respondents were asked about malaria, a third of them said they had been ill with malaria. This suggests that some of the women might consider malaria a 'normal' disease in pregnancy.

A little less than half of the respondents 47.5 percent claimed they do not fall sick during pregnancy. With the nutritional aspect too, the figures recorded in Table 4.3 indicate that majority of the respondents ate the various foods needed by pregnant women in order to ensure proper growth of the fetus. However figure 4.1. indicates that even though the respondents ate to some extent, all the important foods needed by pregnant women, these foods did not add up to balanced meals because they are

not eaten at the same time. For his part, panel Christian (June, 2003) explains that lack of major food nutrients in a pregnant woman's diet can expose her to stillbirth; this is because the fetus may not get the nutrients needed for its proper growth and development. So, the table interprets it to be incomplete, so from the figure, (29%) ate complete meals while (71%) did not. This point has been explained further by panel Christian (2003) that lack of proper nutrients could lead to labour and delivery complications.

So, on the assessment of the health and nutritional status of the health status of the women, it can be said that the health status of the women even though not the best, comparatively is quite okay. With respect to the nutritional aspect, complete meals (well balance meal) is not eaten by the women as far as the major nutrients needed from the various foods for proper growth of the fetus and strength of the mother are concerned.

5.3 LEVEL OF ANTENATAL CARE

Antenatal care or antenatal attendance is very important for every pregnant woman especially, if she wants to know the state of the fetus as well as her health. According to the U.S. National Institute of Health, (2006) better access to antenatal care and obstetric care could reduce the incidence of stillbirth.

From the results, it can be seen that the rate of antenatal attendance was quite encouraging. From the results, (49.5%) of the respondents which seems to be the highest said they attended antenatal clinics four times through out the period of pregnancy which is normal; Followed by (30.5%) who attended five times through their pregnancy period which according to (WHO, 2002) though less than the minimum which is at least six times, is quite encouraging.

Those who attended more than six times constituted just 2(1%) which is not encouraging. According to Di Mario et al (2006), antenatal care which is one of the major causes of stillbirth should be taken advantage of. For them, screening of diseases, conducting various tests and providing essential drugs and information for the pregnant woman can go a long way to reduce the incidence of stillbirth.

5.4 SKILLED DELIVERY, PLACE AND DURATION

The quality of skilled delivery with regards to the actual process of delivery, place and duration can be a contributory factor in stillbirth. From the results, which is on the quality and the level of satisfaction with respect to skilled delivery by the respondents, 181(90.5%) of respondents said they were very happy with the skilled delivery while 11(5.5%) were not happy with 8(4%) not being sure as to whether they were satisfied with the mode of skilled delivery or not.

According to Bryce J. et al (2005), a pregnant woman stands a greater risk of losing her baby if she is not properly helped by a competent midwife to deliver and early too. In the same vein, if the facility in which she is delivering is not well equipped with the necessary equipment so that should there be any emergency, the pregnant woman can easily be helped, then it can affect the chances of survival of the baby.

Relating to this is the duration of delivery and with reference to Table 4.12. which shows the number of minutes or hours spent during delivery, 78(39%) of respondents spent less than one hour during delivery, 58(29%) spent a little over 30 minutes in delivery while 3(1.5%) spent almost two hours.

On the distance from the homes of respondents to health facilities, Table 4.10 gives the break down in terms of kilometers from respondents homes to health facilities and from the table, more than half (81.5%) claimed the distance from their residents to health facilities is less than five kilometers with (12%) claiming the distance is less than 10km. while (2.5%) said the distance from their homes to nearly hospitals is more than 10km. A research done by Helitzer-Alland(1994) has also revealed that the chances of a pregnant mother losing her baby when she is in labour is very slim if the distance between her residence and the nearest health facility is long (about three kilometers and beyond).

This, he explains by saying that by the time the pregnant woman gets to the health facility and attended to, the baby might have lost its life. From the above analysis it can be said that with respect to the assessment of mode of skilled delivery place and duration, there seems to be no serious danger in terms of it leading to high stillbirth, because health officials especially doctors and midwives have been commended for their exceptional skilled delivery with most of the pregnant women who go to

deliver in these health facilities, since they do not spend too much time in delivering while the health facilities are also close to them.

