

Prevalence of Acute Low Back Pain after Cesarean Delivery in Health Care Centers

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ABSTRACT

Background: Low back pain is the common problem faced by mothers after cesarean delivery under spinal anesthesia. Application of spinal anesthesia leads to severe acute and chronic low back pain post-delivery. Physiotherapy plays an important role during and after pregnancy as it helps in reducing the incidence of low back pain and others musculoskeletal pain post-delivery. The aim of the study was to determine the prevalence of acute low back pain after cesarean section and to assess the percentage of population aware about antenatal and postnatal physiotherapy and percentages had taken the treatment in Health care centers.

Materials and methods: Study population comprised of 162 caesarean delivery females out of which 104 were selected of age between 19 to 35 having acute low back pain in postnatal cesarean ward of Health care centers. Population was chosen through convenient sampling. Data collection tools were modified questionnaire. The data collected was analyzed through SPSS software Version 29.0.2.0(20). Prevalence and awareness were measured through descriptive statistics.

Result: 64.1% postpartum caesarean section females had low back pain under spinal anesthesia. 18.2% had mild pain, 34.6% had moderate pain, 30.7% had severe pain and 16.4% had very severe pain. Only 18.3% were aware of antenatal and postnatal physiotherapy out of which only 6.7% had taken treatment. 81.7% were unaware and 93.3% had not taken physiotherapy treatment. Low back pain is dependent upon Occupation and daily activity of the patient, awareness about antenatal and postnatal treatment is dependent upon educational level and patient age is seen as an associative factor for the patient dependency.

Conclusion: Majority of postpartum caesarean delivery females complained of acute low back pain and very less had taken physiotherapy treatment during and after delivery. The majority were unaware about the antenatal and postnatal physiotherapy as they were not recommended by the gynecologist doctors.

KEYWORDS: Acute back pain, Cesarean delivery, Spinal anesthesia, Antenatal, Postnatal, Physiotherapy, Awareness.

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INTRODUCTION

The birth of a child is a very important event in the life of a women. This beautiful moment is as painful as it is when a woman goes through labour. Apart from labour pain, women go through many mental and physical

changes. Back pain is one of those problems that a woman faces during pregnancy and after childbirth [1]. During pregnancy, due to an increase in the size of the uterus, postural changes occur which leads to weakness of the abdominal muscles. The hormonal changes

that occur during this period, the joints and ligament of pelvic girdle become weak, causing difficulty in walking. Due to repeated stress while holding and lifting the child, the integrity of the spine gets affected which leads to the problem of back pain [2].

In general, it has been observed that the problem of back pain is common among Indian housewives [3] and those who undergoes caesarean section under spinal anesthesia suffers the most [4].

A caesarean section is chosen when there is a medical emergency like an abnormal position of the baby where normal delivery cannot be performed [5]. Nowadays women give more priority to caesarean section so that they do not have to go through labour pain due to which the rate of caesarean section is increasing [6-8]. According to WHO guidelines, acceptable caesarean section rate (5-15%) [9] is much lesser than today's caesarean rate which is more than 40% whereas in some cases it is up to 80% [6,10]. Caesarean section can reduce both maternal and fetal illness and death rate [11]. Although the procedure is safer for the baby, the mother face issues like back pain as the consequence of caesarean section under spinal anesthesia [12].

Physiotherapy plays an important role in both antenatal and postnatal period to overcome all the mental and physical changes the women suffer during pregnancy and after childbirth [13].

Antenatal care is provided during the time of pregnancy to strength the pelvic floor muscles, preventing chances of diastasis recti, which helps during labour. Postnatal care is the care provided for the general mental and physical health of the mother and baby. This includes guiding the new mother in aspects like breastfeeding, correct positioning for baby holding, exercise regime for physical recovery following pregnancy and the childbirth process [14]. Physiotherapy also promotes strengthening of abdominal and back muscles which help in providing relief from back pain, pelvic pain and urinary incontinence after childbirth. Therefore, reducing the rate of back pain following caesarean section under spinal anesthesia [15-18].

