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MV10
THEL

FACTORS RELATING TO LOW BIRTH MASS

by

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DEDICATION

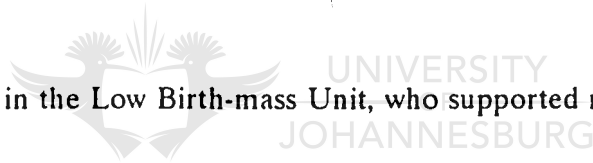
This work is dedicated to my family for their support and encouragement during my studies.



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(i)

SUMMARY

This dissertation studies the cause of the high incidence of low birth-mass and how it can be prevented at this specific hospital in Pretoria.

A qualitative exploratory and descriptive design was used and a case study used in the context of the specific hospital. The population consisted of mothers of low birth-mass babies and a sample of only 10 mothers was selected.

Data was gathered by means of semi-scheduled interviews which were conducted in the language of the subject. There were, however, no opposition from other subjects to be interviewed in English since they understood English. A pilot study was done on only one subject and no major changes were made in the actual study.

Permission was obtained from the subjects and they were informed of the objectives of the study, which were:

- * to detect the reason for low birth-mass babies
- * to prevent the causes
- * to assess the health needs of the patient
- * to be able to improve the health needs by doing strategic planning.

The subjects were told that they had the right to refrain from participating - most of them, however, did participate.

(ii)

Unexpected limitations were experienced when some mothers were afraid to participate after they had been told that they had the right to refrain from participating. Only 10 mothers were included in the study.

Cross case data analysis was done. Data was analysed by grouping the themes together. Each subject was awarded a column according to the grouping of the data. Cross case analysis was done by entering the necessary information in the appropriate column.

After that a table of distribution was drawn up for an easy comparison of the subjects. Tape recordings were listened to in order to record any data that had not yet been recorded in writing earlier.



The results indicated that most mothers were between 15 and 19 years old, and one mother was 43 years old: therefore a high-risk mother, a factor which contributes to a low birth-mass baby. Some mothers were unemployed before and during pregnancy and also lacked emotional support.

Some mothers who worked did not have maternity leave. Antenatal attendance was poor, as the highest attendance was only six times throughout the pregnancy. The result was that these mothers gave birth to low birth-mass babies who suffered complications, such as respiratory distress. Most mothers were pre-eclamptic and in this group were found those with no antenatal attendance.

(iii)

In practice it was found that mothers had to be educated to prevent them from giving birth to low birth-mass babies. The curriculum for Nursing Science should include more periods of midwifery lectures dealing with the causes and the prevention of low birth-mass babies, especially in areas where this is prevalent. Further, research must be done on the causes of the high incidence of low birth-mass babies and how these can be prevented. A functional approach must be followed and researchers must make their findings known to others in order that the situation can be improved.



OPSOMMING

Hierdie skripsie bestudeer die oorsake van die hoë voorkoms van babas met 'n lae geboortemassa in die spesifieke hospitaal in Pretoria en hoe dit voorkom kan word.

Kwalitatiewe, ondersoekende en beskrywende navorsingsontwerp is gebruik en 'n gevallestudie is gedoen teen die agtergrond van die spesifieke hospitaal. Die populasie is moeders wat geboorte geskenk het aan babas met 'n lae geboortemassa en 'n steekproef van 10 moeders is gekies.

Data is ingesamel deur middel van gedeeltelik gestruktureerde onderhoude wat gevoer is in die taal van die proefpersoon. Daar is egter geen teenkanting ondervind by ander proefpersone om die onderhoude in Engels af te neem nie aangesien hulle almal Engels verstaan. 'n Loodsstudie is gedoen met slegs een proefpersoon en geen groot veranderinge moes in die uiteindelijke studie aangebring word nie.

Toestemming is van die proefpersone verkry en die volgende doelstellings van die studie is aan hulle verduidelik:

- * om die oorsake vir lae geboortemassa by babas te bepaal
- * om die oorsake te voorkom
- * om die gesondheidsbehoefte van die pasiënt te bepaal
- * om die gesondheidsbehoefte te probeer bevorder deur strategiese beplanning.

Die proefpersone is meegedeel dat hulle die reg het om hulle van deelname te onttrek - die meeste van hulle het egter aan die studie deelgeneem. Onverwagte beperkinge is egter ondervind: party moeders was bang om deel te neem ná hulle meegedeel is dat hulle die reg het om te onttrek. Slegs 10 moeders is by die studie betrek.

Kruisgevalldata-ontleding is gedoen. Data is ontleed deur die temas saam te groepeer. 'n Kolom is aan elke proefpersoon toegewys volgens die datagroepering. Kruisgevalle = data-ontleding is gedoen deur die nodige inligting in die betrokke kolomme aan te bring. Daarna is 'n verspreidingstabel opgestel vir makliker vergelyking van die proefpersone. Daar is na bandopnames geluister om enige data wat nie vroeër skriftelik op rekord geplaas is nie aan te teken.



Die resultate het getoon dat die meeste moeders tussen die ouderdom van 15 en 19 was, en een moeder was 43: dus 'n hoërisiko-moeder, 'n faktor wat bydra tot die geboorte van babas met 'n lae geboortemassa. Party moeders was werkloos voor en gedurende die swangerskap en het ook 'n gebrek aan emosionele ondersteuning beleef.

Party moeders wat gewerk het, het geen kraamverlof gehad nie. Voorgeboortelike besoeke aan klinieke was gering, want die hoogste aantal gedurende die swangerskap was maar ses besoeke. Die gevolg is dat hierdie moeders geboorte geskenk het aan babas met 'n lae geboortemassa wat komplikasies soos asemhalingsnood beleef het. Die meeste moeders was pre-eklampties en onder hulle was diegene wat geen voor-geboorteklinieke besoek het nie.

In die praktyk is gevind dat moeders voorligting moet ontvang om te verhoed dat hulle geboorte skenk aan babas met 'n lae geboortemassa. Die kurrikula vir Verpleegkunde behoort meer periodes vir verloskundelesings te bevat, wat handel oor die oorsake en die voorkoming van babas met 'n lae geboortemassa, veral in die gebiede waar dit algemeen plaasvind. Verder, navorsing moet gedoen word na die oorsake van die groot omvang van babas met 'n lae geboortemassa en hoe dit voorkom kan word. 'n Funktionele beleid moet gevolg word en navorsers moet hulle bevindings aan ander bekend maak sodat die situasie verbeter kan word.



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CHAPTER 1

THE BACKGROUND OF THE STUDY

1. INTRODUCTION

Statistics show that prenatal care, alcoholism, migrant status, smoking, hypertension and previous poor pregnancy results typify women with low birth-mass infants. Medical records reveal implicated violence, poor social support, psychological adjustment and lack of contraception or ineffective contraception (Boone, 1985:1001-1011). Poor nutritional status, inadequate prenatal care, maternal complications and drug addiction contribute to low birth-mass babies. Some additional factors are illegitimacy, teenage pregnancy and multiparity.



Environmental factors also play a role in low birth-mass babies. Intra-uterine growth retardation is associated with circulation and placental inefficiency and general poor nutrition of the mother (Berman, Richard, Vaughan, Victor, Waldo & Nelson, 1987:376).

There were 920 live births over a period of 1 year in the United States of America, of which 74% were low birth-mass babies. Interviews with the black women who delivered these low birth-mass babies at that time indicated that 75% of them were unmarried and had a poor relationship with their boy-friends as well as no support. These women received assistance from their girl-friends (Boone, 1985: 1001-1011).

There is also a correlation between low birth-mass babies and low socio-economic status. In such families there is a relatively high incidence of maternal undernutrition, anaemia, illness and inadequate prenatal care (Berman *et al* 1983:343/344). Many people, especially those of low socio-economic status, simply do not know about health services or are unsure of how to use health services. They have no insight in principles of modern scientific child care (Marlow, 1977:37). Women with low socio-economic status have poor dietary habits which result in their giving birth to babies weighing approximately 800 g, which is an unfavourable outcome of a pregnancy (McLaren, Burmer, Belton, Anthony & William, 1991:10). Some of these mothers are only seen by a physician when in labour (Marlow, 1977:187).

