

A Survey on Perception of Epidural in Labouring Women

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ABSTRACT

Background: Labour pain is rated as amongst the most painful experiences. Labour epidural is an effective pain relief method which is widely used in western countries. Women in our country are gradually becoming more aware of this pain relief option however, it is still not as widespread as one would expect given severity of pain and epidurals' effectiveness.

Aim: To find out perception (awareness, desirability and fear or concerns) regarding use of epidural for labourpains.

Method: Sixty women admitted to labour ward in active labour and also willing to take part in this study were surveyed (with a structured questionnaire). The questions were directed to find out about awareness, desirability of epidural and their fear or concerns.

Result: Almost all women rate pain of childbirth as severe, and 86% of women are aware of epidural for pain relief. However 53.3% still are undecided about the desirability of epidural, with upto one fifth requiring more information to make an informed decision. Another important factor that influences their decision is source of information.

Conclusion: There is a need for more awareness about epidural as pain relief method and also its risks and benefits. Healthcare professionals should disseminate evidence based information to allay their anxiety and to dispel myths.

Keywords: Epidural anesthesia, labour pain, childbirth

INTRODUCTION

Labour pain is ranked amongst the most painful experience¹, just short of pain of breaking bones. It is likely to be the most painful physiological event in a women's life cycle. There are different pharmacological and nonpharmacological methods² of pain relief during labour.

Labour epidural is an effective method of analgesia for labour pain, in range of 90-95%^{3,4} and is considered gold standard for severe pain.

A large majority of our women population⁵, undergo childbirth experience and bear labour pain. Labour epidural has the potential of providing pain relief to this group of women and maybe improve their overall childbirth experience. It may also help reduce their fear⁶ of managing pain in future pregnancies.

Pain relief is a fundamental human right as declared in Montreal declaration⁷ on occasion of 13th World Congress of Pain and International Pain Summit in 2010. Therefore it should not only be accessible but women also should be given awareness to allay their anxieties and dispel myths. National Institute of Clinical Excellence (NICE)⁸ UK also emphasizes on awareness and provision of information for women to make informed decision about its utility.

Labour pain despite being deemed as severe also has a positive outcome, which adds to the complexity of decision making when it comes to pain relief. Therefore, its acceptance is influenced not only by medical but also by social and cultural factors⁹. Women's perception of epidural is crucial to their decision making and their experience of childbirth.

The objective of the study was to explore how women in active labour perceive epidural for labour pain. It is to find out their awareness of epidural, source of knowledge and fear or concerns.

Rationale: To explore how our women of childbearing age, who deliver at hospital and have potential access to epidural, perceives labour epidural. Identifying their concerns, myths and barriers, will help physicians in their communication with patient and to raise awareness in general population.

Women in labour are most likely to give an exact account of their concerns and decision making factors when so close to making that decision.

METHODOLOGY

Cross sectional descriptive qualitative study of women presenting to labour ward in active labour in February 2019 (two weeks). Conducted in a private teaching hospital with busy labour unit (200 deliveries per month).

$n = (Z_{\alpha/2})^2 p(1-P) / d^2$, $Z_{\alpha/2} = 1.96$, $CI = 95\%$, $\alpha = 5\%$, $d = 0.05$
 $n = (1.96 * 1.96) * (0.96 * 0.04) / 0.0025$ $n = 59$

Ninety-three women were approached after fulfilling criteria of inclusion into study and sixty women agreed and had fully completed survey form (by interviewer).

On admission to labour ward, patient fulfilling criteria of enrollment into study were approached, explained about study and consented. Patient were offered privacy (from friends/ family in room) to proceed with survey. Women were then verbally interviewed by survey questionnaire (Appendix 1) and filled out as per their response.

Inclusion: Age: reproductive age (18-40 years) in active labour stage 1

Exclusion: Stage 2,3 of labour

Communication barrier- hearing, language

Special individual- lacks capacity to process information
Fetal anomaly on scan (IUD, fetal defects)

Stressed (severe pain), unable to process information

Statistical analysis Percentage frequency was calculated for responses. Univariate analysis of gravidity and level of

education with desirability of epidural is alsodone.