Thus, our study was designed with the goal of promoting and spreading awareness about antenatal and postnatal physiotherapy and its importance in the field of gynaecology and obstetrics in a hospital. Hence, reducing the prenatal and postnatal complications like back pain, pelvic pain and urinary incontinence and allowing physical and mental fitness.

MATERIALS AND METHODS

This cross-sectional study was carried out in Postnatal Care Caesarean Ward of Health care centers. Sample size was 162 females out of which 104 fulfilled the criteria. Convient sampling was used to select the patient. Study was of 6-month duration conducted from July 2023 to December 2023. Inclusion criteria was all the Caesarean section females with acute low back pain of 1 week post-delivery of age group between 19 to 35. They all are postoperative admitted patients who voluntary participated in the study. Exclusion criteria were females of age above 35 and below 19 years of age. Normal delivery patient were not included in the study and patient with past history of any back injury, LBP due to disc bulge/herniation.

Data Collection Procedure: A modified questionnaire was used to conduct this study. Questionnaire contains 18 questions arranged in systematic manner in sections include General Details of a respondents, Name, Age, Occupation, Educational level, No. Of Children and overall health or altered health related questions. Those consented to participate were given a consent form. Once they met selection criteria and agreed to take part in the study, the researcher helped the patients to fill in the form and their respond were obtained.

Statistical Analysis: Statistical analysis was done through SPSS Version 29.0.2.0 (20). Frequency distribution was used to summarize categorical data and graphs and charts provided a graphical summary. The mean and standard deviations were calculated.

The chi-square test for association between variables such as Pain in VAS and Age, Occupation, Activity causing pain was used to establish whether there was association

between these variables. Chi square was also used to observe the association between Physiotherapy treatment taken and educational level, Awareness of physiotherapy treatment and between Dependency of patient and Patient age.

RESULT

The sample population n=162 showed that 64.1% females were suffering from acute low back pain after c section under spinal anestheisa and 35.8% were not (Table 1). The population who was aware of antenatal and postnatal physiotherapy were 18.3% out of which only 6.7%had taken treatment. 81.7% participants were unaware and 93.3% had not taken physiotherapy treatment (Table 2). Table 3 shows 18.2% of subjects had mild pain,34.6% had moderate pain,30.7% had severe pain and 16.4% had very severe pain. In correlation between pain in VAS and occupation, daily activity we found that about 79.80% participants were housewife,14.42% were working women and 5.7% were involved in farming activity.83.65% participants experiences pain during sitting,59.61% during bending activity,50.96% during side lying ,45.19% during standing,42.30% during walking activity and 33.65% during lying position (Table 4). In Table 5 we found the association between physiotherapy treatment and educational level 93.3% participants who studied till 11th class and with no education had not taken physiotherapy treatment and 6.7% who studied 12thclass and post-graduation had taken physiotherapy treatment.

Table 1: Frequency of low back pain among participants.

Low back pain	Frequency	Percentage%
YES	104	64.1
NO	58	35.8

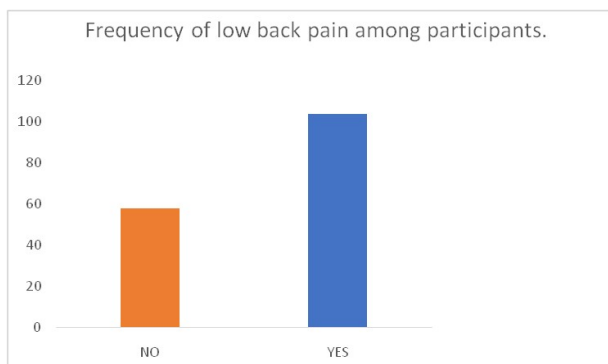


Table 2: Percentage of participants aware about physiotherapy treatment and taken physiotherapy treatment.

