Level of Maternal Satisfaction with Post-operative Pain Management After Caesarian Section Delivery at Debre Markos Comprehensive Specialized Hospital, Debre Markos, Ethiopia, 2022. A Cross Sectional Study

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Keyword: Cesarean section; Level of satisfaction; Postoperative pain.

Abstract

Background: Patient satisfaction is the individual's positive evaluation of distinct dimensions of health care. The rate of cesarean sections is on the rise and being performed more frequently in recent times. Assessment of maternal satisfaction with postoperative pain management is a vital tool for measuring the quality of care in the health center. There is a paucity of data regarding this topic, as it does not previously been studied yet in the study area.

Objective: The aim of this study was to assess the level of maternal satisfaction with post-operative pain management after c/s among mothers who deliver at Debre Markos Comprehensive Specialized Hospital, Northwest, Debre Markos Ethiopia, 2022

Methods: An institutional-based cross-sectional study was conducted among 337 mothers who had undergone c/s delivery in Debre Markos comprehensive specialized hospital, in 2022. All consecutive mothers who under gone cesarean delivery was included the study time and data was collected using a questionnaire distributed. The collected data were coded and analyzed. Orientation was given for data collectors and enters by using SPSS version 25.

Result: Among the total of 337 mothers, 244(72.4%) were satisfied with pain management the rest 93(27.6%) were dissatisfied. A total of 337 parturients who delivered with cesarean section were involved in this study with a 100% response rate. The majority of parturient 197(58.8%) & 112(33.2 %) had age 20-30 years and 31-40 respectively.

Conclusion: The level of maternal satisfaction with post-operative pain management among C/S was high (72.4%).

Introduction

Post-cesarean section pain is a common cause of acute pain in obstetrics, although pain relief and patient satisfaction are still inadequate in many cases [1]. A global element of health care management has become measuring maternal satisfaction states that a basic indicator of the quality of care is maternal satisfaction [2]. In order to fully understand the satisfaction of post-C/S pain management, it is imperative to identify factors influencing satisfaction with pain management among mothers [3]. Maternal satisfaction with postoperative pain management is the result of satisfaction with the care process and care outcome which include waiting time, provision of information, access, and adequacy of care [4,6]. Maternal satisfaction with pain management generally encompassed both psychosocial and technical aspects of care, strongly associated with effective pain management [7].

Patient satisfaction is one of the essential indicators of health management which can help improve the quality of service in healthcare settings. Thus, the current study was aimed at determining the extent of maternal satisfaction after c/s with pain management at Debere Markose Specialized Comprehensive Hospital. The findings of the study should help upper-level health management, in particular those overseeing health institutions in the country by providing a better understanding of hospitals.

Patient satisfaction with post-operative pain management still remains a common problem in health care [2]. However, despite persistent pain for most patients in clinical contexts, pain management has received astonishingly little attention from healthcare professionals, due to unrealistic patient satisfaction with pain management services [8].

Maternal satisfaction with postoperative pain is crucial to measure the performance and success of healthcare institutions. To provide a standard of practice in pain management, and reduce the cost of dissatisfaction it is necessary to identify patient outcomes in terms of patients’ self-reports of pain management satisfaction [7].

Prior studies in our country related to postoperative pain management were mainly focused on the prevalence of postoperative pain intensity. During my search, there was no evidence that shows the magnitude of maternal satisfaction with postoperative pain management in the study area. The available evidence in different set up and participants might affect the level of maternal satisfaction. This study might play an important role in this case as a baseline for the next research to be done in this area, to resolve the problems of maternal dissatisfaction.

Materials and Methods

Study area, design and Study period

An institutional-based cross-sectional study was conducted at DMSCH in East Gojjam zone, North West Ethiopia, Amhara, Debere Markos, Ethiopia, from February 1 to May 1, 2022.

Population

Source and study population

All women who undergo c/s in Debere Markos comprehensive specialized hospital and Women who underwent C/S at DMSCH from February 1 to May 1, 2022.
patient’s satisfaction via a 5-point Likert scale was dichotomized into satisfied and dissatisfied groups based on a demarcation threshold formula:
\[ \text{total highest score} - \text{total lowest score} \times 2 \]

Result

Socio demographic characteristics of study participants

A total of 337 parturients who delivered with cesarean section were involved in this study with a 100% response rate. The majority of parturient 197 (58.8%) & 112 (33.2 %) had age 20-30 years and 31-40 respectively. 189 (56.1) were housewife’s and most of mothers 273 (81%) had an income in the range b/n 400-5000 (in Table 1).

