An evaluation of breastfeeding support activities at St Monica's Midwife Obstetric Unit and an assessment of breastfeeding levels within the first 48 hours after birth.

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DEDICATION

This work is dedicated to all those beautiful breastfed children and to all those mothers who persevere in breastfeeding even when it is sometimes painful and challenging.

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DEFINITION OF TERMS

Exclusive breastfeeding	Exclusive breastfeeding implies that no food or drink is given to infants up to the first six months of age. The infant receives breast milk only, with the exception of vitamins and mineral supplements or medicines
Primigravida	A women during her first pregnancy
Primiparous	A women with her first infant
Rooming-in	Allowing the mother and child to stay together when one or the other is hospitalised during the breastfeeding period. Unrestricted access of the child to the breast is necessary to establish and maintain lactation.
Attachment	Good attachment means that there is more areola above the baby's mouth, the lower lip is turned up and the chin is touching the breast. Effective suckling is a slow, deep suck, sometimes pausing and you may hear swallowing.
Positioning	the correct positioning of the baby to the breast is when the baby's head is straight, facing the mothers breast, with the baby's nose opposite the nipple and the baby's whole body is supported.
Demand Feeding	Unrestricted breastfeeding, where the mother is encouraged to offer the breast whenever her infant shows signs of wanting to suckle.
Expectant Women	A pregnant women. In this study the term expectant women was used to describe all first pregnant women

New mother A mother with infant in this study the term new mother was used to describe all mothers with her first child

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ABSTRACT

The Baby Friendly Hospital Initiative (BFHI) was established to change health care practice, to enable health workers to protect, promote and support breastfeeding. This initiative has been implemented at St Monica's Midwife Obstetric Unit.

However, a study has found that exclusive breastfeeding levels are still very low at St Monica's. Several possible reasons for this has been suggested, namely:

- Social economic factors such as low/poor maternal education and the need to return to employment
- Inadequate breastfeeding promotion programmes.
- Psychosocial factors
- The promotion and availability of formula and free samples

A possible explanation for the low breastfeeding frequency then could be that the breastfeeding promotion programme (BFHI) was inadequate. Given this possibility this study was devised to evaluate the key components of the baby friendly hospital initiative at St Monica's.

An important potential result is that the health workers don't educate and support or do not sufficiently educate and support expectant and new mothers.

Aim

The study examined the training, knowledge and practices of health workers and examined the extent to which health workers advised, educated and prepared expectant women for breastfeeding.

Objectives

- To identify whether all enrolled nursing assistants and midwives are aware of the policy on the importance of breastfeeding
- To identify the nature and duration of training of enrolled nursing assistants and

midwives as a prerequisite for preparing pregnant women for breastfeeding

- To identify the extent to which enrolled nursing assistants and midwives manage to impart education through training expectant and new mothers
- To examine the extent to which expectant and new mothers are aware of and trained in the knowledge and skills necessary for successful breastfeeding
- To identify the nature of support groups available after discharge from the midwife obstetric unit
- To assess the proportion of new mothers who initiate breastfeeding
- To assess the proportion of new mothers who exclusively breastfeed during the first forty-eight hours after birth

Methodology

This was a quantitative descriptive study.

Sample

Data collection

Key findings

This study reveals that all enrolled nursing assistants and midwives are aware of the breastfeeding policies and that most are appropriately trained to prepare expectant and new mothers for breastfeeding.

Preparation given to expectant women on key messages regarding breastfeeding is insufficient. However, there is a high initiation of breastfeeding within the first six hours after birth of the baby.

However, their practice, immediate postnatal care of the mothers and babies seems to have

become routine and does not sufficiently train new mothers in practical skills to manage breastfeeding

The study reveals that the lack of support group structures outside the MOU has implications for sustainable exclusive breastfeeding practices.

There is an alarming increase in the early introduction of other feeds, within 12 hours in this study. It is also clear that new mothers did not have an understanding of the concepts "demand feed" and "exclusive feeding".

