



Attitude of Working Class Mothers towards Exclusive Breast Feeding (A Case Study of Ramat Polytechnic Maiduguri, Borno State)

Ibrahim Umate, Halima Aliyu Mudi and Halima Bulama

Department Of Food Science and Technology Ramat Polytechnic Maiduguri, Borno State

Abstract: *The purpose of the study is to find out the “attitude of working class mothers towards exclusive breastfeeding” in Ramat Polytechnic Maiduguri Borno State. Fifty (50) questionnaire were distributed to get the data. The result lead to the conclusion that (62%) of Grade II Certificate holders responded on exclusive breastfeeding (40%) do not, (30%) of the degree holders breastfeed exclusively while (30%) do not. It also shows that (40%) of mothers breastfeed only, (20%) uses artificial feeding while (40%) uses both method other result shows that (40%) of civil servant breastfeed exclusively (50%) do not (28%) of the traders breastfeed exclusively (20%) did not while (32%) of other occupation responded to exclusively breastfeeding (20%) did not. One of the result shows that (20%) of the mother feed their babies artificially due to sickness, (32%) due to social engagement (30%) due to body fitness and (18%) due to poor location. The final result shows that (40%) of the respondent shows that complain about time (10%) don't want their breast to lose shape (20%) are shy of breastfeeding while (30%) experience insufficient milk. It is recommended that also working class women in Ramat Polytechnic should be encouraged on the significance of exclusive breastfeeding, babies should be fed from birth to six months exclusively and upwards, that is 18 – 24 months.*

Keywords: *Attitude, Breastfeeding, Mother, and Working Class*

Background of the Study

According to Ephram (1988), the reproductive cycle in all mammalian species comprise both the pregnancy and breastfeeding, in the absence of the later; none of those species, man inclusive can survive without a substitute. All societies recognize the importance of breast milk for the survival infants. Helsing (1992) defined breastfeeding as a process by which an infant child feeds on the breast milk provided by his mother through the nipple breast after birth. She further states that artificial feeding is the introduction of artificial feeds outside the natural breast milk. Breast milk is unequally the ideal for a baby and breastfeeding has a unique influence on the health of the infant and his mother.

Breast milk protects baby from all kind of diseases especially diarrhea and malnutrition and ensure adequate growth and development of the entire family (1994). World health organization (1996) defines exclusive breastfeeding as when an infant is feed only on breast milk from his mother of start in the labour ward and continued for six months of life. Ogala (1994) is of the opinion that despite all advantages of breast milk and breast feeding over the years and decades do a dangerous level in the

world, including Nigeria. He further states that in 1990 over 99% of nursing mothers were giving artificial milk water glucose, local herbs, to their babies in addition to breast milk from the first day of birth. This certainly led to the health of babies and children.

Margaret and Yngue, [1991] subscribes that artificial feeding came into being due to technological development in developed countries and mothers in such societies take to artificial feeding other to the strong economic status of their families or as result of their jobs. Ashikenic (1998) Postulates that children deprived of their mother's breast milk have stunted growth and die before their first birth-day, as this affects more than 80% of an average child in developing countries. He further states that advent of artificial feeding, mothers most especially working class mothers seem to have mixed feeding towards excessive breast feeding. It hopes to educate the working class mothers on the importance and benefits of breast feeding, changes or artificial feeding also on their rights to breastfeed at work for the purpose of breast feeding exclusively up to six months of life.

WHO/UNICEF selected 12 developing countries to lead the initiative, Nigeria is among the first countries to participate in baby friendly hospital initiative (BFHI). It was jointly funded in Nigeria by WHO/UNICEF, and federal university of health. All participating countries agreed to have every facility providing maternity services practice fully the ten steps to exclusive breast feeding. The baby friendly hospital initiative (BFHI] since it's establishment monitors members countries. It is one of the child surviving strategies which helps in reducing infant diarrhea diseases and malnutrition. Professional groups and non-governmental organization worried about the trends towards bottle feeding with word leaders met. A consortium of major international NGO'S formed the world alliance for breastfeeding action (WABA) in February 1991. The baby friendly hospital initiative (BFHI) was implemented in Nigeria by professor Ransome lauti in 1991 in all the 13 teaching hospitals by 1994 action on baby friendly hospitals initiatives was decentralized to four zones. The BFHI activities were carried out on zonal basis comprising zones A, B, C and D. There is a national coordinator, 4 zonal coordinator, states coordinators local government area and hospital coordinators. There are also committees namely national, zonal, local government area facility based committees. Health worker and volunteers are trained to bring about change of attitude through learning and relearning of certain skills necessary to influence change.