The above study involved 8 neonatal intensive care units in the United States of America. The study was conducted on mothers who experienced an infant death within 1 year post delivery. All these women were black. The final research project discovered that a correlation existed between low birth-mass babies and disadvantaged women in this particular city in the United States which has a high infant mortality rate (Boone, 1985:1001-1011).

Low birth-mass is of great importance in health care because it represents 20% of the infant mortality rate. It must be prevented because some segment of the population is giving birth to the larger proportion of low birth-mass babies with the least resources to care for those babies after birth or after their discharge from hospital (Brown, Brooten, Kumars, Butts, Frinkler, Backwell, Gibson & Papadapoulos, 1989: 520/521).

The specific hospital used in this study is situated in Pretoria West, about 8 kilometres from the city centre. It has a total of 1 240 beds, of which 140 are for low birth-mass infants. This particular hospital serves urban and rural communities. Most of the population are of low socio-economic status or low middle class status. One of the biggest responsibilities of this hospital lies in providing paediatric care.

There are 2 clinics near the hospital, about 1 kilometre away. These clinics do not cater for delivery services, but provide antenatal care and other health services required by the community. About 2 kilometres from the town is a clinic for sexually transmitted diseases and family planning. The rural communities use the latter clinic and the specific hospital.



The furthest population from this specific hospital is about 120 kilometres and consists of people from Siyabuswa in the district of Groblersdal. They have a transport problem which makes it very difficult for them to utilise the health care services - even for those staying in the township near the hospital transport is a problem. There is only 1 ambulance for township communities. Two city council ambulances serve the nearby workers in the suburbs who also utilise the services of this specific hospital. Most of the people are Ndebeles from Siyabuswa and Pedis from Pietersburg who are working in the white suburbs. Transport is even more problematic at night. To use public transport for coming to this specific hospital, a return bus ticket costs R24,00. This creates a problem for those wanting to utilise the health service as they also have to pay R20,00 for the service rendered at the hospital. The cost of a visit thus amounts to R44,00.

2. PROBLEM STATEMENT

On reviewing the records in the neonatal unit of this specific hospital it was discovered that there was a high incidence of low birth-mass babies. These babies represented problems such as apnoea, atelectasis, idiopathic respiratory distress syndrome, liver immaturity, ductus arteriosus and jaundice. Babies who survived were those weighing 1,5 kg and more, that means they had fewer health problems. The mortality rate was high amongst low birth-mass babies due to the care demanded for them after birth. It is therefore essential to determine possible factors contributing to low birth-mass babies in this specific hospital unit and to develop guidelines for possible prevention. From these findings a hypothesis will be generated to treat the possible causes of low birth-mass babies.



3. AIMS OF THE STUDY

The aims of this research are:

- * to determine the possible factors in the internal and external environment of the mother that may lead to birth of a low birth-mass baby in a specific neonatal unit; and

- * to establish guidelines to prevent this problem.

4. PARADIGM

This research is based on the Judeo-Christian philosophy, biblical principles and values and on the Oral Roberts University's approach to nursing for the whole person.

4.1 Metatheoretical assumptions

4.1.1 *Person*

A person is a spiritual being who functions in an integrated biopsychosocial manner to achieve his quest for wholeness. A person interacts with his internal and external environment holistically (Oral Roberts University Anna Vough School of Nursing, 1992:136-142).

4.1.2 *Health*

It is a state of spiritual, mental and physical wholeness. The person's pattern of interaction with his internal and external environment determines his health status. Health can be qualitatively described on a continuum from maximum to minimum health. Illness potential exists in those who are healthy.

4.1.3 *Illness*

Illness is a dynamic state that reflects the nature of the person's interaction patterns with the stressors in his internal and external environment. Illness can be quantitatively described on a continuum from severe illness to minimum illness. Health potential exists in those who are ill (Oral Roberts University Anna Vough School of Nursing, 1992:136-142).

4.1.4 *Neonatal nursing*

It is a goal-directed service to assist the individual, family and/or community to promote, maintain and restore health. Central to this is the concept of nursing for the whole person. Maintenance, promotion and restoration of health are thus defined as follows:

- * *Maintenance* of health refers to those nursing activities directed towards continuing or preserving the health status of individuals, families and/or communities.
- * *Promotion* of health refers to nursing activities contributing to a greater degree of wholeness for the individual, families and/or communities.
- * *Restoration* of health refers to those nursing activities that facilitate the return to the previously experienced levels of health of individuals, families and communities.

4.1.5 Environment

This concept includes both the internal and external environment. The nature of the internal environment is physical, psychological and spiritual, and that of the external environment is physical, social and spiritual. Patterns of interaction with the internal and external environment determine the health status of a person (Oral Robert University Anna Vough School of Nursing, 1992:136-142).

4.2 Theoretical assumption

This research will be based on the theoretical assumption of nursing for the whole person. The theoretical assumption that will be used is:

The nurse, through the health system, facilitates the promotion, maintenance and restoration of individual health.

4.3 Methodological assumption

A functional thought approach to nursing is accepted. This thought approach implies that the goal of research and theory development in nursing is aimed at providing actions related to the prescriptions within a specified context, for application and improvement of the nursing practice. The usability of the results of the research will serve as guidelines for its validity (Botes, 1992:136-142).

5. DEFINITIONS

- * *Low birth mass:* Low birth-mass babies are babies whose birth mass is less than 2 500 g, and includes full-term, premature and small for gestational age babies.
- * *Small for gestational age:* Babies who, irrespective of their gestational age, weigh 2 500 g or less at birth (Marlow, 1977:185).
- * *Ilobolo:* Cattle or money paid by the bridegroom's family to the bride's family to ensure the rights of the bridegroom in marriage issues (Ngcobo, 1991:36).
- * *Isihlambezo:* A mixture prepared from certain types of plants and sipped by a pregnant woman to assist her during the pregnancy and confinement (Ngcobo, 1991:37).
- * *Isiwasho:* Zionist holy water prepared with salt and ash to prepare a woman for labour (Ngcobo, 1991:38).
- * *Low socio-economic status:* These are people of the lower economic class. Their environment is less favourable and they have unfortunate circumstances since they are often unable to or unsure about obtaining medical care and hospitalisation (Marlow, 1977:37).
- * *Health services:* It is the performance by institutions and individuals consisting of both personal and community or public service activities that has as its goal maintaining or restoring health (Stanhope & Lancaster, 1988:29).
- * *Physical:* Having to do with the body, and it includes anatomical and physiological aspects.
- * *Psychological:* Includes intellect, emotions and volition.

- * *Spiritual*: Includes a person's relationship with God, with the self, values and ethical principles and the ability to judge (Oral Robert University Anna Vough School of Nursing, 1992:15).

6. RESEARCH DESIGN

An exploratory descriptive design will be used within the context of the specific hospital.

7. RESEARCH METHOD



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7.1 Data gathering

Case studies will be completed during which data gathering will be done by means of semi-structured interviews. The population will be mothers of 10 low birth-mass babies admitted to the neonatal unit of a specific hospital in the Pretoria area.

7.2 Reliability and validity

Measures to improve the reliability and validity have been implemented according to Woods and Catanzaro (1988:136).

7.3 Data analysis

A descriptive analysis will be used. A description of the reaction of the mothers who were interviewed, will be given in detail.

8. CHAPTER DIVISION

Chapter 1 Introduction

Chapter 2 Literature study

Chapter 3 Methodology

Chapter 4 Data analysis

Chapter 5 Conclusion and recommendations



CHAPTER 2

FACTORS RELATING TO LOW BIRTH MASS

1. INTRODUCTION

At the end of their pregnancy many women have complications such as maternal exhaustion, asphyxia neonatorum, low birth-mass babies and still birth. This is due to the fact that some of them did not utilise the health services for advice to prevent such complications. Some women do not know of the existence of health services and how such a service can be utilised. This lack of knowledge and the resulting lack of utilisation have a direct influence on the birth of a baby, and may even add to the factors relating to low birth-mass babies because of the fact that high-risk mothers have not been properly screened during prenatal care (Marlow, 1977:187).