Several practical recommendations which would improve the breastfeeding promotion programme were provided

ABBREVIATIONS

BFHI.	Baby Friendly Hospital Initiative
WHO	World Health Organisation
UNICEF	United Nations Children's Emergency Fund
MOU.	Midwife Obstetric Unit
ANC	Antenatal Clinic

1. INTRODUCTION

The introduction is given in two parts. The first part deals with the subject of breastfeeding policy, that is, addressing the various programmes and practices recommended; while the second part provides an introduction to St Monica's Midwife Obstetric Unit (MOU).

1.1 BREASTFEEDING POLICY, PROGRAMMES AND PRACTICES

Studies have shown that the prevalence and duration of breastfeeding has declined in many parts of the world for a variety of reasons. According to reviews carried out by Popkin et al (1983), Forman (1984), Simopoulos & Grave (1984), Kokturk & Zetterstrom (1989), Huffman (1984) and Wilmoth & Elder (1995), social factors are one of the many reasons. These include amongst others the:

- Living environment (whether urban or rural setting)
- Socio-economic status of the individual
- Maternal education
- Women's employment situation
- Commercial pressure
- Knowledge and availability of breast milk substitutes

Socio-cultural factors also determine belief's attitudes and practices. Evidence suggests that one of the determining factors in a woman's decision on how to feed her infant is the perceived or actual attitude of the father. Other members of the family, friends and the support she may have to carry her decision through, also significantly impact upon her decisions regarding breastfeeding, according to the reviews by (Freed, 1991, Fraley and Schanler, 1993)

With the introduction of modern technologies and the adoption of new life styles, the

importance attached to the traditional practice of breastfeeding has been noticeably reduced in many societies. Unwittingly, health services often contribute to this decline, either by failing to support and encourage mothers to breastfeed, or by introducing routines and procedures that will interfere with the normal initiation and establishment of breast feeding (WHO/UNICEF, 1989). Common examples of the latter are separating mothers from their infants at birth, giving infants glucose water by bottle and teat before lactation has been initiated, and routinely encouraging the use of breast milk substitutes (WHO/UNICEF, 1989).

Research suggests that breastfeeding is an ideal way of providing food for the healthy growth and development of infants and has a unique biological and emotional influence on the health of both mother and child. It provides ideal nutrition for infants and contributes to their growth and development, and it reduces the incidence and severity of infectious diseases, thereby lowering infant morbidity and mortality. Breastfeeding contributes to women's health by reducing uterine cancer, and by increasing child spacing between pregnancies. It provides social and economic benefits to the family and the nation, as well as providing women with a sense of satisfaction when successfully carried out (WHO/UNICEF, 1990).

Breastfeeding requires very little investment and has a tremendous payback for families, communities, health care institutions and governments. In poor industrialised countries such as Yugoslavia, approximately 70% of income would potentially be spent on breast milk substitutes for the first six months if breastfeeding were not an option (WABA, 1998). It was also shown that in Yugoslavia, only 30% of infants are breastfed at 4 months. If this could be increased to 70%, it has been calculated that US $449 million could potentially be saved. This might also mean that the 99,000 respiratory infections, 33,000 ear infections, 123 cases of early onset diabetes, 84 cases of childhood cancer and 152 cases of ovarian cancer, currently

experienced in that country could be averted each year. It would seem then that the cost of artificial feeding is high even in industrialized countries (WABA, 1998).

The economic benefits for those in Third World settings are potentially greater. In South Africa, for example, the amount of formula needed for the first year of life of an infant would be approximately 40kg of formula. If one tin of formula costs R19.89 for 500grams, 40kg would cost R1591.20. At least 3 feeding bottles at a cost of R17.95 would be required, totalling R53.85. Included would be 6 teats at R6.99 each, totalling R13.98. Therefore, the approximate total yearly cost for formula would be R1659.03. In addition, to prepare for the approximately 1500 artificial milk feeds during the first year of life, the cost of fuel, water and time for preparing these feeds needs to be factored in.