Aware about antenatal and postnatal physiotherapy	Frequency	Percentage%
YES	19	18.3
NO	85	81.7
Taken physiotherapy treatment (YES)	7	6.7
NO	97	93.3

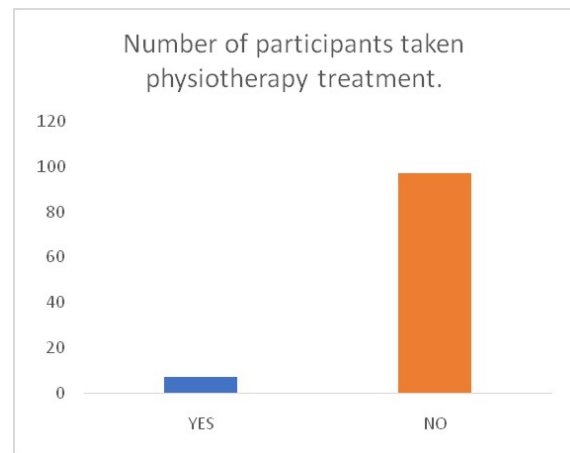
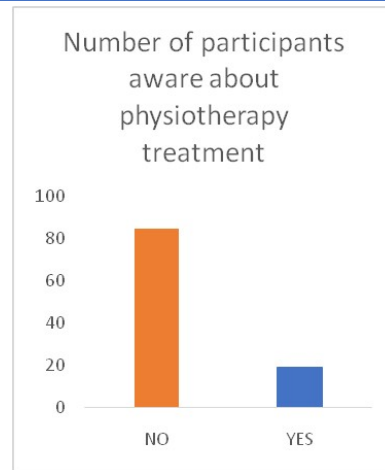


Table 3: Severity of pain on VAS scale.

Pain on VAS	Frequency	Percentage%
3-4	19	18.2
5-6	36	34.6
7-8	32	30.7
9-10	17	16.4

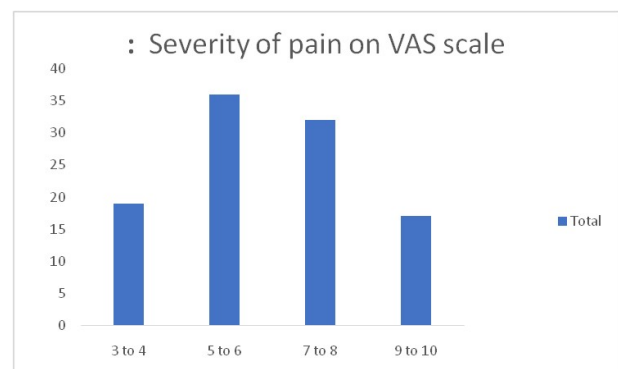
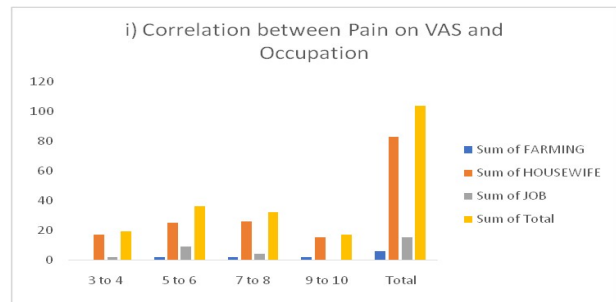


Table 4: i) Correlation between Pain on VAS and Occupation.