Findings: The average age of women surveyed is 29 years (SD 4.6), with 76% in 26 to 35 years age group, only 18% in ≤ 25 years. The average age of primigravida in survey is 24 years , with 64% in 21-25 years age group. It is in line with National statistics of median age 22.2 years at time of first birth in 2012-2013⁵. When compared to United Kingdom, average age of first time mothers is 28.6 years in 2015¹⁰.

RESULTS

Education & work: Almost 58% of women had college education, Intermediate and above. Remaining 41.7% were matric or below. As women were all from Lahore, provisional capital of Punjab, it is not surprising to have good literacy rate amongst them. A large majority of women (85%) are homemakers with only 15% working outside home. There are 23% primigravida versus 76.6% multigravida in this survey. Of the multigravida, 10.9% had miscarriage and this admission for delivery is for their first child. It becomes relevant in terms of their perception of epidural which is likely to be more reflective of primigravida rather than multigravida.

Previous experience of delivery: Majority (66.7%) rated their previous delivery experience as satisfactory. Only 15.3% has a poor or very poor experience of their delivery. Majority of women (86%) were aware of epidural, which is line with a study conducted locally in Karachi, Pakistan ¹¹ in 2003 which showed 76% awareness amongst women. Another study in Low Middle Income country, Nigeria ¹² showed similar rates 80% of awareness about epidural. Although overall awareness is 86% in our study when asked about pain relief methods only 41.6% responded that they do. It could possibly be how they view epidural as 'pain less delivery' and distinctly from other pain relief methods.

Of the women who are aware of epidural, 21% had epidural themselves in their previous pregnancy whereas 63.5% had someone epidural in their circle of friends or family.

They are also their main source of information ¹³ as well. Information received about epidural is generally well-balanced (48.9%) and positive (15.5%). However, it is negative in 35.5% of cases and when linked with sources, most consistently midwifery source is negative about epidural. Anaesthetist as source of information had

consistently positive of epidural. Women who had family as sole source of information too had negative impression, and as part of multisource information with anaesthetist, overall impression turned positive or well balanced. Obstetric doctor did not account for sole source of information and depart information in only one case, and that too as part of multisource.

Epidural is desirable to 28.3% and not to 18.3%, however there is a large group of women 53.3% who are undecided. It is quite interesting that labouring women would still have some uncertainty whether they would go ahead with it or not. Epidural desirability has a moderate positive Pearson correlation coefficient of 0.6 with level of education but none (-0.1) with gravida. It shows that women with higher level of education are likely to high desirability of epidural, also found in a study in Indian population¹⁴.

Women want epidural to control pain and relieve stress, they are likely to have a more positive outlook (55%) if they are encouraged by health professionals, family or other sources of support. This is despite having concerns about its actual or perceived side effects. The frequent cited concern are backache (81.6%), paralysis/ nerve damage (45%), pain from procedure (41.7%), discouragement by family or others (36.7%), Prolonged labour (33.3%) and risk to baby (30%), Inadequate pain relief and risk of intervention(16.7%). Approximately, one-fifth of women highlighted the need for further information to help them make informed decision.