The minimum weekly income in South Africa is about R400.00 per week. In many instances, the cost for formula for the one year would be approximately 9% of their income. When the cost of increased illness is considered as well as the cost of loss of wages to the mother, travel to hospital, food for parents and hospital cost, the average cost of artificial feeding for one year could rise to approximately 13% of the minimum wage, a serious dent in the family's economic situation.

One of women's distinctive contributions to society lies in their ability to breastfeed, a contribution undervalued socially and economically. Breast milk and colostrum provides all the nutrients required for the physical and mental development of the infant. More importantly, it provides a natural immunity by supplying anti-infective constituents thereby helping to prevent infections caused by contaminated artificial feeding bottles and teats and reduces the risk of developing obesity and allergies (WABA, 1998).

Reid (1993) commenting from Brazil, states that all women should be enabled and given the choice to practice exclusive breastfeeding, for the initial six months of age. Studies carried out by Entwisle et al (1982) and Baranowski et al (1983) in developed countries, have shown that children who are breastfed exclusively for six months, tend to have overall reduced rates of childhood cancers, including leukaemia. Children are less likely to show symptoms of asthma and dermatitis or suffer gastrointestinal disturbances, or contract middle ear disease and have lowered risk of childhood diabetes. Considering both the morbidity and mortality statistics for most developing countries, exclusive breastfeeding for the first six months is suggested as a low cost, high impact health practice and provides increased assurance of child survival.

For breastfeeding to be successfully initiated and established, mothers need the active support during pregnancy and following the birth, not only of their families and communities, but also more importantly from the entire health system WHO/UNICEF (1989). Ideally, all health workers with whom expectant and new mothers come into contact, will be committed to promoting breastfeeding, and will be able to provide appropriate information, as well as demonstrate a thorough practical knowledge of breastfeeding management. This however, requires that health workers be trained and intervention programmes be implemented, in order to consciously address and combat the factors that have led to a decline in breastfeeding (WHO, 1986).

Reid (1993) in Brazil, states that institutions and programmes providing maternity services and care for the newborn, should review their policies and practices related to breastfeeding. Thereafter, they should develop breastfeeding promoting policy guidelines covering care for

the expectant, new mothers and newborn infants. They should ensure that these guidelines are communicated to all concerned staff and should undertake to evaluate their effectiveness.

While Downie et al (1996), Winikoff (1987) and Lawrence (1982) in the United States of America, reported many successful breastfeeding interventions, it has not been established whether programmes that use simple messages regarding breastfeeding and are associated with increased breastfeeding rates, are sustainable in the long term.

Participants at the World Health Organization (WHO) and the United Nations International Children's Emergency Fund (UNICEF) policymakers meeting, on "breastfeeding in the 1990's" adopted, the Innocenti Declaration on the protection, promotion and support of breastfeeding. A declaration was made that, all women should be enabled to practice exclusive breastfeeding and all infants should be fed exclusively on breast milk, from birth to six months of age. In many countries attainment of this goal requires the reinforcement of a "breast feeding culture". This, in turn, requires commitment and advocacy for social mobilization, utilizing to the full, the prestige and authority of acknowledged leaders of society, in all walks of life (WHO/UNICEF, 1989).

It would seem that society, media and political commitment influence the culture of breastfeeding, as some women make choices about their intentions to breastfeed before they are pregnant, while others make this decision soon after the birth of their babies. These decisions, it would seem, are influenced by various factors which include amongst other things, their educational level (Foreman, 1994).

In developed countries, researchers like Halley et al (1984), Niefert et al (1988), Dix (1991),

and Graffy 1992) suggest that one third to one half of women decide how they will feed their babies before they are pregnant. Their intentions to breastfeed have been found to vary with ethnicity, marital status, educational levels and age (Baranowski et al, 1983, Simopoulas & Grave, 1984 and Lizarraga et al 1992). Prior socialization, which includes how a woman herself was fed as a baby, impacts on women's initial choices (Entwisle, 1982, Doering and Reilly 1982). It seems too, that the attitudes of the male partners, and the pregnant women's perception of their partner's attitudes towards breastfeeding, may influence their decision regarding breastfeeding (Freed, 1993, Fraley and Schanler 1993).