Pain in VAS	FARMING	HOUSEWIFE	JOB	Total
3-4	0	17	2	19
5-6	2	25	9	36
7-8	2	26	4	32
9-10	2	15	0	17
Total	6	83	15	104



ii) Correlation between Pain in VAS and Daily activity

Pain in VAS	SITTING	BENDING	SIDE LYING	STANDING	WALKING	LYING	Total
3-4	14	4	9	6	6	3	42
5-6	31	23	16	16	17	8	111
7-8	28	24	18	19	10	12	111
9-10	14	11	10	6	11	12	64
Total	87	62	53	47	44	35	328

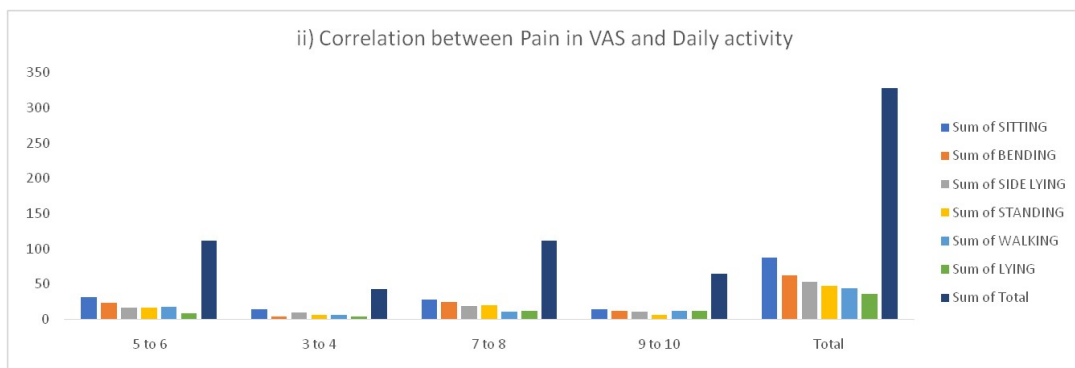
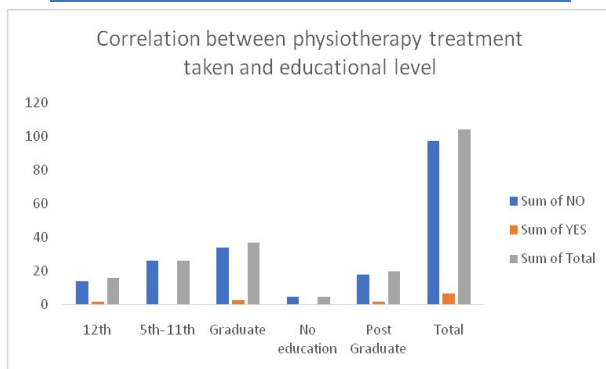


Table 5: Correlation between physiotherapy treatment taken and educational level Taken Antenatal and Postnatal physiotherapy treatment

Educational level	NO	YES	Total
5 th - 11 th	26	0	26
12 th	14	2	16
Graduate	34	3	37
Post Graduate	18	2	20
No education	5	0	5
Total	97	7	104



DISCUSSION

The present study depicted a 64.1% prevalence of acute low back pain out of 162 sample size due to Caesarean section under spinalanestheisa. The relevant studies that

were conducted on mothers having low back pain due to caesarean section under spinal anesthesia revealed the following : a study conducted in August 2018 by Vimala et al.,showed that out of 100 samples size,56% of the mothers were having dull backpain after caesarean section and 14% had low back pain which was long lasting[22].

In correlation between patient age and dependent on others. This study finds that out of 104 participants who experienced low back pain due to caesarean section, 8.6%participants age between 21-23 reported that it restricts them for their daily activity and are completely dependent on others for their daily activity. Whereas in the age between 19-20 and 24-35 about 71.2% were dependent on others while 20.2% were independent. The subjects on describing the nature of their pain out of 104, 53.8%subjects were experienced intermittent type of pain which come and go doesn't persist for prolonged period, whereas 46.2% subjects complain of constant pain which persist for prolonged period withoutdiscontinuation.

In this study, 18.2% of subjects had mild pain, 34.6% had moderate pain, 30.7% had severe pain and 16.4% had very severe pain on VAS scale. According to a study conducted by Vimala et al., (2018), 34% had mild pain, 58% had moderate pain and 8% had severe pain. This is in accordance with the fact that most of the females suffer from moderate level of low back pain after cesarean section under spinal anesthesia[22].