2. FACTORS CONTRIBUTING TO LOW BIRTH-MASS BABIES IN GENERAL

The factors associated with low birth-mass babies may have physical, psychosocial and spiritual origins.

2.1 Internal environment of the mother

2.1.1 *Physical causes and prevention*

2.1.1.1 *Physical causes related to the mother*

A multiple pregnancy represents the clearest picture of the risk of low birth mass because of the tendency of the membranes to rupture prematurely, and because premature labour leads to a low birth-mass baby.

Records of mothers who had pre-term babies indicated an occurrence of intra-amniotic infections which were diagnosed by the amniotic fluid culture. Infections predispose labour and can result in a low birth-mass baby due to the premature labour (Taeusch, Roberts, Ballot & Allen, 1991:88).



2.1.1.2 *Underlying medical conditions*

Women with underlying medical conditions are also at risk to have low birth-mass babies. These medical conditions include, for example diabetic nephropathy, collagen vascular disease and lupus erythematosus. This can affect the functioning of the placenta and result in growth retardation of the foetus which results in low birth mass (Taeusch *et al* 1991:87).

Hypertension also affects the functioning of the kidneys, resulting in foetal growth retardation and subsequent respiratory distress. The growth retarded foetus will suffer

from an insufficient oxygen supply in utero. Once the foetus is distressed in utero it must be delivered - sometimes even before the actual time of labour - with the resulting low birth mass (Taeusch *et al* 1991:87).

2.1.1.3 *Tobacco and cocaine*

Smoking lowers the birth weight by affecting the placenta and can therefore cause intra uterine growth retardation. When such a baby is born it is going to have a low birth mass, irrespective of gestational age. The risk of smoking persists even after adjusting to confounding variables such as the mother's weight and her age, parity, birth place, previous obstetric history, onset of prenatal care and the status of the hospital (Taeusch *et al* 1991:87). In the United States, where 30% of women smoke, it has been estimated that 13 to 20% of low birth-mass babies could be attributed to maternal smoking (Taeusch *et al* 1991:87).

2.1.1.4 *Maternal age*

The incidence of low birth mass is high between the ages of 16 to 18 and above 35. This is due to the fact that between the ages of 16 and 18 girls are still physiologically too small to cope with the strain of a pregnancy. An additional reason is the fact that they wear tight clothes to hide the pregnancy which causes pressure on the abdomen that results in premature labour and the delivery of a low birth-mass baby.

Girls between 16 and 18, if not urged to attend antenatal care, will never do so because they lack the knowledge to make decisions on their own. This can result in non-utilisation of the health services which subsequently can result in complications such as delivering a low birth-mass baby (McInrney, 1988:35-37).

In 1983 teenage pregnancies totalled 30,5% of the deliveries at Paarl Hospital. Of these, 5% were to mothers 19 years old and younger. There was minimal parental influence in this group, probably because the parents did not know that the girls were expectant. When a mother does not know that her daughter is expectant, she will not intervene. Irrespective of whether the mother has any knowledge regarding the utilisation of health services, she may not advise her daughter. This may lead to lack of prenatal care and result in a low birth-mass baby and other birth complications (McInrney, 1988:35-37).

Health education for teenagers during a pregnancy is imperative so that they can seek medical care during in order to prevent any birth complications. Teenagers regard themselves as indifferent to standards of health care and also see themselves as victims of a cultural gap, therefore they fail to seek medical advice. This then influences the course of the pregnancy and can result in giving birth to a low mass babies (McInrney, 1988:37/38).

Teenagers attend to other aspects which they feel are necessary and neglect prenatal care. Education must be given to teenagers to avoid unwanted pregnancies that may end in attempted abortions or result in the birth of a baby with a low mass. Education and

fertility control must receive serious consideration. Adequate health care is essential for the early detection of premature labour and the prevention of birth complications where possible. Women with threatening labour at 32 weeks must be transferred to institution that provide delivery services and efficient care to prevent the birth of a low birth-mass baby (Coovadia & Loening, 1988:74).

2.1.1.5 *Nutrition of the woman*

During a pregnancy the nutrition of women should be raised to provide for the growing foetus. If a woman does not follow a well-balanced diet during her pregnancy, the foetus will be affected, and may have intra-uterine growth retardation. What the foetus gets, is what the mother eats. Diet greatly influences a pregnancy since poor eating habits may result in the birth of a baby with a low mass.

Undernutrition of the pregnant mother is a possible cause of the high incidence in the developing countries of low birth-mass babies as well as prenatal death rate. Women belonging to the lower socio-economic group suffer from poor nutrition due to the lack of money to buy the necessary food and the lack of knowledge about correctly preparing food. This is associated with a lowering of birth mass by 400 g and with an unfavourable outcome of the pregnancy (McLaren *et al* 1991:10).

Women are traditionally responsible for providing food and clothing for their children. Any change to their ability to earn an income during a pregnancy lowers their nutritional

status, which can affect the growth of the foetus. However, health education is necessary to help a woman toward proper nourishment in order to prevent complications during her pregnancy (Wylie, 1987:2).

Religious taboos also affect the mother during her pregnancy, since these often lack certain essential nutrients, such as protein, which is responsible for the growth of foetal tissue. This can lead to intra-uterine malnutrition, resulting in a low birth-mass baby. The vegetarian mother does not eat food coming from an animal and she therefore requires special consideration as to supplementing any deficiencies. A deficiency of certain nutrients during pregnancy predisposes a mother to anaemia, protein deficiency resulting in growth retardation of the foetus and mental retardation and a low birth weight for the baby (McInrney, 1988:38).

The ratio of low birth-mass babies should be reduced to not more than 10% in all parts of the world. The third trimester is a particularly important time for foetal growth. A diet supplying energy at this stage is essential to provide for the growth of the foetus and raise the birth mass at the end of pregnancy. With poor people this is not always the case, but through health education the situation can be improved and the number of low birth-mass babies reduced (Searle & Brink, 1982:386).

Clinical manifestation of malnutrition may not always be present, but may come to the fore during pregnancy when there are different demands on the body of the mother. The health of underprivileged people must be looked after during pregnancy because

they are at risk and, owing to malnutrition, can give birth to low birth-mass babies who then require special medical care post delivery (Searle & Brink 1982:386).

2.1.2 Psychosocial causes

2.1.2.1 Educational level

Maps of illiteracy closely coincides with maps of poverty, malnutrition and ill health, including infant mortality. The illiterate person is not only unable to read and write, but is usually poor, hungry, vulnerable to illness and uncertain. People with low level of education must therefore be educated so that they are able to be enlightened about health matters that can improve their health status. If they are uneducated in these matters they remain in darkness and are subsequently predisposed to birth complications such as low birth-mass babies (Gillette & Ryan, 1987:65). Improvement in the health status of the population can be achieved by the combined impact of a wide range of social and economic developments (Gillette & Ryan, 1987:66).

The social target of the WHO is the attainment of a level of health by all citizens of the world that will permit them to lead a socially and economically productive life by the year 2000. This means that everyone will have access to health services at an affordable fee and prevent disease and birth complications that may lead to low birth-mass babies.

Primary health care is the key to this ideal attainment of health. Primary health care promoters can educate people and reduce high risk factors in the pregnant mother and increase the birth mass of babies (Gillette & Ryan, 1987:66).

2.1.2.2 *Willingness to utilise health services*

The incidence of low birth mass is high among people who do not utilise the health services because they do not have knowledge of prenatal care or of how to eat well and properly care for themselves. Some mothers are only seen by a physician when they are in labour. Birth complications could have been prevented, but cannot then be prevented at this late stage. Such complications include malnutrition that already existed and that would probably lead to a low birth-mass baby. Poor people or those in the low socio-economic group lack understanding of the principles of modern scientific child care and the benefits of utilising the available health services. They must be educated, as these problems undermine their health status during pregnancy and lead to birth complications, especially low birth-mass babies (Marlow, 1977:187).

Poor people are usually unwilling to seek medical care and hospitalisation. The result is that they end up with birth complications such as low birth-mass babies that have a negative influence on their lives (Wylie, 1987:2).