Another crucial decision-making moment is around the time of childbirth. The factors shaping this moment of decision seem to be influenced by the attitudes of female peers, friends, sisters and relatives (Labbok et al, 1988). Male partners also influence the decision to breastfeed (Giugliani et al, 1994).

The decision regarding breastfeeding choices is further impacted upon by the perceived lack of knowledge by health workers and their inability, or unwillingness, to provide breastfeeding support to pregnant women and new mothers (Lawrence, 1982).

In South Africa, the factors shaping women's decisions regarding their breastfeeding choices seems consistent with the studies reported above. In a study conducted by Mostert (1998) in the Western Cape, it was found that as mothers levels of education decreased, associated exclusive breastfeeding practices declined. By implication, it would seem that mothers levels of education impact positively on the practice and duration of exclusive breastfeeding.

The critical role health workers could and should play in protecting, promoting and

supporting breastfeeding cannot be underestimated and should be seen in the context of their broad social commitment. Studies have shown that there are benefits in antenatal education for mothers and an associated increase in breastfeeding if their confidence and skills are developed (Davies-Adetugbo, 1996).

In a joint statement prepared by WHO/UNICEF (1990), on preparing health workers to promote and support breastfeeding, a number of essential messages that should be communicated to all health workers, were stated. These messages form a basis for understanding the relation between health services and the successful initiation and establishment of breastfeeding, and the role that the health facility, and particularly that of the health worker, should play in protecting, promoting and supporting breastfeeding.

WHO and UNICEF established the Baby Friendly Hospital Initiative (BFHI) to encourage health care facilities, particularly maternity wards, to adopt practices that fully protect, promote and support exclusive breastfeeding from birth (WHO/UNICEF, 1990). This initiative consists of ten steps to successful breastfeeding, which may be used to develop a policy to enable institutions to comply with international requirements. (Appendix A)

The "Ten Steps to successful breastfeeding" were initiated to increase awareness of the critical role health services play in protecting and promoting breastfeeding. The initiative equips health workers to provide each woman who enters a health facility, with the knowledge and support needed to make an informed decision regarding breastfeeding practices (WHO/UNICEF, 1989)

The BFHI suggests that it is the responsibility of health staff to conduct educational sessions

with pregnant women and their support members. These sessions should include the benefits of good nutrition, the importance of exclusive breastfeeding, lactation management and the hazards of using bottles, pacifiers and teats. They also need to identify mothers at risk of lactation problems resulting from the use of alcohol, tobacco, excessive amounts of caffeine, and other drugs that may be particularly harmful during pregnancy. Education and training can be done by formal group sessions and the information may be provided through the use of audio, visual or written materials.

In addition, and built into the BFHI policy, is the assumption that any new staff member joining an institution who is a recipient of the BFHI status, will be trained in lactation management.

1.2 INTRODUCTION TO ST MONICA'S MIDWIFE OBSTETRIC UNIT

St Monica's Maternity Hospital in the Bo-Kaap, Cape Town, was the original site of the study. As a result of restructuring of health services, St Monica's was relocated to its present site in Bonteheuwel, to be nearer to the community it had serves. All the midwives and Enrolled Nursing Assistants were transferred to the new MOU.

The drainage area is Bonteheuwel and Langa with a drainage population of 43,228, women in the child bearing age. The total number of deliveries in the year 2000, were 1400. The Perinatal mortality rate for the area was 33 per 1000; low birth weight rate is 13 percent. Initiation of breastfeeding was very high.

Up until the late 1980's, the new mothers were accommodated at the hospital for up to seven days, or until the umbilical cord was healed. During this time, these new mothers received all the supervision that was required for establishing breastfeeding. If they had been discharged prior to this period, new mothers were further supported through domiciliary care. During 1988, domiciliary care was discontinued as well as the reduction in the days of hospital stay to 3 days. It was observed that during this period many women were experiencing problems with breastfeeding, such as engorged breasts, no milk, and painful nipples. It was for this reason that the "Baby Friendly Hospital Initiative" was implemented and it was hoped that it would successfully address these shortcomings.

