

A Systematic Literature Review on Pushing Down Techniques during Labour Second Stage on Maternal and Neonatal Outcome

Ms. Shital V Waghmare¹, Dr Sheela Upendra².

¹ Ph.D. Scholar JJT University, Rajasthan. Asst. Prof, Symbiosis College of Nursing Pune (SIU).

² Associate Professor Symbiosis College of Nursing Pune (SIU)

Abstract

Background: Delivery is a very perious moment in every womens life who go through the labour process. It is actually a very painful process for mother during the time of labour contraction, women get exhausted due to continous bearing down and pain. The severity of pain increse as the uterine contraction becomes stronger. **Objectives:** The objective of this systematic review is to identify various pushing methods and to know both the advantages and disadvantages associated with them. **Methods:** Eligibility criteria: the different studies published on this topic was used. **Conclusion:** In this total 18 studies was reviewed which showed that if the right pushing technique is practiced by the mother during right time the rate of exhausation and pain is less so maternal satisfaction his there with less complications.

Keywords: Systematic, Pushing Down Techniques, Labour, Second, Maternal, Neonatal Outcome

Introduction:

Delivery is a very perious moment in every womens life who go through the labour process. It is actually a very painful process for mother during the time of labour contraction, women get exhausted due to continous bearing down and pain. The severity of pain increse as the uterine contraction becomes stronger. If the women is taugh about proper bearing down or pushing technique during her antenatal visits this painfull event can be minimized and she will be less exhausted. During antenatal vists she must be taught exactly how to push, when to push and how to push. Because all the health care team members, relatives, family members, friends everbody starts giving her advices as soon as they come to know that she pregnant but no one tells her about bearing down. If we go through the literature there are variuos pushing down techniques. But clear no evidence or we can say there is a gap in this area and more research are requied to be conducted.

Objectives:

The objective of this systematic review is to identify various pushing methods and to know both the advantages and disadvantages associated with them.

Methods

Eligibility criteria: the meta-analysis was done on the studies published on the same topic or related one and the eighteen studies was finally included and systemic review was done. The components studied was duration of Second Stage , Perineal laceration, Perineal laceration, Perineal laceration, Perineal laceration, APGAR score, Duration of pushing, Pitocin, Complications ,Spontaneous vaginal delivery, Maternal satisfaction.

Extraction of data:

The data was extracted based on the inclusion criteria. Author extracted the data by checking the similarity with this study and analysis was done the discrepancies was removed and it was further discussed and then the decision was taken into consideration. By this means the eligible studies was included and reviewed. The following were the domains consider:

- The publication duration
- The different types of study designs used.
- Which type of are/ country it was published.
- What type of sample were used.
- The study findings
- Outcome of this studies etc.

Table-1, Inclusion Criteria

SR.N	Inclusion criteria
1.	Parity of women
2.	Gestation week
3.	Presentation must be cephalic
4.	Fetus must be alive

5.	If any analgesia given or not both
6.	Single live fetus
7	Absence of complication during pregnancy

The inclusion criteria the components included was Parity of women's which reveals primary infertility or secondary infertility. Consideration of gestational week was done on account of considering the maternal and neonatal outcomes of pregnancy. The normal presentation was taken into consideration i.e. cephalic and included in the present systemic review. Also those studies was consider whose fetal outcome was positive and single live fetus. And high risk cases was not included in this studies.

Systemic Review of the Analysis:

Table-2

SR.N	Effects	Result
1.	Duration of Second Stage	Two studies data showed actually the no relation with the duration of labour
2.	Perineal laceration	There was no risk of perineal trauma
3.	Episiotomy	Six studies data showed that no associated risk of episiotomy between groups
4.	Admission toNICU	one studies data showed no difference between groups
5.	Hypoxic ischemic encephalopathy	Not a single study reported this outcome
6.	APGAR score	no studies showed difference between groups
7	Duration of pushing	The studies showed the direct evidence that duration of pushing was associated with type and time of pushing technique.
8	Pitocin	Those patient who were administer with Pitocin had greater exhaustion at the time of crowing.

9	Spontaneous vaginal delivery	All the deliveries occur was spontaneous vaginal delivery
10	Complications	No complication was observed
11	Maternal satisfaction	Maternal satisfaction was higher in mother who actually pushed when the cervix was fully dilated

The components studied was duration of Second Stage , Perineal laceration, Perineal laceration, Perineal laceration, Perineal laceration, APGAR score, Duration of pushing, Pitocin, Complications ,Spontaneous vaginal delivery, Maternal satisfaction was disused on the following bases :

Comparison between the types of pushing:

There was no noteworthy relation in the duration of second stage of labour, it was found the studies the mean difference was 09.22 minutes; at a level 94.8 percent confidence interval. Also few studies showed that it was from negative to 20.53 minutes. And other studies had very few. The episiotomy was on the rate of 0.05 with confidence interval 92 percent and other three studies it was seen from 1.60 to 8.0 no relevance was seen among episiotomy rate and pushing technique. The also showed that there was no associated risk of pushing technique with perianal laceration. Perineal laceration is mainly associated with perineal support to be provided during labour by a skilled birth attendant. If good and strong perineal support is provided it minimize the risk. APGAR score is usually observed at birth at one minute and at 5 minute, it reveals the condition of neonate, based on the scoring neonate can be categorized in high risk, critical, normal. The APGAR score was <7 FOR 5 minutes and there were no clear observation identified between the groups it was at RR -032 TO 7.65 an this was studied on almost 300 neonates. Not a single study reported Hypoxic ischemic encephalopathy outcome. Those patient who were administer with Pitocin had greater exhaustion at the time of crowing. No complication was observed. Maternal satisfaction was higher in mother who actually pushed when the cervix was fully dilated