The accessibility of a health service means a lot more than the physical presence of an infrastructure. Sometimes a health service does exist, but it discriminates against women of certain cultural groups and thus act as a barrier, preventing women from utilising an existing service. Women must be educated about available health services and their importance. Health education is the key concept to enhance knowledge about existing health services and their access - thus uplifting the standards of the women, which will

in turn uplift the health status of the newborn and reduce the occurrence of babies with a low birth mass as much as possible (Wylie, 1987:2).

2.1.2.3 *Sex discrimination*

In some cultures pressure is put on women by their husbands not to utilise the health services, even if the women are willing to go. Women in these cultures do not make decisions. Men make decisions on their behalf and those decisions are not always the right ones. This can then influence a baby's birth weight, because the women cannot overrule their husbands (Wylie, 1987:1).

These women cannot go to the health services without the permission of their husbands for fear of punishment - this is especially the case with illiterate women. They use traditional attendants who sometimes do not pick up any complications such as a breech presentation. Sometimes these attendants see the problems but do not treat them correctly and delay seeking medical aid, for example, treating oedema in pre-eclampsia. These kinds of complications influence the birth of a baby and can result in premature labour and a low birth-mass baby (Wylie, 1987:2).

It is culturally expected of mothers to produce children, irrespective of the number of children they produce. It can lead to producing babies with a low birth mass due to multiparity, which predisposes a pendulous abdomen and pregnancy complications. This attitude can be thrashed out by educating the society as a whole about the importance

of a smaller number of babies and the prevention of low birth-mass babies. Education can change the attitudes of people, birth complications can then be prevented, with a decrease in the number of low birth-mass babies born (Wylie, 1987:2).

2.1.2.4 *Attitude towards utilisation of health care services*

Culture plays a major role in the utilisation of health services because in some cultures women are not allowed to leave the family compound to visit a health service or to be attended to by a male health worker. The health service is regarded as foreign to their own traditional concepts of health care. This attitude can lead to the birth of premature babies as screening by doctors are not done in time (Wylie, 1987:2).

Many women are delivered of babies by traditional attendants or other females, such as family members or neighbours. The problem lies with the consequences, the best possible care might be or is within the formal health care system. The health care system prevents maternal death, threats infections and prevents unplanned pregnancies. This is not the case with the traditional healer's system, resulting in babies being born with a low birth mass (Wylie, 1987:2).

If unplanned pregnancies are prevented and infections which are possible causes of low birth mass are prevented, the incidence of low birth-mass babies may decline. Values and standards of behaviour provide powerful motivation. For example, if one group of people values prevention, the group will probably attend health care services and

therefore prevent complications such as low birth mass. If a group does not value prevention, the members will not attend the health service, even if it is free (Stanhope & Lancaster, 1988:92).

Women respond to their culture and norms: some therefore expect childbirth to be agonizing, while others cope with it as if it were an everyday occurrence. Factors influencing such behaviour are past experience, expectations and ideas about the health care services. Women who have utilised the services in the past find it easier to do so with a next pregnancy because of their acquired knowledge and experience about the prevention of maternal complications and low birth-mass babies (McInrney, 1988:38).

Many mothers feel like strangers in a hospital and prefer the help of a traditional birth attendant because they feel more free and comfortable with them. Family-centred care is an attitude rather than a hard and fast rule. Not all women are happy to produce babies and not attend a health care service, but they cannot utter a word because of sex discrimination. The stress associated with this lowers the health status of a woman, and can therefore result in premature labour and giving birth to a baby with a low birth mass (Kiebel & Wagstaff, 1991:116).

2.1.2.5 *Marital status*

Most of the teenagers are unmarried at the time of a pregnancy and when giving birth and this can be a reason why they do not utilise a health service. The non-utilisation of

the health service can lead to the birth of a low birth-mass baby. Teenage girls are sometimes too young and lack knowledge of the existence of health services and the benefits of using such a service (Marlow, 1977:37).

Health costs are constantly rising and together with a lack of financial assistance some people cannot cope, irrespective of whether they are aware of health services or not. If unmarried, it poses the additional problem of financial support which can cause such stress and complications that premature labour occurs and a low birth-mass baby is born to the mother. Some mothers hide their pregnancy due to the fact that they are unmarried - to attend a health service is in a way exposing them to the public, so they would rather refrain from utilising the health service (Marlow, 1977:37).



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2.1.3 *Spiritual causes and prevention*

People following the religion of the Jehovah's Witnesses do not accept medical treatment. They believe that it is God's will for them to live and to die. When the time arrives for them to die, they will not prolong life by means of medication. This means that they do not utilise any health service, which may have the result that they suffer maternal complications and give birth to low birth-mass babies, especially due to the lack of any screening during the course of a pregnancy. According to them it is stated in the Bible that a woman shall struggle to give birth, and any abnormality that they encounter during childbirth is regarded as God's will. Even in a dire emergency women cannot change from this view as they are still dependent on their husbands, who will stick to

this belief and this may very seriously affect labour. In cases where a man is the decision maker, he should negotiate that the birth attendant transfer the woman in time to be assisted by health care (Gcaba, 1990:29).

The traditional birth attendant is trusted by her community as she shares the beliefs of that community. Her decision to transfer a woman to a health care centre will be accepted and respected. Community involvement as a strategy for attaining health for all by the year 2000 is thus put into practice. The community gets involved in training birth attendants, building formal health services, building water reservoirs and improving the environmental hygiene. This will also improve the quality of life and obstetric care (Gcaba, 1990:31). Village health workers can also be trained to detect early signs of labour and other problems related to maternal life, in order to be able to refer the woman to a health service in time and lessen traumatic child bearing. The family must be given health education that points to the positive impact on overall health and the family may be supported to make their own choice. This is, however, always difficult with a single mother, as stress on her may affect the pregnancy which may lead to delivery of a low birth-mass baby (Gcaba, 1990:31).

Spiritual support given to a pregnant woman can include quotations from the Bible that are applicable to the situation, and prayer. The family's particular religious leaders can also be contacted for support. Spiritual support can raise the standard of a mother, and that prevents stress leading to premature labour (Nolte, 1990:23/24).

2.2 External environment of the mother

2.2.1 *Transport services and distribution of health services*

A woman's access to a health service depends on factors that affect the population as a whole. These factors include the availability of transport, trained health workers, supplies and equipment (Wylie, 1987:2).

Transport is a major reason that some people refrain from utilising the health service. In some areas there is a lack of transport due to the geographical layout of the particular area. People find it difficult to go to a health service because they have to walk long distances before arriving at a transport depot and often still have to travel a long way by bus before reaching a health service (Kiebel & Wagstaff, 1991:115). This reluctance to utilise a health service due to the lack of transport leads to maternal complications.

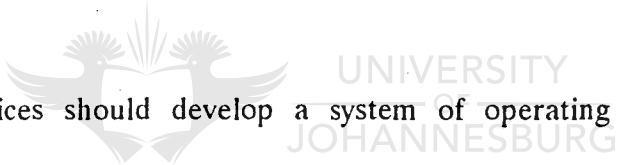
Mothers from Siyabuswa who visit this specific hospital in Pretoria that was mentioned previously, pay R28,00 for a return bus trip and then still have to pay R20,00 for the health service. The cost of R48,00 per visit is very high for disadvantaged families, and leads to non-utilisation of the health service. The high-risk mothers will end up with low birth-mass babies and other maternal complications.

This can be prevented by the proper distribution of health services, that is, they must be situated in the rural areas within easy reach of the people and there must be an adequate number of health services to meet the needs of the people of that particular

area. Sufficient primary health care must also be provided to ensure early detection and referral of the patient in time to prevent maternal and neonatal complications, especially low birth mass.

Maximum decentralisation, together with the application of the principle that health services should be provided on the lowest level at which they can be rendered effectively and through which the highest degree of efficiency will be ensured, should be the primary goal for health care in this country.

2.2.2 Hours of operation of health services

The logo of the University of Johannesburg, featuring two stylized birds facing each other with a sunburst above them, and the text 'UNIVERSITY OF JOHANNESBURG' in a light grey font.