5.5 SOCIO- CULTURAL PRACTICES

According to ChiChester Metal (2005), certain cultural prohibitions such as not visiting a hospital or clinic during pregnancy, not taking certain medicines, not eating certain kinds of foods and the use of certain local herbs could affect fetal growth and development which can further lead to stillbirth. The use of certain herbs during pregnancy has been identified to be one of the things that could lead to stillbirth. From the results, two-thirds (77.5%) of the respondents said that certain rites which has now become a practice for most of them are performed by them while (22.5%) claimed no rites performed for them.

From table 4.6, one of the major rites is the use of herbs to prepare food to eat and enema. The vast majority (94%) of the respondents claimed they use herbs to prepare food and enema during pregnancy while (4%) did not, these women claim it strengthens them and protects the baby and also for safe delivery.

From the two tables, it is obvious that the use of herbs in the municipality by pregnant woman is very high and this can affect the survival of the fetus. A study done by the U.S. National Institute of Health (June, 2006) on the survival and safety of the fetus, concluded that certain socio-cultural practices like the use of unprescribed drugs and substances could seriously affect the very life of the fetus as well as rendering the mother barren.

5.6.1 THE LEVEL OF HEALTH EDUCATION ON STILLBIRTH AS PERTAINS IN THE MUNICIPALITY

More than three-fourth, (80.5%) of respondents explained what they know about stillbirth which was in line with the true meaning of stillbirth, with (12%) saying they did not know while (7.5%) were not sure whether they knew it or not.

Relating to this, is the opinions of the respondents on the causes of stillbirth and from table 4.14 which indicates the distribution of the knowledge on the causes of stillbirth, (50.5%) were able to enumerate most of the causes, with (33.5%) unable to while (16%) were undecided. In the words of Gromadecka S. (2001), health professionals should use antenatal clinics as platforms to organize health education programmes to educate mothers and pregnant women in particular on the nature, causes, effects and preventive measures on stillbirth; since according to him, very little is being done in this direction. For him, helping pregnant women in particular to have in-depth knowledge of stillbirth will go a long way to reduce its occurrence drastically.

The analysis, shows that with respect to the level of health education, most of the respondents had some idea about stillbirth as well as its causes. With regards to the source of information on stillbirth, Table 4.15 shows that most of the respondents (54.5%) got to know about stillbirth through antenatal attendance where they are briefed on it by the midwives. A little over forty percent (41%), got to know through antenatal attendance. (41%) said they got to know at churches and mosques where health education programmes on stillbirth are held.

From the results, (46.5%) had been following and practicing the knowledge they had been provided, while (43%) had not been practicing it.

Related to this is the extent to which those who have some knowledge share this knowledge with other women. From Table 4.17 only (6.5%) do share their knowledge on stillbirth with other women (46%) said they do not. whiles (47.5%) were undecided on the question.

From the results, it can be said that with regards to the level of health education, the level is relatively low because less than 20% of those with knowledge on stillbirth share their knowledge with others.

KNUST



CHAPTER SIX

6.0 CONCLUSIONS AND RECOMMENDATIONS

6.1 CONCLUSIONS

The study sought to identify some factors that may be associated with the causes of stillbirth and the level of health education on stillbirth pertaining in the Municipality. The study has shown that first, the nutritional status of the pregnant women in particular was good; even though most of the respondents did not eat complete meals at a go, especially foods like plantain which contains Iron, fruits, green leafy vegetables etc, which are important for the proper growth and development of the fetus as well as a source of good health for the mother. (This can be seen in table 4.3., fig. 4.1., where more than fifty percent (50%) of the women studied consumed more of the required foods).

The study further revealed that the patronage of antenatal clinic by pregnant women was also good in the municipality. According to the table 4.4., most of the pregnant women right from the third month till delivery attended antenatal clinic at least four times.

Another major observation from the study is the indiscriminate use of local herbs by most pregnant women during pregnancy. The research revealed that about 94% of respondents did use herbs, some for food preparation and some to enema and this could be a major cause of stillbirth in the municipality.

This is because some of the pregnant women continue using these herbs even few weeks to delivery, believing that it can help them to deliver safely and as it is known, some of the herbs tend to affect the very survival of the fetus when it comes into contact with it.

The final conclusion is the level of health education on stillbirth as pertains in the municipality. The research revealed that even though most respondents had some idea about stillbirth and its causes, the percentage of those who claimed they were following the instructions to the letter was not impressive. The percentage of 46.5 was less than 50%.

With respect to the sharing of information on stillbirth with others, just 6.5% were doing that. So the level of health education on

Stillbirth is not all high looking at the percentages.