In present study that the activity which are performed by the females had correlation with the pain on VAS. The females experienced more pain during sitting position > bending > side lying > standing > walking and last in lying position. Ascending to descending order according to the painful activities. The incidence of pain intensity on VAS was between 6 to 10.

In the correlation between pain in VAS and Occupation of participants, this study conclude that housewives complained of pain the most about 79.8% were housewife, 14.42% were working women and 5.7% were involved in farming activity. In the similar study by Saira Tariq et al. (2020) among housewives who experiences low back pain after cesarean section under spinal anesthesia. The author suggest that majority of housewife complained of low back pain the most[21].

About 28 out of 104 complained of pain radiating to their leg and 76 of no such complains. Pain results in disturbance in sleeping and out of 104, 53 subjects experienced sleep disturbance due to pain. On worsening of the pain intensity from day to night, 13 participants responded that they experience back pain most during morning time, 17 with painful back pain during night time. However, 74 females responds that they experiences constant intensity of pain throughout the day. During lifting of the baby, the mothers experiences the back pain and only 42 complain of the same and 62 with no complain. Prolonged sitting during breast feeding position leads to stress on the back muscles result in back pain. About 80 subjects complained of back pain during breastfeeding and 24 with no complaints of such. Sudden jerks in the body lead to an

increase in the pain intensity. During coughing and sneezing 57 females out of 104 complain of back pain.

This study shows the correlation between Education level and Antenatal and Postnatal Physiotherapy treatment taken about 97 subjects with no education and who studied till 11th class had not taken physiotherapy treatment while 7 were graduate, post graduate and 12th class subjects who had taken antenatal and postnatal treatment. According to the study performed by Samuelolufemi Bolarinde, et al. (2018) the author conducted study among the Females Health Care Professionals to understand their prospective towards the importance of physiotherapy treatment during antenatal and postnatal period and the author observe that Females Health Care Professionals demonstrates adequate knowledge about physiotherapy treatment and proper perception about role and relevance of physiotherapy services during antenatal and postnatal care[20]. In the similar study conducted by V K Kumar (2016) the author find that Indian housewives had inadequate knowledge about antenatal and postnatal physiotherapy, but they had positive attitude towards the role of physiotherapy[19].

About 18.3% participants aware about antenatal and postnatal physiotherapy and only 6.7% had taken treatment. Whereas 81.7% were unaware and 93.3% had not taken physiotherapy treatment in this study. In the similar study performed by Shifna ULB, et al. (2017) the author reveal that when the exercise was trained among the pregnant women, they responded in positive way towards it. The author saw that there is improvement in quality of life of pregnant women who had taken physiotherapy treatment and, they found that there is very poor knowledge about antenatal and postnatal physiotherapy among the pregnant women[23].

This study concluded that there is a need of increasing awareness about antenatal and postnatal physiotherapy among health care professionals and peoples. Through the study we found that there were majority of females

who had not taken the antenatal and postnatal physiotherapy treatment complained of low back pain the most.

Physiotherapy treatment should be included from the moment pregnancy is detected and continued to the postnatal period. Proper awareness programme should be organized in the community to spread knowledge about benefit and importance of physiotherapy treatment during and after pregnancy to the pregnant females and their family members. There should be a duty of physiotherapist in the antenatal and postnatal care ward to regularly assess the condition of the patients and to take measures to treat the problems. Do's and Don'ts should be properly educated to the pregnant females in the hospital to prevent low back pain and other health related problems.

CONCLUSION

This study demonstrates the high incidence of acute low back pain after cesarean delivery which is dependent on the following factors such as occupation of the subject, daily activity they perform. This study concludes that they had very poor knowledge and awareness about antenatal and postnatal physiotherapy. Only 19 participants out of 104 participants were aware of antenatal and postnatal physiotherapy treatment out of which only 7 participants had taken the treatment and very large population about 85 subjects were unaware and about 97 subjects had not taken antenatal and postnatal physiotherapy treatment.

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Conflicts of interest: None

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