St Monica's was a recipient of the "Baby Friendly Hospital" award in June 1994, having changed its hospital policy to be in line with the "Baby Friendly Hospital Initiative". In order for this to occur a breastfeeding committee was established. Thereafter, hospital policies were reviewed and changed in line with the "ten steps to successful breastfeeding". The revised policy required that all staff working in the hospital undergo a minimum of eighteen hours of training in breastfeeding theory and practice. In this instance, approximately eighty percent of the staff of one hundred received a minimum of eighteen hours of training. Within this cohort, some staff members received substantially more hours of training. This training included personal development, advocacy skills training, as well as theory in breastfeeding management. Staff conducted several workshops on breastfeeding to create community awareness. Media support in this regard through articles in newspapers, journals and magazines, was extensive. Baby food manufacturers were not allowed to advertise or to give group discussions to mothers about their products in the hospital, or to provide sponsorship for any purpose in the hospital, and there is no free distribution of samples. During the antenatal period, hospital staff were obliged to provide all pregnant women with information about the advantages of breastfeeding, during the first and subsequent visits. Other activities included:

- Assisting all women to prepare adequately for breastfeeding during the antenatal period by means of slides, video films, demonstrations and group talks.
- Preparing mothers for skin to skin nursing of their babies
- Teaching the concept of unrestricted or demand feeding
- Teaching about myths e.g. "no milk myth"
- Doing physical examination of breasts at all visits to the clinic
- Referring those with any deformities or abnormalities of the breasts

St Monica's Information booklet (1996) (Appendix B)

The benefits of the initiative were acknowledged by staff and were visible in some ways in the hospital. However, before 1998, no evaluation or impact study had been conducted to provide empirical evidence to support the above. Mostert (1998) conducted one of the first evaluation studies (between St. Monica's and another MOU) that measured the impact of the BFHI on exclusive breastfeeding, as well as role the BFHI plays in increasing exclusive breastfeeding of infants at 3 months of age. This was a retrospective cohort study. A comparison of breastfeeding rates with a control institution was done. The results are shown in the table below.

Table A. Summary of Raw Data of Feeding Practices at St Monica's and Mitchell's Plain MOU

Feeding Status	St Monica's		Mitchell's Plain	
Mean and standard deviation of exclusive breastfeeding duration, in months	Mean	Standard deviation	Mean	Standard deviation
	1,98	0,86	1,67	0,87
No. and % of mothers exclusively breastfeeding at 3 months	No.	%	No.	%
	21	32	22	19
No. and % of mothers partially breastfeeding at 3 months	24	37	47	41
No. and % of mothers bottle feeding at 3 months	20	31	46	40

A multivariate analysis of exclusive breastfeeding at three months postpartum was done to determine which characteristics significantly influenced exclusive breastfeeding. Table B presents a summary of the findings.

Table B. The influence of various characteristics on exclusive breastfeeding at 3 months postpartum.

Characteristics	P- Value	Relative Risk
Maternal Age	P=0,86	0,97
Living with Father	P=0,09	2,00
Maternal Employment	P=0,007	0,28
Regular Household income	P=0,33	1,89
Maternal Education, matric level	P=0,01	2,05
Received Education at St Monica's	P=0,72	2,6

It is clear that maternal employment is statistically significantly associated with a dramatic decrease in exclusive breastfeeding.

Although receiving education at St Monica's is associated with a more than twofold increase in exclusive breastfeeding, this association was not statistically significant and may therefore purely be due to chance.

As the staff at the BFHI (at St. Monica's) are specifically trained to help women breastfeed through counselling and workshops, it is important to determine the influence of nurse

intervention alone on exclusive breastfeeding and the impact it plays on other forms of feeding.

While this is a useful comparative study, it did not critically analyse the training conducted by health workers nor assess the health workers knowledge base and implementation strategies adopted.