6.2

RECOMMENDATIONS

Nutritional status of the pregnant women in particular: From the study, it has become clear that most of the pregnant women in the municipality were eating the prescribed foods but were not eating well enough as they should in terms of the right type and quantity of nutrients required in their diet. Hence, the need for first of all, the Ministry of Health to introduce a programme which could be dubbed “Healthy and a balanced diet, a recipe for stillbirth free delivery” particularly for pregnant women which will be observed once every year just like the national immunization program. This programme will be observed throughout the country and will be supervised by Regional and District Directors of Health Services to create the awareness for women with special emphasis on pregnant women to be very serious with the kind of food they eat; whether it has the required nutrients in their right quantities since this could go a long way to reduce the incidence of stillbirth.

Furthermore, the municipal director of health services should in collaboration with all the doctors and midwives in the health facilities in the municipality, organize regular health education programmes at least once every month at markets, churches and other places of gathering where the importance of eating a healthy and a well balanced diet as a pregnant woman, will be explained to them by the doctors and midwives and this, it is believed can go a long way to help reduce the rate of stillbirth in the municipality.

Finally, antenatal clinics could also serve as alternative platforms where midwives could use to explain to pregnant women who go for antenatal clinics, the need to eat a healthy and a well balanced diet in their rite proportion during pregnancy so that they (pregnant women) can have stillbirth deliveries as it has been explained by some literature that eating a healthy and a well balanced diet can contribute greatly to having stillbirth free delivery, Panul Christian (June, 2003).

Antenatal attendance: The research further revealed based on the results that the level of antenatal attendance was quite impressive even though not up to the required standard as indicated by literature; and in order to address this, the Ministry of Health

in collaboration with other health related non governmental organizations should advertise in both the print and electronic media about the importance of antenatal

clinics and since the media is known to be a powerful medium of communication, especially the radio and TV, the impact will be greatly felt. These advertisements, especially the one's that will be put on TV and radio could be done during prime time news or when important programmes are being aired.

The Municipal Directorate of Health Services can organize regular health education programme which will be under the direct supervision of the municipal director of health services and the midwives. These programmes will be organized at least once every month to sensitize the women about the need to attend antenatal clinics on regular basis whenever they become pregnant, especially from the third month onwards so that their health as well as that of the fetus can be monitored in order to avoid any complications during delivery.

Midwives in the various health facilities should intensify their antenatal talks on the need for pregnant women to report regularly and on time any time they notice any unusual feelings in their wombs.

Finally, series of fora should be organized by the municipal health authority for husbands to conscientize them on the need to encourage their wives to attend antenatal clinics regularly when they become pregnant.

Use of herbs: The results of the research further revealed that 94% of women who become pregnant in the municipality at one time or the other, during pregnancy, resort to the use of local herbs. In order to address this unfortunate trend, the municipal health authority, in collaboration with the doctors and midwives in the municipality should embark on regular massive health education campaigns at markets, churches and other places of gathering to drive home the need for pregnant women to desist from using herbs during pregnancy. Here, the dangers associated with the use of these local herds should be thoroughly explained to the women. They should also be encouraged to be each others keeper by way of constantly reminding one another not to use herbs during pregnancy.

Antenatal clinics could be the most appropriate places where this message can be properly given. In this vain, midwives in the various health facilities in the municipality should make it a point to remind the women who come for antenatal

clinics about the need not to use local herbs during pregnancy. I suggest there should always be a brief talk on this and other pregnancy related problems before the women are attended to; laying emphasis on the possible risk of losing their babies all together and this, can to some extent, reduce the rate of still birth in the municipality.

Level of health education: The results of the research indicates that the level of health education programmes and activities on stillbirth organized in the municipality has not been well felt. There is therefore, the need to intensify these programmes and activities by the municipal health authority; that is, these programmes should be well packaged and organized more regularly. Midwives in the municipality should review their notes with regard to how they educate the pregnant women who go for antenatal clinics.

Finally, more seminars and workshops should be organized for health officials, especially the midwives in the municipality to equip them with the current knowledge and skills regarding pregnancy related problems like stillbirth. This should be done by the municipal health authority which will invite some senior doctors and midwives from the bigger hospitals like Korle-Bu and Komfo Anokye Teaching Hospital to come and give a lecture on some of these health problems and this, I think, could impact greatly on reducing the increasing rate of stillbirth in the municipality.