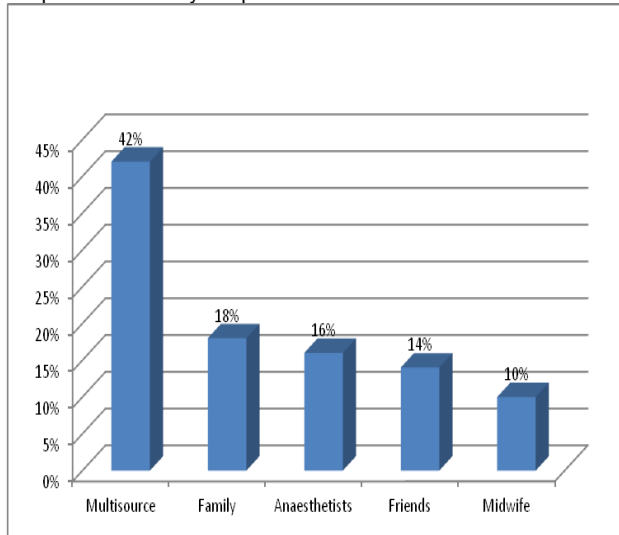
Table 1: Demographics

Age years	Overall	29.05 +/- 4.6
	≤20	2 (3%)
	21-25	9 (15%)
	26-30	26 (43%)
	31-35	20 (33%)
	≥36	3 (5%)
Education	Matric and below	25 (41.7%)
	Intermediate	21 (35%)
	Bachelors	14 (23.3%)
	Intermediate and Bachelor	35 (58.3%)
Work status	Working	9 (15%)
	Homemaker	51 (85%)
Area of residence	Lahore	60 (100%)
Gravida	Primigravida	16 (26.7%)
	Multigravida	44 (73.3%)

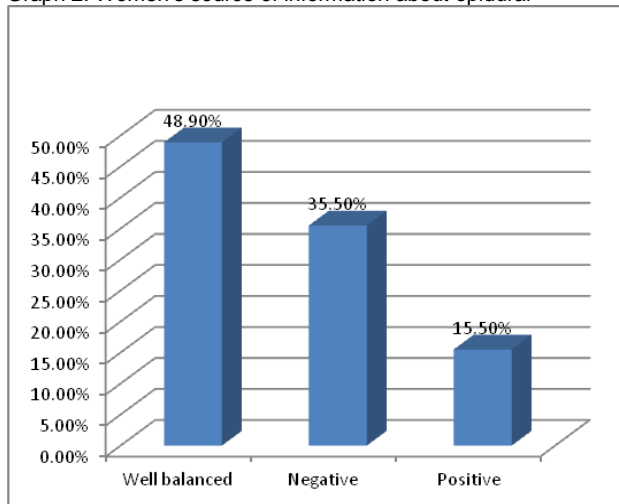
Table 2.

Rate your previous delivery experience	Excellent	Good	Satisfactory	Poor	Very poor	
	1	6	26	4	2	
	2.6%	15.4%	66.7%	10.2%	5.1%	
Aware of pain relief methods	Yes 25 (41.7%)		No 35 (58.3%)			
Previous Epidural and in whom	Yes 44(73.3%)		No 16(26.7%)			
	Self 11(25%)	Family 26 (59%)	Friends 7(16%)			
Source of information about epidural	Anaesthesia 8	Family 9	Friends 7	Midwife 5	Multisource 21	Hyne as multisource 2
Information received about epidural	Positive 7(15.5%)		Well balanced 22(48.9%)		Negative 16 (35.5%)	
Desirability of epidural	Yes17 (28.3%)		Maybe 32 (53.3%)		No 11 (18.3%)	

Graph 1: Desirability of epidural



Graph 2: Women's source of information about epidural



Graph 3: Desirability of epidural

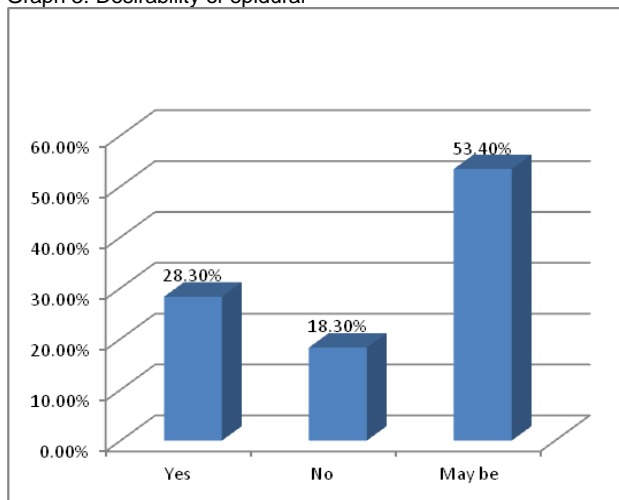


Table 3: Breakdown of concerns for opting in/out of epidural for labour analgesia