The health services should develop a system of operating around the clock to accommodate the needs of the community. Many people cannot leave their jobs to visit a health clinic because their pay will be cut off or time will be deducted according to the time spent at a clinic. Due to the above-mentioned factors people refrain from utilising health services. Health services must be equipped in such a manner that people can be helped immediately, instead of spending a day there. Health services should operate after hours for those who cannot come for antenatal care during the day. This can decrease non-utilisation of the health service and prevent the premature birth of babies with a low birth mass (Kiebel & Wagstaff, 1991:15). Nurses should use a visiting system to be able to attend to more than one person at a time. Such a system will alleviate the waiting which is generally associated with utilising a health care centre.

Health centres that operate only during the week do not give those people who also have to work on the weekend a chance of using the service. The hours of operation of a health service should therefore also include the weekends, even if it is open for only a few hours.

People are willing to utilise the health services if they have some other alternatives. Many people, however, cannot afford to leave the jobs they value in order to go to a health clinic - they fear losing their jobs. This can cause strain in a woman's mind, i.e. to lose that job would undermine her health status, putting her at high risk and possibly even lead to premature labour (Montoya, 1987:2).



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2.2.3 *Political issues in Pretoria*

Political groups of unknown origin in the recent past sometimes did affect people who attended this specific hospital. The hospital workers were on strike for increased wages while other persons from outside the hospital were involved in fighting workers on the hospital premises. These outsiders prevented patients from entering the gate to the hospital: people coming for health service were sjambokked, taxis were hijacked, stoned or burned. People were afraid to visit the clinic and some women who stayed at home may have experienced problems such as ruptured membranes, which predisposes low birth mass.

Other communities, however, did not experience politically related problems. The neighbouring community has only one ambulance operating in the township. Mothers working in the white suburbs were brought in by their employers and the city council ambulance. There was no threat to white employers bringing their workers to the hospital.

During stay-aways some patients were turned away at the hospital gates and only those who were seriously ill were allowed to enter. This had an impact on the mother who had already started labour pains and might deliver at the hospital gate. Another example of the effect on a mother was when she experienced a problem on that particular day, for example bleeding in the case of a threatening abortion, and was turned away at the gate - being admitted to hospital for bed rest could have prevented the delivery of a low birth-mass baby.

The strike caused many people to refrain from using the health service and nobody told those people in isolated areas when the strike was over. Other hospitals that were not on strike were warned not to admit patients from the striking hospital - the idea was that hospitals should support the striking hospital.

Decisions concerning health care services are done at all levels and within the branches of the government. These decisions shape the health care policy-making activities. The government often gives financial support to one group rather than to another. In most cases it is the disadvantaged group that suffers. Such a decision influences the health

care resources of both groups. Health policy decisions have broad implications on economic growth, resource allocation and the development of health care field. The above-mentioned has an impact on the underprivileged which for whom the health care service are mostly always inaccessible, which can predispose them to complications such as delivering low birth-mass babies, due to a lack of the proper maintaining of and the education that a health centre can provide.

Policy making includes planning health resources, developing and reviewing professional standards and organisation. Autonomous agencies such as the WHO are established with the aim of providing an international worldwide service to promote health. They cooperate with those concerned with health efforts and coordinate biomedical research to improve health. Their efforts are based on the statistics of that particular country for their allocation of resources to meet the demands and health needs (Sheriff, 1982:346).

Women are taken on to do a man's work, women are thus exploited for the sake of being paid a low wage. Some women have no maternity benefits and some work until late in the pregnancy. Some who want to go on maternity leave do so without pay. Strain and stress are factors contributing to a woman delivering prematurely and ending up with a low birth-mass baby. Strain may cause the membranes to rupture and labour to begin because the baby cannot be retained once the membranes have ruptured (McInrney, 1988:37).

Blacks are disadvantaged and have no equal rights: rights to equal opportunities, rights to happiness, rights to dignity. To black South African rights to happiness and life do not exist as blacks generally tend to have fewer medical and educational facilities and a lower family income. They face a high unemployment rate and a shorter life expectancy.

Medical facilities offered to blacks and whites differ considerably. Subsidies by the state for education of black and white pupils differ. Blacks in South Africa do not enjoy equal access to health services than other groups. Some health services are for whites only, and only a few whites actually utilise them while a large number of blacks are sometimes without a health service. The increase in the incidence of low birth-mass babies among black is caused by the lack of sufficient health services for them.

2.2.4 Cultural aspects

Cultural background is often not considered when a health care centre is planned. Certain diseases are associated with particular activities that the people engage in (Sherrif, 1982:346). Low birth mass is said to be a common occurrence among blacks due to nutritional deficiencies and strenuous jobs performed by black women - hence the distribution of health services in most cases affect black women. Few health service centres are situated in the rural areas where most of the rural black women live - leading to their problem of being "victims" of low birth-mass babies (Sherrif, 1982:346).

According to eye witnesses some women were working for building contractor companies in 1992. Black women were assisting with bricklaying and painting, some were even digging foundations for houses. More energy is consumed in this type of job and this then adds to the poor nutritional habits found in the disadvantaged group. Lacking body energy due to nutritional insufficiency is associated with a low birth-mass and decreased health status of the mother. During the digging of a house foundation the continuous bending up and down may cause early placenta separation, leading to premature labour and resulting in a low birth-mass, precipitated by possible foetal distress.

2.3 Foetal causes

2.3.1 *Physical causes and prevention*



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Multiple pregnancies may present the clearest picture of pre-term births. Current complications that predispose the mother to low birth mass are foetal abnormalities and amniotic fluid retention (Taeusch *et al* 1991:88). Intra-uterine growth retardation due to maternal malnutrition can bring about a low birth-mass baby, irrespective of gestational age. Foetal distress leads to premature labour and sometimes the mother has to be delivered by a caesarean section to save the baby. If this happens prior to term, the baby will naturally have a low birth mass. Maternal hypertension and kidney dysfunction may predispose the baby to low birth mass due to an insufficient supply of blood to the placenta - leading to growth retardation of the foetus, with the end result of a low birth mass (Marlow, 1977:88).

Breech presentation is another factor that can lead to low birth mass because sometimes when the external version is done the placenta may detach and premature labour may result. Injury to the foetus, as in the case of an accident, may make it impossible for the foetus to be carried to term. An Rh incompatibility may also predispose prematurity due to severe sensitisation (Marlow, 1977:187).

The greatest preventative measure to reduce the number of premature births is adequate prenatal care for all prospective mothers. The incidence of prematurity and low birth mass are increasing because of the growing number of teenagers who become pregnant. Many of them are not physically fit to meet the demands of a pregnancy. Maternal care is provided to protect the infant as well as the mother, because the longer the foetus is retained in utero, the better its chances of survival (Marlow, 1977:188).

3. SUMMARY

In this chapter all the factors relating to low birth-mass babies were discussed under the headings of the internal as well as external environments of the mother and the foetus.

CHAPTER 3

METHODOLOGY

1. INTRODUCTION

The goal of this study is to determine the causes of the high incidence of low birth-mass babies and how it can be prevented. In this chapter the methodology used to obtain the objectives, is discussed.

2. RESEARCH DESIGN



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The qualitative exploratory and descriptive design in the form of a case study was used in the context of a specific hospital in Pretoria.

3. RESEARCH METHOD

3.1 Population

The population was mothers of all low birth-mass babies admitted to the neonatal unit of this specific hospital.

3.2 The sample

Ten mothers of low birth-mass babies were selected as the babies were admitted to a low birth-mass unit. It was of no significance whether the mother was a lodger or an in-mother. Only mothers who gave their permission were included in the study. The only criteria for inclusion in the sample was that the baby of the mother who was interviewed, had to be admitted to a low birth-mass unit.

3.3 Data gathering

Data gathering was done by means of semi-scheduled interviews and conducted in a language preferred by the interviewee, that is, the subject. The interviews were taped by means of a tape recorder to ensure that all the information would be available for analysis. Field notes were also made immediately after the interview to ensure accuracy. Permission for the interview was asked of the subjects and the purpose of the study explained to them (see Addendum A). The subjects were assured that their anonymity would be maintained. The medical records of the subjects were also studied for some medical and obstetric information. The information from both the interview and the medical records was gathered according to an interview schedule (see Addendum B).