REFERENCES

Abraham J.H (1990): *Survey methods in community medicine*; London Churchill Livingstone, 4th Ed. Chapt. 6 pp 61-65

Blonded B., J. Stamler, L. Myers, (1996): *poor antenatal care and pregnancy out*; European Journal of Obstetric and Gynaecology and Reproductive Biology, 50(3)

Bann C.M.(1998): *Rubella in pregnancy : Asaniatiological factors in congenital Malformation, stillbirth and miscarriage*, American Journal of Obstetrics and Gynaecology. PP 245 – 261

Bryce J. Boschi-Pinto C.(2005): *Shibuyak: the WHO estimates of the causes of death in children*, Lancet; 365

Chalumeau M., David A., A.W. Cagguila, (2002):*Foctors Contributing to poor maternal and child health care*: Journal of Obstetric Gynaecology and Reproductive Biology, 60(3).

Chichester M., Loria, C.M (2005): *Reproductive health outlook*; International Reproductive guide, Vol 2 PP 101-104

Corlien M. Verkevisseer, Indra Pathmanathan, Ann Brownlee (2003): *Designing and conducting health system research projects* ; vol : 1 : proposal development and field work. PP 45, 46 65, 285 KIT publishers, Amsterdam. International Development Research Centre in Association with W.H.O Regional Office for Africa.

Di Mario S., Say L, Lincetto O (2007): *Evaluation of effectiveness of Health care*: Modena, Italy, page 34.

Ghana health Statistics, (2007):*Reorienting the Health Service*, vol. 1, Pp. 5 of 10
www.ghanahealthservice.org/documents.

Gibaldi J. (1995) : *MLA Handbook for writers of Research papers* : NEW YORK. Churchill Livingstone. Pp. 175-181

Helitzer-Alland, Wahgel AM (1994): *obtaining sensitive Information: The need for more than focus groups, reproductive Health matters* 3: 75-82

Hoffman M.C., P.K. Whelton, White N.J., (2007): *Risk factors for stillbirth*; US National Institute of health.(34)7

Gromadecka S, Bazzano L.A. (2001):*Health education research: vol. 16 No. 4*
Publisher Oxford University Press

Krissi D (2006): *Stillbirth causes: why babies die during pregnancy.* Pp 1– 3

Mc. Clure (2007): *Maternal mortality: stillbirth and measures of obstetric care in developing and developed countries:* Pp 1-2

Miller O'brien (2006): *Stillbirth in Developing Countries:* international Journal of obstetrics and Gynaecology: a4(2) Pp 82-90

Marc H. (1998): *Stillbirth evaluation: what tests are needed?* American Journal of Obstetrics and Gynaecology: vol. 178(6) Pp 1 of 2

Myles M. (1993): *A textbook for midwives: 12th ed.* New York, Churchill Livingston, Oxford University press. Pp 145-160

Mackey O. (2006): *Risk factors for unexplained stillbirth in Infants;* American Journal of obstetrics and Gynaecology, Vol 93(3).

Masay S, Ramin MD (2002): *Risk factors for stillbirth in developing and developed countries:* International journal of health 155(6)

Nicky Hart (2008): *Beyond infant mortality*1998: Gender and stillbirth in Reproductive Mortality before the 20th Century: 52 number 2, page 215-229

Ngoc, Hallet R.(2007): *Seeking stillbirth solutions: The Auckland stillbirth study:* obstetrics and Gynaecology / Pediatrics, University of Auckland September, page 1 of 2.

Offinso District Health Directorate Offinso Ashanti: Antenatal care and Stillbirth records: January 2005- June 2007.

Otti Trulsson (2004): *The silent child:* mothers experience before, during and after stillbirth: 3rd issue page 189- 195.

Patricia E., Green A.(1998): *prenatal death:* Grief, support for families: Birth vol.10 1st issue, March, 1983 pages 17-28 available.

Say L. et al, (2006): *Ensuring Successful birth:* Journal of reproductive health, Vol 2.

Selmon A.C. (2000): *Health and Longevity*, 2nd Ed. Oriental watchman publishing house Pp. 242-251.

Smith G.(2006): *Managing congenital abnormalities*, American Journal of Gynaecology.Vol 3 PP 90-96

Sodeman, Johnson D. (2007): *coping with stillbirth:* American Journal of Gynaecology, vol. 175 (6) Pp. 11.

Delecek T.A, Buzzard I.M. (1997): *Finding solutions to nutritional problems:* American Journal of Clinical nutrition, Vol. 65 pp 23-30.