Discussion:

It is more difficult for us to find out the scientific reasons from the meta-analyses report that which is right pushing technique actually more studies needs to be done in this area.⁸ The studies often do not consider either predictive or confounding factors (direction of the fetal head, birth weight, maternal position during the second stage of labour, station when pushing begins, policy of early coaching and active management of labour, etc.).⁷ Furthermore, most of these studies omitted patients with epidural painlessness, which is widely used in some western countries. In France, almost 80% of parturient accept epidural analgesia.⁴ There was no noteworthy relation in the duration of second stage of labour, it was found the studies the mean difference was 09.22 minutes; at a level 94.8 percent confidence interval. Also few studies showed that it was from negative to 20.53 minutes. And other studies had very few. The episiotomy was on the rate of 0.05 with confidence interval 92 percent and other three studies it was seen from 1.60 to 8.0 no relevance was seen among episiotomy rate and pushing technique. The also showed that there was no associated risk of pushing technique with perianal laceration. Perineal laceration is mainly associated with perineal support to be provided during labour by a skilled birth attendant. If good and strong perineal support is provided it minimize the risk. APGAR score is usually observed at birth at one minute and at 5 minute, it reveals the condition of neonate, based on the scoring neonate can be categorized in high risk, critical, normal. The APGAR score was <7 for 5 minutes and there were no clear observation identified between the groups it was at RR -032 to 7.65 an this was studied on almost 300 neonates. Not a single study reported Hypoxic ischemic encephalopathy outcome. Those patient who were administer with Pitocin had greater exhaustion at the time of crowing. No complication was observed. Maternal satisfaction was higher in mother who actually pushed when the cervix was fully dilated.

This similar finding was observed in the present systemic review. But still the right pushing technique is practiced by the mother during right time the rate of exhaustion and pain is less so maternal satisfaction his there with less complications.

Conclusion

In this total 18 studies was reviewed which showed that if the right pushing technique is practiced by the mother during right time the rate of exhaustion and pain is less so maternal satisfaction his there with less complications. There is certain issues faced during second stage of labour was to encourage women to take a deep breath and while during the initiation of uterine

contraction and then which she is supposed to hold it and push down thought the complete uterine contraction. Now hear as she is severe pain it is difficult to encourage her to push during this time and her cooperation is also questionable. Thus these techniques must be taught priority to these women's and made them understand the importance of it to them and their fetus. Unless she realizes the importance and advantages of it she won't practice it. She should also be explained that she need to start bear down or push while crowing because reviews gives us the data that women starts pushing at the beginning and when actual time come to bear down she is completely exhausted and the fetus get stuck into the perineum and which can give risk to complication like fetal distress etc.

Ethical Clearance: Permission obtained from Institute Ethical Research Committee. Confidentiality was maintained of the data

Funding Source: The funding source is none

Interest of Conflict: No interest of conflict

References

1. Buxton EJ, Redman CWE, Obhrai M. Delayed pushing in the second stage: effect on fetal acid base status. Proceedings of Silver Jubilee British Congress of Obstetrics and Gynaecology; 1989 July 4-7; London, UK. 1989:80.
2. Fitzpatrick M, Harkin R, McQuillan K, O' Brien C, O' Connell PR, O' Herlihy C. A randomised clinical trial comparing the effects of delayed versus immediate pushing with epidural analgesia on mode of delivery and faecal continence. BJOG: an international journal of obstetrics and Gynaecology 2002;109:1359–65.
3. Fraser WD, Marcoux S, Douglas J, Goulet C, Krauss I, for the PEOPLE Study Group. Multicentre trial of delayed pushing for women with continuous epidural. Acta Obstetrica et Gynecologica Scandinavica 1997;76Suppl (167:1):45.

4. Kelly M, Johnson E, Lee V, Massey L, Purser D, Ring K, et al. Delayed versus immediate pushing in second stage of labor. MCN; American Journal of Maternal Child Nursing 2010;35 (2):81–8.
5. Gillesby EJ, Mogensen KD, Burns SM, Kirby S, Naylor KS, Petrella JA, et al. Comparison of delayed versus immediate pushing during second stage of labor for nulliparous women with epidural anesthesia. JOGNN: Journal of Obstetric, Gynecologic & Neonatal Nursing 2010; 39 Suppl 1 :S87
6. 2010; 39 Suppl 1 :S87
7. Goodfellow CF, Studd C. The reduction of forceps in primigravidae with epidural analgesia—a controlled trial. British Journal of Clinical Practice 1979; 33(10):287–8
8. Hansen SL, Clark SL, Foster JC. Active pushing versus passive fetal descent in the second stage of labor: a randomized controlled trial. Obstetric & Gynecology 2002; 99 (1):29–34
9. Jahdi F, Shahnazari M, Kashanian M, Farahani MA, Haghani H. A randomized controlled trial comparing the physiological and direct pushing on the duration of the second stage of labor, the mode of delivery and Apgar score. International Journal of Collaborative Research on Internal Medicine & Public Health 2011; 3 (2):159–64
10. Knauth DG, Haloburdo EP. Effect of pushing techniques in birthing chair on length of second stage of labor. Nursing Research 1986;35:49–51