To have epidural	To control pain	48 (80%)
	To relieve stress	11 (18.3%)
	Previous experience	6 (10%)
	Encouraged to have	33 (55%)
Not to have epidural	Discouraged by	22 (36.6%)
	Not natural	6 (10%)
	Previous bad experience	2 (3.3%)
	Pain from procedure	25 (41.6%)
	Risk to baby/ self	18 (30%)
	Prolonged labour	20 (33.3%)
	Risk of intervention	10 (16.6%)
	Back pain	49 (81.6%)
	Inadequate pain relief	10 (16.6%)
	Headache	4 (6.6%)
Paralysis/ nerve damage	27 (45%)	
Discouraged by	22 (36.6%)	

DISCUSSION

First epidural in obstetrics was used in 1946. Pain relief with epidural catheter is in clinical practice since 1970s and has long been used by women in labour. It has been long studied and audited (National Audit Project NAP3)¹⁵ for its efficacy, safety and side effects and is recommended by World Health Organization (WHO)¹⁶, American Society of Anaesthetist, American College of Obstetricians and Gynecologists (ACOG) and National Institute of Clinical excellence (NICE) UK. It is widely used in developed countries, about 60% women in United States of America, 30% in United Kingdom, 33% in Norway and 46.3% in Canada¹⁷.

This survey identifies key areas that require focus to improve epidural perception and desirability amongst labouring women. One-fifth of the women felt that they do not know enough about epidural and would like more information to help make them decision either way. By providing them information through radio and television programs on health and women, awareness sessions at women colleges and antenatal classes. These forums are also good at providing evidence based information to help dispel myths and by health professionals. As this survey shows that certain sources of information have biases, for instance women who had epidural related information from midwives rated it as negative. One can only hypothesize that Midwives are not being part of hospital staff and private health care worker of varying qualifications and knowledge about epidural, moreover they may or may not have financial interest in delivery themselves in non-hospital setting. Considering half the birth in Pakistan are at home and 41% are assisted by midwives⁵. There is a role of obstetrician in educating women about different pain relief methods, as primary physicians there is an established rapport and trust.

This study also highlights the importance of creating awareness of pain relief methods other than epidural, both pharmacological (opioids, entonox) and non-pharmacological (relaxation, massage). Women seem to associate pain relief method with epidural ('pain less delivery') and not alternatives.

Almost all whether primigravida or multigravida considered pain of childbirth as severe. They were all well-aware of the severity of pain to be encountered shortly as

their labour would progress. Epidural was desirable for its pain relief and reducing stress of labour. However, whether epidural was desirable or not, they had some concerns about it. A few like pain from procedure, prolonged labour or risk of intervention, nerve damage and paralysis need more information and putting these risks in context as well. Nerve damage (1:54000) or paralysis¹⁴.

(1:140,000) is very uncommon but given that it has life changing consequences therefore requires good evidence based explanation in a simplified way that women can understand. NICE guidance on epidural is to discuss risk and benefits of epidural which includes “second stage of labour may prolong with increased risk of instrumental delivery”⁸.

Women overwhelmingly showed concern of backache, which is not inclusive of pain during procedure and was asked separately. It again needs to be clarified and possibly at a larger scale or forum to dispel myths before biases are created.

Limitations of this study is that women belong to metropolitan city and relatively more educated and aware of epidural through different sources of information, however it cannot be extended to rural or smaller cities.

Subgroup analysis in terms of perception amongst primigravida versus multigravida, educational level or working status could not be carried out due to small study size.

CONCLUSION

In setting of a large private teaching hospital in metropolitan city, majority of women were aware of epidural, however one fifth felt that they needed more information to make an informed decision. Women had concerns about risks related to epidural, some of them had no proven association with epidural. It shows that information from relevant health professionals will help dispel such fears and help women make informed decision.