The objective of gathering data was to find answers to questions by means of scientific methodology. The scientific research question was precise and was based on the literature study which acted as theoretical framework.

3.4 Pilot study

A pilot study was carried out on one subject. The pilot study helped to test the instrument. The complete set of steps for data gathering was followed in order to detect any flaws that could be avoided in the main study. Following on the research of the pilot study, no major changes were required for the actual study.

3.5 Ethical dilemmas

Permission to conduct the study was requested from the superintendent of the specific hospital. Permission for the interview was obtained from each subject, in order to ensure continued cooperation. The subjects were informed that the aims of the interview were:

- * to detect the reason for low birth-mass babies
- * to prevent the causes
- * to assess the health needs of the patient
- * to improve the health requirements by doing strategic planning.

The subjects were told that they had the right to refrain from participating if they so wished. They were also told that a tape recorder would be used during interviews and that their names would not be linked to the information collected. The population consisted of mothers who had given birth to low birth-mass babies. They were informed that they were entitled to know the results of the study. These mothers were also told

that nothing would happen to them if they did not wish to participate in the study. They were informed that the semi-structured interview would be used.

3.6 Limitations of the study

In-depth information was collected from the participants. Interviews were conducted in a quiet, side ward of the low birth-mass unit. The setting was not a natural one, but the environment was less threatening.

Unexpected limitations were encountered when some subjects were afraid of talking about their failure to attend the antenatal clinic. Some subjects, after it was explained to them that antenatal care was not compulsory, refused to participate in the study. Overall however, only a few refused to participate. Some subjects were afraid of participating, irrespective of the assurance that they would remain anonymous. Some felt guilty for not attending the clinic and felt that they had been the cause of the low birth mass of their babies - they feared that any information given by them would have legal implications.

Only 10 mothers were included in the study. The information given by the subjects was recorded in English and no difficulties were experienced in recording the information in the subject's home language.

3.7 Reliability and validity

In order to improve the reliability and validity of this study the following was done according to Woods & Catanzaro (1988:136):

- * The role of the researcher was identified. Although it may have had an influence on the fact that some people were afraid to commit themselves to the interview, this was limited to a minimum by explaining the situation to the participants.
- * The context (social, physical and interpersonal) in which the data was gathered was clearly defined.
- * Field notes were made immediately after the interview to ensure accuracy.
- * The strategies used for the gathering, analysis and description of data, were described in detail.
- * The interviews were transcribed verbatim.
- * The participants were selected strictly according to criteria.
- * The findings were correlated with findings of literature

3.8 Data analysis

Data was analysed by grouping the themes together. A column was allocated to each subject according to the grouping of data. A cross case analysis was done by entering the necessary information in the appropriate column.

After that a table of distribution was drawn up for an easy comparison of the subjects. Tape recordings were listened to, to record any data that had not yet been recorded in writing earlier.

4. SUMMARY



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In this chapter an outline of methodology was given while the results will be discussed in the next chapter.

CHAPTER 4

RESULTS OF RESEARCH

1. INTRODUCTION

The results of the research is going to be presented in this chapter. The main objective of the research was:

- * to detect possible factors that contribute to low birth-mass babies.

2. CROSS CASE ANALYSIS



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The table of cross case analysis follows on the next page. In Table 4.1 data was analysed by grouping the themes together. Each subject had a column according to the grouping of data. The particular information was entered in the relevant column of the cross case analysis. Please refer to Table 4.1.

Case no.	1	2	3	4	5	6	7	8	9	10
I. Socio-economic data										
Age	15 yrs	30 yrs	23 yrs	19 yrs	34 yrs	27 yrs	31 yrs	43 yrs	38 yrs	31 yrs
Main support	Mother	Husband	Uncle	Husband	Husband	Mother	Self	self	Grand-mother	Mother
Marital status	Single	Married	Single	Lobola pd	Lobola pd	Lobola pd	Divorced	Lobola pd	Single	Single
Total income p/month	R580	R1 980	Unknown	R600	R1 000	Unknown	R1 400	R200	R295	R200
No. in house	4	8	9	3	2	4	4	2	4	5
Housing	-	-	-	1 rm shack	1 rm	4 rm house	9 rm house	Servant rm	4 rm house	4 rm house
Highest std passed	Std 8	Std 9	Std 5	(ZoZo hut) Std 6	Std 7	Std 10	Std 10	Nil	Std 8	Std 3

Table 4.1

Case no.	1	2	3	4	5	6	7	8	9	10
Employment status										
Before	No	Yes	No	No	No	No	Yes	Yes	No	No
During	No	Yes	No	No	No	No	Yes	Yes	No	No
Smoking										
Before	No	No	No	No	No	No	No	No	No	No
During	No	No	No	No	No	No	No	No	No	No
Use of alcohol										
Before	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Yes	-
During	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	-
Emotional support										
Yes/No	Yes	Yes	Yes	No	Yes	No	Yes	No	Yes	Yes
By whom	Mother	Cousin & husband	Friends & boy-friend	-	Husband	-	Staff at work	-	Grand-mother	Aunt

Case no.	1	2	3	4	5	6	7	8	9	10
2. Obstetric data										
Parity	0	1	0	1	3	2	0	5	5	1
Gravida	1	3	1	1	4	3	2	6	6	3
Abortions	-	1	-	-	-	-	-	-	5	1
No. of live babies	-	1	-	1	3	2	-	5	-	1
Still births										
Age of youngest	-	6 yrs	-	11 months	7 months	4 yrs	-	8 yrs	0	10 yrs
Maternity leave										
Taken, no. of weeks	Not taken	Not taken	N/A	N/A	N/A	N/A	Not taken	Not taken	N/A	N/A
If not taken, why?	Un-employed	Was still early	Scholar	Un-employed	Scholar	Un-employed	Was still too early to be taken	Does not exist where she works	Un-employed	Un-employed

Case no.	1	2	3	4	5	6	7	8	9	10
3. Place of attendance of health care										
Hospital	Mamelodi	Kalafong	Nil	Nil	Mamelodi	Mamelodi	Mzinoni		Mamelodi	Mamelodi
Clinic										
Private doctor										
No. of visits	4	6	Nil	Nil	4	1	4	Laudium 3	4	3
Reason for attendance	Healthy mother & baby	Healthy mother & baby	Nil	Nil	Healthy mother & baby	Healthy mother & baby	Healthy mother & baby	Healthy mother & baby	Healthy mother & baby	Healthy mother & baby
Reason: not attending	-	-	Was not told to - transport fee high: R9,00	Was unsure of pregnancy	-	-				

Case no.	1	2	3	4	5	6	7	8	9	10
4. Present experience										
Accessible health service in kilometres	2 km	2 km	13 km	½ km	2 km	½ km	½ km	½ km	1½ km	½ km
Transport available	Yes	Yes	Yes	Walking	Yes	Yes	Very near	Yes/Near	Yes	Yes
Return fee	R2,60	R1,90	R4,60	Walking	R2,60	Walking	R1,60	Walking	R2,60	R2,60
Cost at the care centre	R29 per visit	R74 for whole service	Unknown	Unknown	R8,00 per visit	R8,00 per visit	Unknown - used medical aid	R30,00 per visit	Free	R8,00 per visit

Case no.	1	2	3	4	5	6	7	8	9	10
6. Maternal complications										
Toxaemia			Yes	Yes	Yes	Yes				Yes
Hypertension										
Placenta praeria										
Placenta abruptio										
Ruptured membrane prematurely										
Others							Eclampsia	Eclampsia	Type II deceleration	

Case no.	1	2	3	4	5	6	7	8	9	10
7. Neonatal data										
Apgar score										
at birth	5/10	5/10	5/10	4/10	5/10	4/10	3/10	7/10	7/10	7/10
after 5 min	7/10	7/10	7/10	7/10	8/10	7/10	10/10	10/10	10/10	9/10
Resuscitated										
Yes/No:										
With oxygen										
mask	-	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Ventilated	Yes	-	-	Yes	Yes	Yes	Yes	Yes	Yes	-
Birth										
mass	1,50 kg	1,66 kg	1,10 kg	1,45 kg	1,2 kg	1,030 kg	900 g	1,6 kg	1,2 kg	815 g
Weeks of gestation										
	35 weeks	34 weeks	32 weeks	32 weeks	34 weeks	29 weeks	32 weeks	30 weeks	32 weeks	33 weeks

2.1 Age distribution

Table 4.2 illustrates the age distribution of the mothers. It is easy to deduct from this Table that the mothers who participated in the study were between 15 and 43 years old.

Table 4.2 Age distribution of mothers

Age	Number of subjects
13 - 17	1
18 - 22	1
23 - 27	2
28 - 32	3
33 - 37	1
38 - 42	1
43	1

2.2 Parity

Table 4.3 indicates the parity of the mothers: the number of children per mother that could be a contributing factor to the birth of a low birth-mass baby.

Table 4.3 *Parity of mothers*

Parity	Number of subjects
0	2
1	3
2	1
3	1
4	1
5	2
6	-
7	-
8 and above	-

2.3 Educational level of the mother

Table 4.4 depicts the educational level of the subjects who participated in this study. Only two mothers had reached Standard 10 and there was one who had had no schooling. This could be a factor contributing to the non-utilisation of the health services since lack of knowledge could contribute to low birth-mass babies.

Table 4.4 Educational level of the mothers

Standard completed	Number of subjects
No schooling	1
Sub A	-
Sub B	-
Standard 1	1
Standard 2	-
Standard 3	1
Standard 4	-
Standard 5	1
Standard 6	1
Standard 7	1
Standard 8	2
Standard 9	1
Standard 10	2

2.4 Antenatal attendance

Table 4.5 illustrates the number of visits to the antenatal clinic. According to the Table some subjects did not go an antenatal clinic at all. Failure to visit a clinic can predispose the mother to deliver a low birth-mass baby because screening could point to possible problems, and conditions such as hypertension, that predispose premature labour, could be treated in time.

Table 4.5 *Antenatal attendance by mothers*

Number of visits	Number of subjects
No visit	2
1	1
2	-
3	2
4	4
5	-
6	1
7 and above	-

2.5 Marital status

Most of the mothers were not married and for some only lobola had been paid. The fact that they lack moral support from husbands can predispose them to stress and premature labour, contributing to the delivery of low birth-mass babies. Table 4.6 shows the marital status of the mothers.

Table 4.6 *Marital status of the mothers*

Marital status	Number of subjects
Married	1
Single	4
Divorced	1
Widowed	-
Separated	-
Lobola paid	4

3. SUMMARY

In this chapter the results were presented in the form of various tables. The required conclusions will be drawn in the next chapter.

CHAPTER 5

CONCLUSION AND RECOMMENDATIONS

1. CONCLUSION

Low socio-economic factors play an important role. Most of the mothers were single and unemployed before and during pregnancy. Most mothers were the providers of food and clothing for themselves and for their children. If unmarried during pregnancy, this predisposed them to undernutrition, a factor which could contribute to low birth-mass babies.



The status of education plays a role in deciding about utilising health services. An educated woman can make a decision on her own, which is rare in the case of an illiterate woman. In this study only two women had finished school and passed Standard 10.

Emotional support is also imperative to a pregnant mother in order to prevent the stress that can contribute to the birth of a low birth-mass baby. High parity is a risk and can predispose a mother to having a low birth-mass baby. Spacing of children is also necessary to enable the mother to cope with the upbringing of the next baby. If the mother is pregnant while her youngest is seven months old, her condition poses a problem and causes

stress - even more so if she is a single parent - and this can lead to the delivery of a low birth-mass baby.

Maternity leave must be taken early, at least at 24 months, to prevent strain and the infections which can be acquired in ordinary working surroundings. Mothers must attend antenatal clinics regularly according to the clinic's requirements so that possible complications can be monitored. The highest attendance was only six visits and that is not enough.

The very real high costs for having to travel long distances and for visits to clinics usually cause some mothers not to attend clinics. This, however, was not the case in this particular study as some mothers were within walking distance of a clinic but did not attend regularly.

Maternal complications such as pre-eclamptic toxæmia and toxæmia were the greatest causes of premature labour that resulted in low birth-mass babies. These conditions could be monitored at the clinic if a mother started going to the clinic early in her pregnancy. The clinic could help control her high blood pressure and raise her health status.

2. RECOMMENDATIONS

2.1 Introduction

In this study it is recommended that health education about those factors that can improve health be done by means of health talks, especially to mothers who are unemployed. Health talks should include education about existing health services and how to utilise these services. Primary health care should also be emphasised: the fact to stress is reaching the WHO's objective of health for all by the year 2000. Health services must be accessible, affordable and be within easier reach of the general population. The objective of health can only be reached if people are made aware of the above through health education.



2.2 Socio-economic data

The age distribution of the mothers who participated in the study was between 15 and 43 years. At 43 a mother faces many risk factors such as a low birth-mass baby. At the age of 15 a mother is still too young to cope with the demands of a pregnancy. Health education about contraception is needed to prevent pregnancy at an early age and when the mother is unmarried. As only two mothers had an income of more than R1 000,00 per month, health education about buying and preparing nutritious food is necessary in order to improve the health status, especially during pregnancy.

Since most of the mothers live in sub-economic houses they have to be taught the importance of personal hygiene to prevent diseases caused by even a droplet of infection. The lever of illiteracy can be improved by formal and informal education.

Unemployed mothers, especially those with no support, can be advised to do piece work, such as washing and cleaning, in the community. This type of work they can stop doing during the pregnancy. They can also be taught to start little vegetable gardens which can be a source of income for them.

Although nobody participating in this study smoked, it is a known fact that smoking undermines health and contributes to placental dysfunction, which contributes to low birth-mass. Alcohol does not contribute to good health and also has adverse affects on a pregnancy. Emotional support is essential during pregnancy to prevent the stress that may lead to the delivery of a low birth-mass baby.

2.3 Obstetric data

The highest parity was 5 and the highest gravida 6. High parity is a contributing factor to low birth-mass. The number of abortions indicated the incompetent os. Stillbirth and the lack of properly spacing children can put the mother at risk. Mothers should attend antenatal clinics in order to prevent complications that may arise and lead to low birth-mass

babies. Mothers must be taught the importance of taking maternity leave early, at about 24 weeks or according to the doctor's advice, to prevent premature labour. None of the working mothers who participated in the study took maternity leave, and other mothers were not aware of the existence of something like maternity leave. Health education in this regard is therefore imperative.

2.4 Place of attendance

Mothers must be made aware of the existing health services and their accessibility and mothers must be taught the importance of utilising these health services. Mothers must also be told about free services, such as those offered by the City Council Clinic so that any birth complications be minimised. Mothers must be advised to attend antenatal clinics according to the antenatal schedule for monitoring a pregnancy. Some of the mothers who participated in the study did not attend a clinic and were not nulliparas. It is essential that health talks to expecting mothers stress the importance of regular visits to clinics.

2.5 Present experience

Mothers usually live far from a health service. Health services must be distributed in a community according to the needs of that community. In Section 30 of the Health Act (Act 63 of 1977) provision is made for those who live far from health services. People in

distant communities must be informed about mobile clinics in the area and how to make use of these clinics. All should also be taught to use public transport rather than the more expensive private transport. The cost for health service at a hospital need not be paid immediately with each visit, it can be paid later when the mother has gone back to work or has somebody who assists her financially. Mothers should be encouraged to come to a hospital, to come for medical assistance, and any financial and social problems should be referred to a social worker.

2.6 Past experience and use of health services

Three of the mothers participating in the study had no past experience of a health service. On their first visit to a health service such mothers should be educated about the service and its use, and about the importance to her and her baby of frequent visits.

The other subjects in the study used castor oil, tea of Zion, hot steam and isiwasho. The inyangas must cooperate with doctors with regard to the use of these preparations, in order to prevent that too potent concentrations of these preparations result in diarrhoea and hasten labour, thus resulting in the birth of a low birth-mass baby. Mothers who do not know anything about being pregnant and what to expect in labour must be taught about the entire process, when to expect labour to take place and also about any signs of abnormality.

2.7 Maternal complications

Mothers must be made aware of the fact that not all pregnancies develop normally. Complications must be highlighted to encourage the mothers to attend antenatal clinics for monitoring. It must be emphasised that some factors cannot be prevented, but some can be treated when they arise to prevent early labour and the birth of a low birth-mass baby.

2.8 Neonatal data

At the point when labour has started, the situation is irreversible. Babies with a low Apgar can be resuscitated successfully and the Apgar monitored after 5 minutes to determine the baby's response. It is essential that high-risk mothers deliver their babies in hospital where equipment for resuscitation and ventilation are available. Mothers must be encouraged during their pregnancy to maintain good health to prevent the delivery of low birth-mass babies, as facilities to care for such babies are scarce and some babies die soon after birth. The cause of death could be put down to the fact that such babies lack surfactant to expand their lungs to be able to breathe properly. In this study the minimum birth-mass was a mere 815 g - due to its severe prematurity it was impossible to ventilate the baby.

2.9 Place of birth

All the mothers who participated in the study delivered their babies in hospital. However, mothers in general must be taught the importance of delivering their babies in a hospital or health centre which has facilities for resuscitation to prevent neonatal and maternal death. A caesarean section that has to be done because of complications, and the resulting care for mother and baby, can only be done at a hospital and not at home. Of all the babies born to the mothers who participated in this study, one died. If for every 10 babies born one dies, ie. 10 babies die per 100 babies born, the death rate is high. Health education through primary health care is necessary to prevent low birth-mass babies and to uplift the health status of pregnant mothers.



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2.10 Education of mothers

The prevention of teenage pregnancy is imperative and mothers with high parity must be encouraged to be sterilised. Mothers must be educated about dietary requirements during pregnancy and the preparation of nutritious food, so that the body can properly nourish the unborn baby and thus prevent low birth-mass that results from intra-uterine growth retardation.

Physical exercise is necessary to keep healthy and to encourage blood circulation and oxygenation to the baby. Stress must be reduced through the moral support of the family. It is therefore imperative to avoid pregnancy outside marriage as it causes stress because of the lack of proper financial support for mother and child.

Mothers must be educated to abstain from smoking and using alcohol, factors which undermine good health. They must also be educated about the need to take maternity leave, that it is necessary for the health of both mother and child. Delivery at a health centre is imperative so that abnormalities which were undetected during the pregnancy can be dealt with by, for example, a caesarean delivery. Some other factors which cannot be prevented, can however, be treated and the mother's life saved.

2.11 Recommendations to improve the training of nurses

Nurses and midwives must be taught the causes for and prevention of low birth-mass, especially in areas where low birth mass is prevalent, as at the specific hospital used in this study. The curriculum for training must include a number of periods to address this issue. It must be stressed in primary health care that prevention is better than cure. Nurses must be taught that facilities to care for low birth-mass babies are scarce and that such babies require long-term care. Sometimes, even after long-term care, such babies have great difficulty in coping with life, and this results in more stress on the mother.

During their training nurses should be allocated to low birth-mass units to be able to understand the impact of low birth-mass, to also learn how to implement that training once they have become registered nurses.

2.12 Recommendations to improve research

Further research is imperative to determine other factors which cause low birth-mass. New knowledge must be generated and old knowledge validated to be able to improve the overall condition of health services in this country.

3. SUMMARY



Mothers must be taught about family planning, and especially young teenagers. Instruction about family planning must start at an early age as some of the mothers in this study were only 15 to 19 years old, and still too young to cope with the demands of a pregnancy.

Parents must also be involved in teaching their children to refrain from sex prior to marriage because a baby is a burden on a single mother, especially a mother without any income or one with a low income.

Job opportunities must be created to improve the status of women who are unemployed at present. The community must help in this project, the government alone cannot provide for everybody.

Emotional support to the pregnant mother is essential in order to alleviate strain and stress. Once the problem of lack of emotional support has been identified during a visit to a health care centre, a community nurse can teach the family of the pregnant mother how to support and encourage the mother.

Mothers with high parity are at risk and they can be advised to be sterilised. The spacing of babies is essential to provide the mother sufficient time to recuperate and rest.

Maternity leave is essential. Mothers must be taught at a clinic about the importance of taking maternity leave early to prevent any maternal complications.

Mothers who have already given birth to a low birth-mass baby must be told the reason why it happened, eg. pre-eclampsia or syphilis. This must be done and the mother told of the importance of attending an antenatal clinic during her next pregnancy so that complications resulting in the birth of a low birth-mass baby can be prevented.

Lectures on low birth-mass babies and maternal complications must be included in the curricula of midwifery students, so that they can teach mothers and minimise the incidence of low birth-mass babies.

More research is still needed to further determine the causes of the high incidence of low birth-mass babies and how this can be prevented. Researchers must make their research known to others so that the situation can be improved. A functional approach must be followed in order to improve the practice.



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ADDENDUM A

PERMISSION FOR INTERVIEW

Permission for the interviewing was obtained from the subjects to gain their cooperation. The subjects were told that the purpose of the interview was:

- * to detect the reasons for low birth-mass babies
- * to prevent the causes
- * to assess the health needs of the patients
- * to be able to improve the health needs by doing strategic planning.

The subjects were told that they could refrain from participation. They were also told that a tape recorder would be used during the interview sessions and that their names would not be linked in any way to the collected information.

The population was the mothers who had given birth to low birth-mass babies. They were told that they had a right to know the outcome of the study. Nothing would happen to them if they decided not to participate in the study. The semi-structured interview was used.

ADDENDUM B**INTERVIEW SCHEDULE****1. MATERNAL DETAILS**

Physical history of pregnancy

- Age
- Para Gravida Abortions Stillbirths
- Number of live babies
- Age of youngest baby

2. EDUCATION

- Highest standard passed
- Technikon
- University
- None



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3. SMOKING PATTERN

Before pregnancy

During pregnancy

4. USE OF ALCOHOL

Before pregnancy

During pregnancy

5. FAMILY HISTORY

Anybody in the family with the following problems:

- Epilepsy
- Diabetes
- Others

6. MATERNAL COMPLICATIONS (from medical records)

- Hypertension
- Pre-eclamptic toxæmia
- Abruptio placenta
- Amnionitis
- Diabetes
- Epilepsy
- Eclampsia
- Premature rupture of membranes
- Urinary tract infection
- Others

7. MODE OF DELIVERY (from medical records)

- Normal vertex
- Breech delivery
- Caesarian section
- Others

8. INDICATION OF ABNORMAL DELIVERY (from medical records)

- Foetal distress
- Prolapsed cord
- Abruptio placenta
- Multiple pregnancy
- Breech
- Eclampsia

- Pre-eclampsia
- Hypertension
- Others

9. GEOGRAPHICAL INFORMATION

- Place of residence
- Type of housing
- Number of people in the house
- Nearest clinic or hospital
- How far is the health service from home
- Transport available
- Cost at the clinic
- Political issues preventing use of clinic
- Number of attendances
- Reason for attending clinic
- Reason for not attending clinic



10. SOCIO-ECONOMIC STATUS

- Married
- Single
- Divorced
- Other

Employed during pregnancy

Employed before pregnancy

If employed, did you have maternity leave?

Number of months maternity leave taken

If you did not take maternity leave, state the reason(s)

Monthly income received from?

- Parents
- Friends
- Boyfriend
- Husband

Did you receive any emotional support?

If yes, from whom?

Describe your intake per day during pregnancy

11. SPIRITUAL NEEDS

- Religion
- Use of traditional medicines
- Isihlambezo
- Isiwasho
- Others

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12. SURGICAL HISTORY

- Previous operations
- Others

13. NEONATAL DETAILS

Gestational age in weeks

Apgar at birth

After 5 minutes

Resuscitation with:

Oxygen mask:

Oxygen per head box

Ventilated:

No resuscitation

Birth mass:

Alive:

Died:



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