Table 1: Distribution of socio demographic characteristics of respondents DMCSH, Debre Markos, Ethiopia, 2022.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Category</th>
<th>Frequency</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>20-30</td>
<td>197</td>
<td>58.5</td>
</tr>
<tr>
<td></td>
<td>31-40</td>
<td>112</td>
<td>33.2</td>
</tr>
<tr>
<td></td>
<td>&gt;40</td>
<td>28</td>
<td>8.3</td>
</tr>
<tr>
<td>Ethnicity</td>
<td>Amhara</td>
<td>332</td>
<td>98.5</td>
</tr>
<tr>
<td></td>
<td>Oromo</td>
<td>4</td>
<td>1.2</td>
</tr>
<tr>
<td></td>
<td>Others</td>
<td>1</td>
<td>0.3</td>
</tr>
<tr>
<td>Educational level</td>
<td>Illiterate</td>
<td>85</td>
<td>25.2</td>
</tr>
<tr>
<td></td>
<td>Can read and write</td>
<td>87</td>
<td>25.8</td>
</tr>
<tr>
<td></td>
<td>Primary</td>
<td>38</td>
<td>11.3</td>
</tr>
<tr>
<td></td>
<td>Secondary</td>
<td>65</td>
<td>19.3</td>
</tr>
<tr>
<td></td>
<td>College and above</td>
<td>62</td>
<td>18.4</td>
</tr>
<tr>
<td>Marital status</td>
<td>Single</td>
<td>5</td>
<td>1.5</td>
</tr>
<tr>
<td></td>
<td>Married</td>
<td>331</td>
<td>98.2</td>
</tr>
<tr>
<td></td>
<td>Widowed</td>
<td>1</td>
<td>0.3</td>
</tr>
<tr>
<td>Occupation</td>
<td>house wife</td>
<td>189</td>
<td>56.1</td>
</tr>
<tr>
<td></td>
<td>Merchant</td>
<td>68</td>
<td>20.2</td>
</tr>
<tr>
<td></td>
<td>Student</td>
<td>2</td>
<td>0.6</td>
</tr>
<tr>
<td></td>
<td>civil servant</td>
<td>58</td>
<td>17.2</td>
</tr>
<tr>
<td></td>
<td>Laborer</td>
<td>9</td>
<td>2.7</td>
</tr>
<tr>
<td></td>
<td>Other (state...</td>
<td>11</td>
<td>3.3</td>
</tr>
<tr>
<td>Income</td>
<td>400-5000</td>
<td>273</td>
<td>81</td>
</tr>
<tr>
<td></td>
<td>5001-10000</td>
<td>61</td>
<td>18.1</td>
</tr>
<tr>
<td></td>
<td>&gt;10000</td>
<td>3</td>
<td>0.9</td>
</tr>
<tr>
<td>Resident</td>
<td>Urban</td>
<td>218</td>
<td>64.7</td>
</tr>
<tr>
<td></td>
<td>Rural</td>
<td>119</td>
<td>35.3</td>
</tr>
</tbody>
</table>

Numerical pain score at rest with in 24 Hr at rest

The 24 hour post-operative numeric pain rating scale shows that (10.68%) of parturient had no pain, while, about (43.62%) of parturient reported to had mild pain the rest mothers about 35.01% & 10.68% had moderate & severe pain respectively.

Figure 1: Post-operative pain reports after cesarean section within 24 hr at rest of the study participants in DMCSH, Debre Markos, Ethiopia, 2022.

Figure 2: Post-operative pain reports after cesarean section within 24 Hr at movement of the study participants in DMCSH, Debre Markos, Ethiopia, 2022.
Numerical pain score in 24 hr. at movement

The 24-hour post-operative numeric pain rating scale shows that (3.86%) of parturients had no pain, while, about (38.87%) of parturients reported to had mild pain the rest of mothers about 40.95% & 16.62% had moderate & severe pain respectively.

Likert scale (assessment of level of satisfaction)

By using demarcation formula we got the cut point first to level the satisfaction

\[ \frac{\text{highest point} - \text{lowest point}}{6} + \text{the lowest point} = 25 - 6 = 15.5, \quad \text{we use this is the cut point mothers who scored} \leq 15.5 \text{consider as dissatisfied while, who score} > 15.5 \quad \text{said to be satisfied by using this} \]

72.4% mothers were satisfied, the rest 26.1% & 7.4% were done by ISO and MSc respectively. Among 338 mothers 139 (41.2%) were done C/S should receive peripheral nerve blocks as part of multimodal analgesia to decrease the incidence and severity of post-op pain accordingly based on the WHO pain ladder. Moreover, we suggested that all mothers who underwent c/s should receive peripheral nerve blocks as part of multimodal analgesia to decrease the incidence and severity of post-op pain.