UNICEF Global causes of malnutrition, September, 1990. Vol. 2 Pp 24-28

WHO (2006): *Global Health Statistics*, vol. 2 Pp 25 (1),www.who.int/whosis.

Wikipedia free Encyclopedia, available at :<http://curekids.org.nz/stillbirth.htm>. Accessed on April 1, 2008.

Li Z., Ngoc V. (2007): *Viral infection and stillbirth:* International Journal of Gynaecology.Vol 4 PP 50-55

Pawlowsky,Z. S. (2001): *Health Clinic. Research:* Oxford Journal of medicine: vol. 16,No. 4 PP 92-99

APPENDIX

QUESTIONNAIRE

INTRODUCTION (SECTION A)

This questionnaire is designed to determine the primary causes of stillbirth and the impact of health education in the Offinso South Municipality of the Ashanti Region , your assistance will therefore be need to aid in gathering this information .

SECTION B

Stillbirth Status

1. How many pregnancies have you had?

1. 1
2. 2
3. 3
4. 4
5. 5
6. 6
7. none
8. none

2. How many of them were delivered?

1. 1
2. 2
3. 3
4. 4
5. none
6. none
7. all of them

3. If less than the number , what happened to the rest ?

1. Abortion
2. Induced abortion
3. Miscarriage
4. Stillbirth

4. How many of the children are alive?

1. 1
2. 2
3. 3
4. 4
5. All of them
6. More than 4

SECTION C

Health and nutritional status

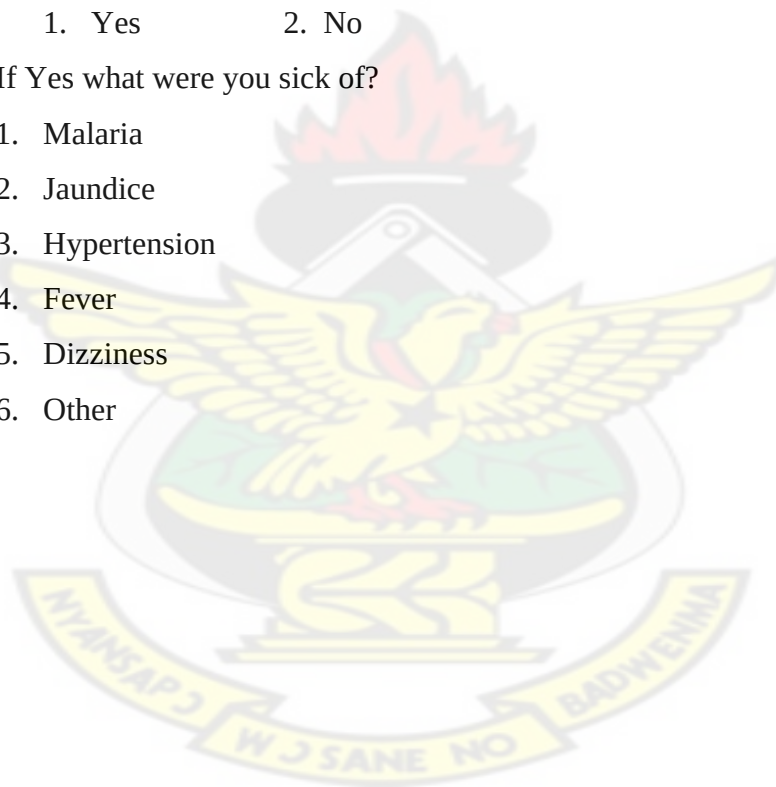
Health status

1. Were you sick in the course of your pregnancy?

1. Yes
2. No

2. If Yes what were you sick of?

1. Malaria
2. Jaundice
3. Hypertension
4. Fever
5. Dizziness
6. Other



Nutritional Status

3. What foods were you eating during pregnancy?

Food and Nutrients			Frequency of eating a week
Carbohydrate food from	1. Yes	2. No	
1. Rice 2. Maize 3. Cassava 4. Yam 5. Potato 6. Others			
Food / Nutrients	1. Yes	2. No	Frequency / Times a week
(b) Protein 1. Fish 2. Egg 3. Beans 4. Nuts 5. Meat 6. Others			
(c) Fruits 1. Banana 2. Pineapple 3. Orange 4. Mango 5. Pawpaw			
(d) Green leafy Vegetables 1. Kontomire 2. Cabbage 3 Others			
(e) Iron (Plantain)			

SECTION D

Antenatal Care

1. Did you attend antenatal Clinic during pregnancy ?
 1. Yes 2. No
2. If Yes , how many times during the whole period of pregnancy ?
 1. Once
 2. Twice
 3. 3 times
 4. 4 times
 5. 5 times
 6. More than 5 times
3. Did you find it difficult following the antenatal instruction ?
 1. Yes
 2. No
4. If Yes why ?
 1. The instructions were difficult for me
 2. I did not have time to do them
 3. Any other .

