



Cedarville University
DigitalCommons@Cedarville

Pharmacy and Nursing Student Research and Evidence-Based Medicine Poster Session

12-4-2015

Reducing Perineal Tears: The Effect of Pushing Methods and Length of 2nd Stage of Labor

Kristen A. Mohre

Cedarville University School of Nursing, kmohre@cedarville.edu


Jessica A. Wall

Cedarville University School of Nursing, jwall@cedarville.edu

Chien-Yueh Lee

Cedarville University School of Nursing, chien716@gmail.com

Follow this and additional works at: http://digitalcommons.cedarville.edu/pharmacy_nursing_poster_session

 Part of the [Female Urogenital Diseases and Pregnancy Complications Commons](#), [Maternal, Child Health and Neonatal Nursing Commons](#), [Obstetrics and Gynecology Commons](#), [Pharmacy and Pharmaceutical Sciences Commons](#), and the [Women's Health Commons](#)

Recommended Citation

Mohre, Kristen A.; