



Research Article

PREVALENCE OF MUSCULOSKELETAL DISCOMFORT AMONG BREASTFEEDING MOTHERS

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ABSTRACT

Background: Musculo-skeletal disorders are a diverse group of disorders with regard to pathophysiology. Breast feeding is universally endorsed by the world health and scientific organization as the best way of feeding infants. Although the benefits of breast feeding for mother and child are well documented. However, musculoskeletal pain associated with breast feeding position has not been well investigated.

Objective: The study objective was to determine the prevalence of musculoskeletal discomfort among breast feeding women.

Methods: the study design was non experimental, 90 subjects, who are immediate and 3 months and 6 months duration of breast feeding women. PROCEDURE: 30 subjects in Group-A immediate and 35 subjects in Group-B after 3 months of delivery and 35 subjects in Group-C after 6 months of delivery.

Outcome Measures: Nordic musculo-skeletal discomfort questionnaire.

RESULTS: musculoskeletal discomforts were distributed as follows of Neck was 61%, shoulders 59%, Upper back 58%, Lower back 46%, Elbow 41% while Wrist and hand were 22%.

Conclusion: This study concluded that musculoskeletal discomforts were distributed according to the duration of breast feeding period where by group C that was composed of six months duration of breast feeding were more affected in different sites.

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INTRODUCTION

Labor ends with the birth of the baby. After delivery, Postnatal mothers especially primipara find themselves so new to the difficult situation to take care of the baby and to breast feed them appropriately. India is a country of various cultural beliefs and practices. Post delivery the practices vary among various states. Mostly the women are made to live with pain and discomfort and accept it in various rural areas especially during their immediate postnatal period. World Health Organization (WHO) has recommended breast feed for six months. After six months food can be introduced then also it's recommended to feed till one to two years of age¹. Breast milk is the best nutrition you can offer your newborn. Breast feeding offers tremendous health benefits to both mother and child. For maximum benefits, breastfeeding should be initiated soon after the birth of your child and should be maintained exclusively for six months, until weaning is initiated². Many new mothers especially in India, find breast feeding as one of the most special aspect of mother, as this is the first time they provide nourishment to their babies. In the past new mothers had old generation of mentors to provide them with breast feeding tips and it help to ease the process³. Duration of feeding is usually 10-15 minutes in every 2-3 hours.

That is 8-12 times a day. Breast feeding takes 15-20 min. So totally its coming around 5 to 6 hours a day (4). The most suitable position for breast feeding are cradle, cross cradle and foot ball position to give proper care for themselves and for their baby. Most of the women forget this during feeding (5). Each of the technique needs patience to fulfill the baby. The most important part of the successful breast feeding is the latch. Breast feeding need patience and practice, if not mother will have trouble, For example: Improper position during latch on technique might cause pain and discomfort related to musculoskeletal system⁶. Musculo-skeletal discomfort develops in women during breast feeding due to "continued hormonal influence of lactation on the musculoskeletal system with bio-mechanical and ergonomic stresses of child care related activities". According to World Health Organization (WHO), the burden of musculoskeletal disorders can be assessed in terms of problems associated with them, that is the pain and impaired functioning (disability) related to the musculoskeletal system¹. Nowadays most of the mother have to breast feed their babies at any time anywhere and it is a difficult situation during travel⁷. According to data from 2007 National immunization survey released by centers for disease control and prevention says that only 43 percent of US mothers only continues to breast feed after 6 months other 47 percent stops before 6 months. Some leaves breast feeding feeling too uncomfortable and sore, and bottle feeding offers them a convenient and pain free alternative. (8)

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METHODOLOGY

Study Desig: Non Experimental

Study Type: Observational

Sampling Mehod: Convenient sampling

Samplesize: 90

Study Duration: 6 Weeks

Study Setting: Department Of Obstetrics and Gynaecology SRMHospital, Kattankulathur

Inclusion Criteria

Mothers aged between 20 to 30 years, who are actively feeding Primipara mothers Exclusively breast feeding mother.

Exclusion Criteria

Mothers with lactation failure Mothers already with musculoskeletal disorder Mothers with premature baby. Mothers with pigeon chest.

Procedure

Breast feeding women will be approached, the procedure will be explained and consent would be taken to participate in the study. Participants for the study should be lactating women. Applying inclusion and exclusion criteria 90 breast feeding women were selected and a format of the Nordic Musculoskeletal Discomfort Questionnaire were given to them. The scores obtained with help of the questionnaire and was documented during immediate , 3 months post delivery and 6 months post delivery

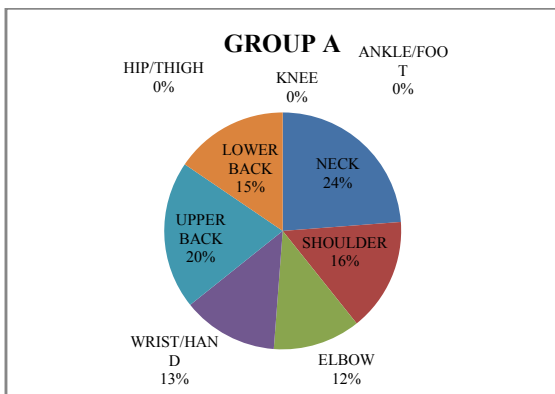
Data Analysis

The data obtained fromnordic Musculoskeletal Discomfort Questionnaire on immediate postnatal, three months postnatal and six month postnatal were analyzed and tabulated.

Table 1 Prevalence of musculoskeletal discomfort in different body regions among immediate postnatal mothers.

Areas	Yes	No
Neck	20	10
Shoulder	13	17
Elbow	10	20
Wrist/hand	11	19
Upper back	17	13
Lower back	13	17
Hip/thigh	0	30
Knee	0	30
Ankle/foot	0	30

The table shows that neck and upper back regions were found to have more discomfort than other regions among breast feeding women.

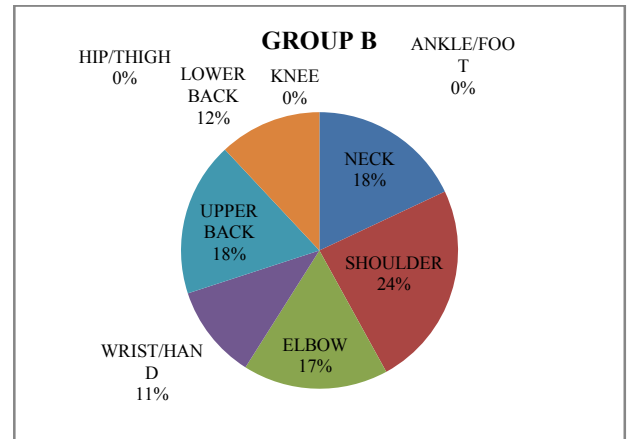


Graph 1 Percentages of musculoskeletal discomfort distribution among various regions of the body among immediate postnatal mothers.

Table 2 Prevalence of musculoskeletal discomfort in different body regions among postnatal mothers three months post delivery.

Areas	Yes	No
Neck	18	12
Shoulder	24	6
Elbow	17	13
Wrist/hand	11	19
Upper back	18	12
Lower back	12	18
Hip/thigh	0	30
Knee	0	30
Ankle/foot	0	30

This table shows that neck ,shoulder,elbow and upper back regions were the most affected areas among breastfeeding mothers three months after delivery.

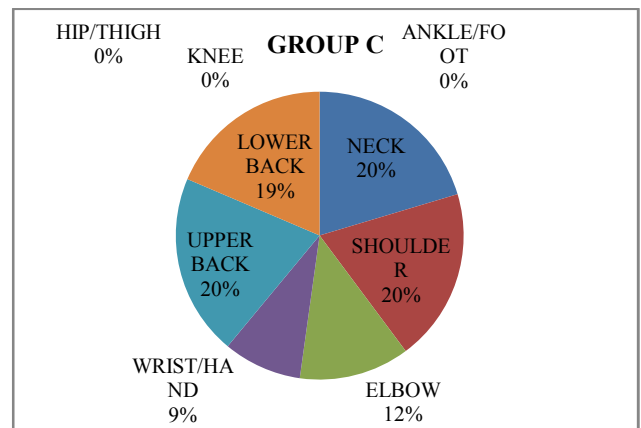


Graph 2 Percentages of musculoskeletal discomfort distribution among various regions of the body among postnatal mothers after three months of delivery.

Table 3 Prevalence of musculoskeletal discomfort using nordic questionnaire scores in different body regions among postnatal mothers six months post delivery.

subjects	yes	no
neck	23	7
shoulder	22	8
elbow	14	16
wrist/hand	10	20
upper back	23	7
lower back	21	9
hip/thigh	0	30
knee	0	30
ankle/foot	0	30

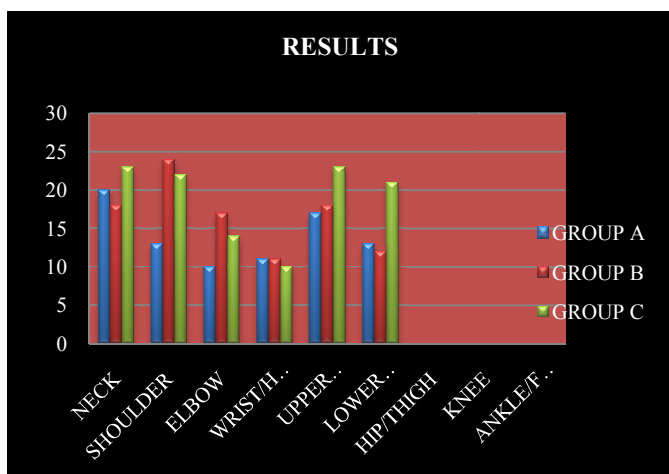
This table shows that neck, shoulder, elbow and upper back and Lower back regions were the most affected areas among breastfeeding mothers six months after delivery.



Graph 3 Percentages of musculoskeletal discomfort distribution among various regions of the body among postnatal mothers after six months of delivery.

Table 4 Comparison of musculoskeletal discomfort using nordic questionnaire scores among immediate ,three months postpartum and six month postpartum breast feeding mothers

areas	group a	group b	group c
neck	20	18	23
shoulder	13	24	22
elbow	10	17	14
wrist/hand	11	11	10
upper back	17	18	23
lower back	13	12	21
hip/thigh	0	0	0
knee	0	0	0
ankle/foot	0	0	0



Graph 4 Comparison Of Musculoskeletal Discomfort Using Nordic Questionnaire Among Immediate ,Three Months Postpartum And Six Month Postpartum Breast Feeding Mothers

The table infers that neck region, shoulder, upper back and Lower back were the most affected region among the breast feeding mothers during all three periods, i.e Immediate, three months post delivery and six month post delivery.

DISCUSSION

This study assessed the prevalence of musculoskeletal discomforts amongst breast feeding women. For nutritional, Immunological, contraceptive, psychological and economic reasons breast feeding remains superior. Breast feeding is considered as one the essential practice in India among postnatal mothers (9).

The awareness of the importance of breast milk is quite high and lot of research supports the benefits of the breast milk over to baby but on the darker side the breast feeding mother are not getting their awareness and importance of proper breast feeding positions.

Further more there is no evidence that says the incidence and prevalence of musculoskeletal problems among breast feeding mothers so that the physiotherapist might gain and insight of the problem and better design the assessment and management accordingly. The mothers could be educated better and preventive measures might be strictly recommended.

This study explains neck region found to have a high prevalence of discomfort followed by Lower back and shoulder among immediate postnatal mothers. This can be attributed to the fact that baby handling involves neck and shoulder whereas proper mother position is quite essential to keep the back healthy.

This result can be further supported by Ram c goyal , 2011 who stated that each mother should be observed for mothers and infant positioning and attachment at the onset of breast feeding and if needed subsequent counseling should be encouraged over proper positioning.(11)

Breast feeding mothers who are three months postnatal reported a high prevalence of musculoskeletal discomfort over shoulder followed by neck and upper back. This can be further explained by that three months baby commonly weighs around 5 kg which may post negative effect and more load over shoulder and neck if mothers had not adopted proper breast feeding positions and baby handling techniques. Proper Breast feeding positions not only constitutes baby handling like cradle, Cross cradle and foot ball positions, mother position also should be given importance. Mothers should have their back supported, foot supported and support should be placed below the baby while breast feeding so that the weight of the baby does not place an undue effect over mother shoulder .The baby should be lifted to the mother breast ,the mother should not bend to the baby, if when followed may reduce neck and upper back pain.

This can be supported by Ogbonna 2002, stressed the importance of imparting training programme to the hospital staff for better compliance with increased rate of breast feeding.

Six month postnatal mothers found to have a higher prevalence of musculoskeletal discomfort in neck and upper back followed by shoulder and lower back. The musculoskeletal discomforts worsen than in the previous months if the inappropriate positioning is followed which make the mothers irritated and fatigue due to pain and worsen their quality of life.

Further more inappropriate positioning along with the musculoskeletal problems may also damage the nipple causing nipple soreness, nipple cracks which may further make the women more exhaustive after breast feeding due to pain. Also the musculoskeletal pain also may prevent the mothers from adapting a incorrect positioning which may also be the reason to place excess pressure and pulling on nipple that leads to nipple cracks and nipple soreness.

Coca *et al* reported that women with infants incorrectly positioned were more prone to develop nipple trauma compared with women whose infants were correctly positioned.

A study from brazil reported that due to inexperience in breast feeding techniques there was a high incidence of nipple trauma among primiparous women.

The results of this current study, demonstrated a significant increase in musculoskeletal discomforts in Group C which comprised women who breastfed for at least six month period. While comparing the three groups Group B followed by Group C is found to have more of the musculoskeletal complaints and this increase was related to the growing of the baby in weight and size. This study’s results have a similarity that of Santiana *et al* 2018who also discussed the musculoskeletal complaints related to breast feeding and ergonomics but they did not classify their results according to site and location.

Mbada *et al* 2013, linked the higher prevalence of musculoskeletal complaints to low awareness of ergonomic and correct posture awareness (12).

Kiranmai *et al* 2015 concluded that not only prevalence of musculoskeletal problems are more in pregnancy but also in breast feeding period therefore awareness and preventive measures as well as ergonomic improvement was highly recommended.

Bjelland *et al* 2014 found out that appropriate breast feeding has a significant effect on the recovery of different musculoskeletal discomforts including pelvic girdle pain. It is with this regard that they concluded that longer duration of breast feeding is not only beneficial to the baby but also to the mother, hence proper practice of breast feeding as well as prevention of secondary complications is highly recommended.

Therefore the results of the current study elaborated the prevalence and distribution of the more affected parts in terms of musculoskeletal discomforts as follows: Neck, shoulders, Upper back, Lower back, Elbow. Which explains that proper breast feeding position and education to mother is necessary.

CONCLUSION

This study concludes that neck, Upper back and shoulder were found to have a higher incidence of discomfort among immediate postnatal mothers. Shoulder, neck and Upper back were found to be involved among Postnatal Breast feeding mothers with three months duration. Neck, Upperback and shoulder were more involved in mothers of six month postnatal. This study recommends implementation of training programs for breast feeding mothers especially on Latchon techniques and maternal positioning of feeding through Breast feeding classes which will improve the knowledge and attitude of postnatal mothers and aid in better practice of feeding.

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