SECTION E

Socio-Cultural Practices

1. Are there any rites performed for pregnant women in your community ?
 1. Yes 2. No
2. If yes what are they ?
 - 1.
 - 2.
 - 3.
3. Why are they perform ?
 1. To Strengthen the fetus
 2. To Strengthen the mother
 3. To help ensure safe delivery
 4. For blessings
 5. Others
4. Do you think it is necessary among the community for pregnant women to attend Clinic ?
 1. Yes 2. No

If No why ?

1. For fear that she may not get the baby
 2. Not necessary
 3. Herbs can equally do the job
 4. Due to attitude of health personnel
 5. Others
5. Where did you seek medical treatment when you were sick during pregnancy ?
1. Self medication
 2. Hospital
 3. Clinic
 4. Herbalist
 5. Pray for me
 6. Others
6. Culturally , are there special medicines in any form that you take during pregnancy ?
1. Yes
 2. No
7. If yes what are some of them
1. Herbal preparations from backyard
 2. Herbs sold in drug stores or in cars
 3. Others
8. How are these medicines administered ?
1. For bathing
 2. For enema
 3. Taken through the mouth
 4. Others
9. Did you enema during pregnancy ?
1. Yes
 2. No

SECTION F

Mode of skilled Delivery

1. Where did you go to deliver ?
 1. St. Patrick hospital
 2. District Assembly Maternity
 3. Anyinasuso SDA . Clinic
 4. Abofour Health Centre
 5. Kyebi Clinic
 6. Nkenkansu Hospital
 7. T. B. A
 8. Home
 9. Others
2. How far is the facility from your house / residence ?
 1. Less than 5km
 2. 5km
 3. Less than 10km
 4. 10km
 5. More than 2 hours

Level of satisfaction

1. Were you satisfied with the mode of skilled delivery ?
 1. Yes
 2. No
- a) If No why ?
 1. Poor treatment
 2. Inadequate facilities
 3. Inadequate health personnel
 4. Others

Level of Health Education

1. Do you know what stillbirth is ?
 1. Yes
 2. No
 2. If yes, do you know the causes of stillbirth ?
 1. Yes
 2. No
 3. If yes what are they
 1. Health status of the pregnant woman
 2. Nutritional status of the pregnant woman
 3. Infection
 4. Some socio- cultural practices
 5. Level of antenatal care
 6. None of the above
- Sources of information

7. All of the above except 6
4. Where did you get your information on stillbirth from ?
 1. Radio, Fm
 2. Television
 3. Anc (Antenatal Clinic)
 4. Church / Mosque
 5. Market
 6. Friends
 7. Others
5. What can we do to prevent stillbirth ?
 1. Good prenatal care
 2. Avoidance of infectious disease
 3. Improves one's nutritional intake
 4. Regular antenatal care
 5. Non of the above
6. Do you share your knowledge with other pregnant women ?
 1. Yes
 2. No

SECTION G

DOCTORS/MIDWIVES VIEWS

1. What are some of the general causes of stillbirth ?
 - 1.
 - 2.
 - 3.
 - 4.
 - 5.
 - 6.
2. What are some of the specific causes of stillbirth in your facility ?
 - 1.
 - 2.
 - 3.
 - 4.
 - 5.
 - 6.
3. Are there any available statistics on stillbirth in your facility ?
 1. Yes
 2. No
4. If Yes what are they ?
 - 1.
 - 2.
5. If No why ?
 - 1.
 - 2.

6. Are there any laid health education programmes in your facility ?

1. Yes
2. No

7. If yes , what are some of them ?

- 1.
- 2.
- 3.
- 4.
- 5.

8. If no why ?

- 1.
- 2.
- 3.
- 4.

9. Are these programmes making any impact by way of addressing this problem ?

1. Yes
2. No

10. If yes how ?

- 1.
- 2.
- 3.
- 4.

11. If no why ?