Statement of the Problem

Through mother's breast milk is best for babies but most working class mothers have negative attitude toward breastfeeding their children that is some prefer artificial milk because of consumer reasons (prevention of falling of their breast) and their right schedules. Most children that are deprived of mothers breast milk have stunted growth, diseases like diarrhea and die before their first birthday, due to mixed feedings of most working class mothers towards exclusive breastfeeding it predisposes the children to breastfeeding it predisposes the children to infection secondary to artificial breastfeeding.

Aims and Objectives of the Study

1. To find out the attitude of working class mothers towards exclusive breastfeeding.
2. To identify the factors that is responsible for the attitude of working class mothers towards exclusive breast feeding.
3. To determine effect of attitude of working class mothers toward poor exclusive breast feeding on affluent/children.

Significant of the Study

The importance of this study is to know the attitude of working class women in Ramat Polytechnic Maiduguri towards exclusive breastfeeding. This study would add to existing literature in the area of breastfeeding and serves as a source for further on the impotence of breastfeeding. It also helps to encourage the positive attitude of working class mother towards breastfeeding. It also enlightens mothers on the importance of exclusive breastfeeding.

Justification of Study

I observed that there is poor practice towards exclusive breastfeeding among working class mothers of Ramat Polytechnic Maiduguri.

Operational Definitions

1. **Attitude:*** A settled way of thinking of feeling, typically reflected in a person behavior.
2. **Breast:-** Upper ventral region of the torso of a primate, in the left and right sides which in a female contains the milk production during and after pregnancy.

Colostrums: Milk secreted for a few days after parturition and characterized by high protein and characterized by high protein and antibody content.

Down syndrome:- This is a condition in which extract genetic material causes delay in the way a child develops. **Exclusive:-** This typically means not with other things or not including other things.

Engorgement:- Or breast fullness is normal part of lactation which nearly all women experience when their milk come, it is also a naturally occurring or pathological condition of vessels being saturated with fluid.

Infection:- This is an invasion of body tissue by disease causing micro-organism. Their multiplication and reaction of body tissues this micro-organisms and the toxins that they produce.

Inverted:- This means to turn inside, out or upside down or to reverse the position or condition of something.

Mastitis:- This is inflammation of breast tissues, aureus is the most common etiological organism responsible, but epidermis and streptococci are occasionally isolated as well,

Anatomy of the Breast

Verrals (1980) states that breast are hemispherical swellings with tails of tissue extending towards the axilla. They are situated on each side of the sternum extending from level of the second to the sixth rib. They lie superficial to the pectorals major; external oblique and serratus anterior muscles. Campbell and less (2002), are of the opinion that breast are largely made up of glandular, adipose and connective tissues. A pigmented area called the areola which contains sebaceous glands, surround the nipple. The nipple lies in the center of the areola. During pregnancy the areola becomes darker and the sebaceous glands are more prominent (Montgomery's Tubercles). They further states that the breast comprises of 15-20 functional units arranged radially from the nipple and each unit is made up of a lactiferous duct, a mammary gland lobule and alveoli which are milk secretory cells. The lactiferous duct dilates to form lactiferous sinus before converging to open in the nipple. Contractile myoepithelial cells surround the ducts as well as the alveoli (Appendix I).

Verrais (1980) postulates that the breasts are supplied with blood from the internal and external mammary and upper intercostals arteries. Venas return is through corresponding vessels into the internal mammary and auxiliary veins. Lymphatic drainage is to the auxiliary glands and portal fissure of the liner. The lymphatic vessels of each breast communicate with one another. Nerve supply the function of the breast is largely controlled by hormone activity but the skin is supplied by branches of the thoracic nerve.

Physiology of Lactation

Van de graaff and fox (1995) are of the opinions that the control of mammary growth and development involves many hormones. Oestrogen stimulates proliferation of the lactiferous ducts while progesterone is responsible for the development of the lobules. During early pregnancy, lactiferous duct and alveoli proliferate, while in latter pregnancy the alveoli hypertrophy in preparation for secretary activity. They further states that the production of milk proteins including casein and lactalbumin is stimulated after parturition by prolactin which is a long chain polypeptide produced from the anterior pituitary gland (APG).

The fall in the levels of oestrogen and progesterone after delivery of the placenta causes increase in the secretion of prolactin. Levels of prolactin rise up to tenfold during lactation and peak levels are reached within 45 minutes of sucking but returns to normal when child is not breastfed or after weaning. When milk is secreted from the alveoli into the ducts the action of another hormone is needed in order for the baby to get the milk. They further postulates that the stimulus of sucking results in the reflex secretion of oxytocin results in milk reflex secretion of oxytocin from the posterior pituitary gland (PPG). The secretion of oxytocin results in milk ejection reflex or milk let down. It controls the cells surrounding the alveoli as well as the myoepithelial cell along the lactiferous ducts thereby aiding expulsion of milk. It also contracts the uterus (which explains why women who breastfeed gain uterine muscle tone faster than those who do not) hence, preventing post partum hemorrhage (PPH) oxytocin release can be stimulated by visual, olfactory or auditory stimuli like hearing the baby cry out but can be inhibited by stress. Thus, if a woman becomes anxious and nervous while breastfeeding, her milk will be produced but will not flow as there is no milk let down. It is therefore important for mothers to nurse their babies in a quite and calm environment (Appendix 2).

Composition of Breast and Cow Milk

Campbell and less (2002) are of the opinion that the major constituents of breast milk are lactose, protein, fat and water. The composition can even change during a feed. Compare to cow's milk, breast milk provides slightly more energy, has less protein but more fat and lactose. The major proteins are lactalbumin, lactoglobulin and caseinogens. Lactalbumin is the major protein breast milk where as caseinogens forms 90% of the protein in cow's milk. The mineral content is higher in cow's milk, particularly sodium and can be dangerous if given to a baby who is dehydrated. Breast milk contains factors like lactoferrin. Macrophages complement and lysozymes. Lactoferrin inhibits bacterial growth with exception of vitamin k, breast milk has all other minerals. It also contains Igm of immunoglobulin.

Comparison Between Human and Cow's Milk

Campbell and Less (2000) demonstrated the nutritional value of human and cow milk as shown in table 1.1.

Table 1.1: Nutritional Value of Human and Cow Milk

Composition	Human breast milk	Cow milk
Energy (Kcal/ml)	75	66
Lactose (g/100mls)	6.8	4.9
Protein (g/100mls)	1.1	3.5
Fat (g/100mla)	4.5	3.7
Sodium (mmol/l)	7	2.2
Water (m/100mls)	87.1	87.3

Colostrums

Colostrums is a yellowish fluid secreted by the breast and can be expressed as early as 16th week of pregnancy. It has a high concentration of proteins but contains less sugar and fat than breast milk. The protein are manly in form of globulins particularly immunoglobulin (Ig) A. which plays a very important role in protein against infection. Hence breast milk is baby's first immunization. Colostrums has an aperients effect thereby helps in emptying baby's bowel of meconium. Ashikeni (1998) reiterates that colestrums is socially not acceptable in some tribes (taboo attracted). That it is harmful part of breast milk and should be expressed and thrown away. Such tribes should be educated on the importance of colostrums to baby's health's. According to WHO (1995), exclusive breast feeding rate is 20% while water, during the first month of life, 29.2% are already giving supplements. It is seen that a woman's education and social class affects her motivation to breastfeed/ but how it affects such class of women differs.

Disadvantages of Artificial Feeding

1. Often contaminated with bacteria especially when feeding bottles are used.
2. Do not contains anti-infective substances, babies are often ill with diarrhea and other infections.
3. Does not contain enough vitamins for baby.
4. Has too much salts which will cause fits in dehydrated babies.
5. No lipase to digest fat
6. Allergy problems like asthma and eczema.
7. It is expensive and mothers give too few feeds or over dilute which will consequently result in malnutrition.

Care of the Breast

The care of the breast starts from the antenatal period, where the expectant mothers are taught how to care for their breast so that it will be easier for her and the oncoming infant. According to UNICEF/WHO (1993), the breast should be cleaned during pregnancy. The nipple should be washed with mild soap, oiled with Vaseline and then nipples like flat inverted and retracted should be detected early and treated

before childbirth. The treated should be by weaning nipple shields, paw paw stalk (cut round) and placed on the nipple, it forms a sort of vacuum and pulls the nipple out during pregnancy. International planned parenthood federation medical publication (1988), re-emphasis that breast enlightenment should start in the antenatal. This requires patience and a strong desire to achieve success especially with women who have never given birth.

Preparation for Breastfeeding

After delivery, the same care should be given. WHO/UNICEF (1993) declares that nipples should be cleaned before and after breastfeeding to ensure that proper cleanliness is maintained. before. So pregnant women's confidence is her ability to breastfeed her baby whether it is her first pregnancy or subsequent one. A desire to breastfeed her baby with a well formed active breast and healthy nipple, with all these characteristics of the breast, the baby should be allowed to feed on demand rather than timing. Babies should be put to breast 30 minutes after bathe to give room to clean the baby and rest. Only breast milk should be given from birth to 4-6 months of life. The breast provides the offspring with nutrition best adopted to the environment. The milk contains all food nutrients required by the baby in the right proportion.

According to international planned parenthood federation medical publication (1988), cleanliness is the first essential item to explain to each mother. Her nails should be trimmed and clean, she should not touch her nipples with unclean hands or wipe them with handkerchief. The hands should be washed at every sitting of breastfeed. Clean supporting brassieres should be used especially those meant for nursing mothers with firm and flat strips. further states that before the infant is put to breast he/she should be made comfortable by changing wet happy or pampers. Mothers should be relaxed, comfortable and position the breast in the right way to the baby's mouth.

Margaret *et al* (1996) states that if you look closely at your baby as (illustrated in appendix 3) while breastfeeding, you will notice that the nipple is inside the baby's mouth while the lips grasps the darker portion of the breast which is the areola. Before you start breastfeeding, you should adopt a position which you find comfortable for you and your baby,

Breast Condition That Can Affect Effective Breastfeeding

The following are some of the major problems associated with breastfeeding.

- a. Engorgement of the breast.
- b. Sore nipple and nipple fissure.
- c. Abscess and mastitis or blockage duct.
- d. Inverted or flat nipples.

Engorgement of the Breast

This is caused by the breast becoming full with milk, as a result of delay in starting breastfeeding, poor attachment to breast, infrequent removal or emptying because milk accumulates in the ducts causing back pressure, so that circulation in the veins and lymphatic glands become sluggish causing

engorgement. Campbell and less (2002) maintains that baby should be allowed easy access to the breast soon after delivery; mother should be advised on proper and good attachment. Sometimes a warm shower or bath enhances milk flow the breast, so that they *become soft enough* for the baby to suck. After a feed, put a cold compress on her breast, it will help produce the oedema or engorgement. Advice mother to relax, that she will soon breastfeed comfortably.

Sore Nipple and Nipples Fissure (Crack)

Campbell and less (2002), declares that nipple can become very painful if the covering epithelium is denoted or if a fissure develops giving rise to "cracked nipple". The cause is attributed to poor attachment and candidacies.

Mastitis and Abscess

Margaret et, at (1996) postulates that mastitis and abscess is an inflammation of the breast which occurs due to poor drainage of part or the entire breast due to infrequent breastfeeds, large breast drainage poorly, pressure from clothes or stress, over work due to damage tissues or nipple fissure which allows bacteria to enter.

An advice on frequent feeds, application of warm compresses and varying position start feeds on unaffected breast or side, (appendix 2) If all these treatment do not help the situation within or after 24 hours, add the following treatment, antibiotics like caps erythromycin 250mg orally 6 hourly for 7-10 days. Analgesic like tabs paracetamol 1000mg TDS x 5/7 days. Complete bed rest should be ensured Dressing done, after incision and drainage of affected LH east

Inverted or Flat Nipples

Margret (1996), and mother and health was first detected during the first visits for antenatal clinic as nipples that are not prominent. The mother should be encouraged that baby sucks breast (areola) not nipples proper positioning and attachment should be demonstrated. Help her make nipple to stand out more by the use if express breast milk and feed child with clean up.

Treatment

Further information from WHO/UNICEF (1991), and breastfeeding counseling (1993) built the mother confidence in explaining to mothers that whatever the breast condition is (infection) it is a temporary condition. Help her to improve baby's attachment, if the breast is engorged it helps to reduce infection by expressing the breast milk of frequency putting the baby to breast on the other hand if the skin of the nipple and areola is red shining or flaking or if there is itching or deep pour or the soreness persists, consider Candida. They further continue by advising mothers to wash breast once a day should not use soap or rub hard with towel. Normal washing during bath alone should be encouraged. After breastfeeding she should rub a little of the breast milk by expressing it over the nipple (affected nipple) and areola with her fingers this promotes healings.

Prevention of Breast Infection

WHO/UNICEF [1991] and breastfeeding counseling (1993) states that prevention depends on breast attachment and also *on* the core of the nipples. The breast should be kept as *dry* as possible, in case of sore nipples, look for the cause, observe the baby breastfeeding and check for signs of Candida infection, tongue tie and baby's bottom for *Candida* rash.

Research Methodology Area of Study

This study was based on questionnaire collected from Ramat Polytechnic Maiduguri Borno state. The form was designed and used in this research, in order to provide an accurate information for the study.

Sources of Data

The questionnaire was personally administered and distributed to working class mothers in Ramat Polytechnic Maiduguri.

Collection of Data Analysis

Data collection was been subjected to analysis using simple tables and percentages.

Result and Discussion Data Presentation and Analysis

This chapter present the data collected on the attitude of working class mothers towards exclusive breast feeding in Ramat Polytechnic Maiduguri of Borno State. Fifty (50) questionnaires were distributed and retrieved. The questionnaire were interpreted and analysed using simple tables and percentages.

Table 3.1 Age Distribution of *Respondents*

Age	Exclusive Breastfeeding	Percent Age (%)	Non Exclusive Breastfeeding	Percentage
16-20	12	24	5	10
21-25	14	28	10	20
26-30	16	32	15	30
31 and above	8	16	20	40
TOTAL	50	100	50	100

From the table above those between the age of 16-20 years 12 (24%) respond to exclusive breastfeeding while 5 (10%) do not respond to breastfeed exclusive. Those aged 21-25 had 14 (28%) on breastfeeding while 10(20%) are not on exclusive breastfeeding. 16(32%) practice exclusive breastfeeding while 15(30%) do not under the ages of 26-30 years. Those between the ages of 31 and above, 8(16%) respond to breastfeeding while 20 (40%) do not. It is a clear, indication that those between the age of 31 and above, breastfeed exclusively than all the other age groups.

Table 3.2: Influence of Religion on Breastfeeding

Religion	Exclusive Breastfeeding	Percent Age (%)	Non Exclusive Breastfeeding	Percent Age
Christianity	20	40	15	30
Islam	26	52	34	68
Traditionalist	4	8	1	2
TOTAL	50	100	50	100

From the table above, 20 (40%) Christians working mothers' breastfeed exclusively while 15(30%) do not. 26(52%) Muslim breastfeed while 34(68%).

TABLE 3.3: Influence of occupation on Breastfeeding Respondents

Occupation	Exclusive Breastfeeding	Percentage (%)	Non Exclusive Breastfeeding	Percent Age
Civil servant	20	40	25	50
Traders	14	28	15	30
Others	16	32	10	20
TOTAL	50	100	50	100

From the table above, 20 (40%) civil servants breastfeed exclusively while 25 (50%) do not. Trading mothers had 14 (28%) on breast milk while 15 (30%) are not. Other occupations had 16 (32%) on breast milk while 10 (20%) are not

TABLE 3.4: Influence of Educational Status on Breastfeeding Respondents

Educational Status	Exclusive Breastfeeding	Percentage (%)	Non Exclusive Breastfeeding	Percentage
GCE/SSCE/GRADEII	31	62	20	40
DEGREE/HND/ABOVE	19	38	30	60
TOTAL	50	100	50	100

Table 3.4 reveals that those with SSCE certificate had 31 (62%) respondents on exclusive breastfeeding and 20 (40%) on non exclusive breastfeeding Degree and above had 19(38%) on breastfeeding while 30(60%) were not.

TABLE 3.5 Method of Feeding

Method	Respondents	Percentage (%)
Breastfeeding	20	40
Artificial feeding	10	20
Both	20	40
TOTAL	50	100

From the table above, most working mothers breastfeed 20 (40%) use both methods while 10 (20%) depends artificial feeding.

TABLE 3.6: The Response on Reason on Artificial Feeding

Reasons	Respondents	Percentage (%)
Sickness	10	20
Social engagement	16	32
Body fitness	15	30
Poor lactation	9	18
TOTAL	50	100

From the table drawn, it shows that 10 (20%) feed their babies artificially due to sickness, 16(32.7%) feed artificially due to social engagement while 15 (30%) as a result of cosmetic

purpose keeping their breast standing and the remaining nine (18%) do so as a result of poor lactation.

Table 3.7: The Response on Diseases Children Suffer From Artificial Breastfeeding

Reason	Respondents	Percentage (%)
Diarrhea	10	20
Fever	15	30
Jaundice	15	30
Vomiting	5	10

None	5	to
TOTAL	50	100

The table above indicates 10 (20%) of children on artificial feeds suffered diarrhea, 5 (10%) suffered vomiting and 15 (30%) suffered fever while 15 (30%) suffered jaundice.

Table 3.8: Response to Feeding During Breastfeeding

Response	Respondents	Percentage %
Pains	10	20
Satisfied	25	50
Angry	0	0
Hungry	15	30
TOTAL	50	100

Table 3.8 indicate 10 (20%) respondents experienced pains during breastfeeding, 15 (30%) do experience hunger, while only 25 (50%) are satisfied.

TABLE 3.9: Response on Factors Responsible For Negative Attitude of Mothers Towards Exclusive Breastfeeding

Response	Respondents	Percentage (%)
Breast shape lost	5	10
Insufficient milk	15	30
Inconvenient time	20	40
Shyness	10	20
TOTAL	50	100

Table 3.9 shows factors responsible for negative attitude toward exclusive breastfeeding, 20 (40%) respondents complained about time, 5 (10%) respondents does not want their breast to loose shapes 10 (20%) respondents are shy of breastfeeding opening while just 15 (30%) respondents experienced insufficient milk.

Conclusion

All health workers should contribute in educating mothers on the importance of breastfeeding. The importance of breastfeeding, the world health and united nations children fund (WHO/UNICEF) "Ten steps" to success breastfeeding should be implemental in every facility providing maternity service. These steps are:

1. Have a written policy and communicated to all health staff.
2. Train staff on skills and breast management
3. Inform pregnant women about the benefits of exclusive breastfeeding.
4. Help mothers initiative breastfeeding within half an hour of birth.
5. Show mothers how to breastfeed and how to maintain location even if they should be separated from their infants.
6. Give newborns no food or drink other than breast milk unless medically indicated.
7. Practice rooming-in allow mothers and infants to remain together 24hrs a day.
8. Encourage breastfeeding on demand
9. Give on artificial teat or pacifiers
10. Foster establishment of breast support.

Supplementary feeds should be introduced from the age of six months of life with addition of nutrients like.

- a. Meat broth
- b. Porridge mixed with soya beans powder, groundnut powder or palm

Recommendation

1. It is recommended that all working class women in Ramat Polytechnic be encouraged and educated on the significance and method of exclusive breastfeeding. Babies should be fed from birth to six months exclusively and upwards, that is 18-24 months.
2. Mothers should be advised and encouraged to attend antenatal clinic for health education on exclusive breastfeeding and care of the breast, delivery, personal and environmental hygiene and proper nutrition which help her in proper lactation.
3. Government should intensify their efforts in solving some of the problems affecting breastfeeding working class mothers.
4. Health personnel should demonstrate management of breastfeeding; all conditions which may temper with properly treated especially mothers with nipple problems like flat or inverted nipples.

References

- Ashikeni M.A unpublished (1998), *breastfeeding and lactation* management. Breastfeeding Quarterly-Newsletter and baby friendly hospital initiative in Nigeria September 1999 published by the Nutrition section UNICEF-Lagos.
- Campbell and Lessel (2002) *Gynecology* by Ten teachers published by Arnold, Ajanta offset, India.
- Ebrahim G.J (1986), *breastfeeding, the Biological option* published by Macmillan press London.
- International Planned Parenthood Federation medical publication (1988), *breastfeeding, fertility and contraception*.
- Margaret C and Yague H (1996) *feeding infants and young children* published by Swedish international Authority Nairobi.

Myles M.F (1999), Textbook for midwives thirteen edition church HIV lining stone, Edinburg, undon, New York.

Pamphlet on straps to successive breastfeeding sylvia verrals (1980), anatomy and physiology applied to obstetrics published by pitman press, London.

Van De Graff Kuri and fox S.I (1 995), concepts of anatomy and physiology.