Discussion

This is the first study that tries to assess the level of maternal satisfaction with post-operative pain management after c/s at the study area. This study was not done in Ethiopia since we try to discuss the research done on general population satisfaction. The findings of this study revealed that the majority of the participants 244 (72.4%) This was higher than the study conducted in Tigray Region Zonal Hospital where patient satisfaction was 43.6% and lower than [31] study conducted in Pakistan district hospital where patient satisfaction was 97% [32]. This may be due to the high patient load in Tigray Regional Hospital due to seasonal malaria in the area and may also be due to the time or study period variability of the two studies.

In contrast, the level of patient satisfaction in this study was higher than the study conducted in government hospitals of Ethiopia like Debre Birhan, and Jimma Zonal Hospital where patient satisfaction was 57.7%, and 57.1%, respectively [33]. This may be because DMCSH was established earlier than both Debre Birhan and Jimma Hospital so they might be our hospital have greater access to resources, including better-trained and experienced staff. High patient load also may decrease patient satisfaction in those hospitals. It might also be due to the low motivation of health professionals in the current study as compared with the previous studies. This low motivation may be a result of payment and other administrative issues.

The level of patient satisfaction in this study was also lower than the regional health bureau target which was 85% and above [34]. This is may be due to the hospital only gives services to a high population number. This study showed that maternal satisfaction was about 72.4% This was higher than the study conducted in Gondar University Hospital and Addis Ababa [35]. This might be because Gondar University Hospital is an academic hospital in which the presence of a high number of health science students in comparison with DMCSH hospital might lead to overcrowding.

Conclusion and recommendation

The overall level of maternal satisfaction with postoperative pain management was considerably low as compared with other studies. Hence, it is vital to implement a time-interval pain assessment method during the first 24 hours of the postoperative period and treat accordingly based on the WHO pain ladder. Moreover, we suggested that all mothers who underwent c/s should receive peripheral nerve blocks as part of multimodal analgesia to decrease the incidence and severity of post-op pain in order to increase the level of maternal satisfaction.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Category</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>The profession who</td>
<td>Gynecologist</td>
<td>224</td>
<td>66.5</td>
</tr>
<tr>
<td>done C/S</td>
<td>ISO</td>
<td>88</td>
<td>26.1</td>
</tr>
<tr>
<td>Responsible anesthetist</td>
<td>MSc midwife</td>
<td>25</td>
<td>7.4</td>
</tr>
<tr>
<td></td>
<td>Student</td>
<td>139</td>
<td>41.2</td>
</tr>
<tr>
<td></td>
<td>Level 5</td>
<td>68</td>
<td>20.2</td>
</tr>
<tr>
<td></td>
<td>BSc</td>
<td>120</td>
<td>35.6</td>
</tr>
<tr>
<td></td>
<td>MSc</td>
<td>10</td>
<td>3</td>
</tr>
<tr>
<td>Anti-pain given</td>
<td>Yes</td>
<td>171</td>
<td>50.7</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>166</td>
<td>49.3</td>
</tr>
<tr>
<td>Type of anesthesia</td>
<td>General</td>
<td>17</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Spinal</td>
<td>320</td>
<td>95</td>
</tr>
</tbody>
</table>

Table 3: The frequency Table the frequency and percentage of care provider relating factors DMCSH, Debre Markos, Ethiopia, 2022.

Health care provide related factors

For most mothers, 66.5% were done by gynecologists while for others the rest 26.1% & 7.4% were done by ISO and MSc midwives respectively. Among 338 mothers 139 (41.2%) were anesthesia by students and 35.6% given by BSc anesthetists. A large proportion of parturients 320 (95%) had undergone cesarean section under spinal anesthesia, while only about 17 (5%) of parturients were with general anesthesia (in Table 3).

Ethical clearance had been obtained from Debre Marko’s University, collage of health science and Medicine ethical clearance review board and informed written consent was obtained from each respondent after illuminating the purpose and procedure of the study.

Declarations

Ethics approval and consent to participate

Ethical clearance had been obtained from Debre Marko’s University, collage of health science and Medicine ethical clearance review board and informed written consent was obtained from each respondent after illuminating the purpose and procedure of the study.

Abbreviations and Acronyms

ASA: American society of anesthesiologist; CD: Cesarean Delivery; CDC: Centers for Disease Control and Prevention; DMCSH: Debre Marko’s Comprehensive Specialized Hospital; NRS: Numerical rating scale.
Availability of data and materials

The datasets used and/or analyzed during the current study are available from the corresponding author upon reasonable request.

Conflict of interest

The authors declare that they have no competing interests in this section.

Source of funding

This research did not receive any specific grant from funding agencies.

Authors’ contribution

All Authors conceptualized, designed the study, collected, analyzed, and interpreted the data, and also drafted the manuscript. Data analysis, drafting of the manuscript, and advising the whole research paper and also involved in the interpretation of the data and contributed to manuscript preparation. All authors read and approved the final manuscript.

Acknowledgment

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Reference