REFERENCES

1. Karn, S., Yu, H., Karna, S., Chen, L.Q. and Qiao, D.Y. (2016) Women's Awareness and Attitudes towards Labor Analgesia Influencing Practice between Developed and Developing Countries. *Advances in Reproductive Sciences*, 4,46-52.
2. <http://dx.doi.org/10.4236/arsci.2016.42007>. Aksoy, M., Aksoy, A.N., Dostbil, A., Celik, M.G. and Ince, I. (2014) The Relationship between Fear of Childbirth and Women's Knowledge about Painless Childbirth. *Obstetrics and Gynecology International*, 2014, Article ID:274303.
3. <http://dx.doi.org/10.1155/2014/274303> Jalal A. Nanji, and Brendan Carvalho. Modern techniques to optimize neuraxial labor analgesia *Anesth Pain Med* 2018;13(3):233-40. <https://doi.org/10.17085/apm.2018.13.3.233>
4. Paul O Ezeonu, Okechukwu Bonaventure Anozie Fidelis A Onu ,1 Chidi U Esike Johnbosco E Mamah .Perceptions and practice of epidural analgesia among women attending

- antenatal clinic in FETHA. *Int J Womens Health* .2017; 9: 905–911. doi: 10.2147/IJWH.S144953
5. Pakistan, 2012-13 Demographic and Health Survey, Key Findings. https://www.nips.org.pk/abstract_files/PDHS%20Key%20Findings%20FINAL%201.24.14.pdf
6. Aksoy, M., Aksoy, A.N., Dostbil, A., Celik, M.G. and Ince, I. (2014) The Relationship between Fear of Childbirth and Women's Knowledge about Painless Childbirth. *Obstetrics and Gynecology International*, 2014. <http://dx.doi.org/10.1155/2014/274303>
7. Montreal declaration, IASP <https://www.iasp-pain.org/DeclarationofMontreal> .Last accessed June 2019. NICE-Intrapartum care: <http://pathways.nice.org.uk/pathways/intrapartum-care/pain-relief-in-labour#content=viewnode%3Anodes-supporting-the-womans-choice> . (Last accessed June 2019).
8. Women's Decision- Making About Birthplace Choices: Booking for Birth Center, Hospital, or Home Birth in the North of England, Lambert, Carol, Jomeen, Julie, McSherry, Wilf. *International Journal of Childbirth*. Vol 8 Issue 2, DOI:10.1891/2156-5287.8.2.115
9. Births by parents' characteristics in England and Wales: 2015: <https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/livebirths/bulletins/birthsbyparentscharacteristicsinenglandandwales/2016#main-points>
10. Mohammed Raheel Minhas, Rehana, Gauhar Afshan. Knowledge, attitude and practice of Parturients regarding Epidural Analgesia for Labour in a university hospital in Karachi *Journal of the Pakistan Medical Association*, February 2005, Volume 55, Issue 2 <https://jpma.org.pk/article-details/586>
11. Oladokun, A., Eyelade, O., Morhason-Bello, I., Fadare, O., Akinyemi, J., & Adedokun, B. (2009). *Awareness and desirability of labor epidural analgesia: a survey of Nigerian women*. *International Journal of Obstetric Anesthesia*, 18(1), 38–42. doi:10.1016/j.ijoa.2008.07.01 <https://www.ncbi.nlm.nih.gov/pubmed/19046871/>
12. Women's Awareness and Attitudes towards Labor Analgesia Influencing Practice between Developed and Developing Countries Shammi Karn1, Hong Yu1*, Sourabh Karna2, Liqin Chen1. http://file.scirp.org/pdf/ARSci_2016050914571322.pdf
13. Awareness and attitude of Indian pregnant women towards labour analgesia. *RV Shidhaye, Mandar Galande, VB Bangal, Joshi Smita. Anaesthesia, Pain and Intensive care ;vol 16(2) May-Aug 2012* <http://www.apicareonline.com/index.php/APIC/article/view/506/495>
14. The Royal College of Anaesthetists. 3rd National Audit Project (NAP3). [<http://www.rcoa.ac.uk/nap3>].
15. WHO recommendation on epidural analgesia for pain relief during labour, February 2018. <https://extranet.who.int/rhl/topics/preconception-pregnancy-childbirth-and-postpartum-care-during-childbirth/care-during-labour-1st-stage/who-recommendation-epidural-analgesia-pain-relief-during-labour>(Last accessed June 2019).
16. Canadian Institute for Health Information. <http://indicatorlibrary.cihi.ca/pages/viewpage.action?pageId=114213>.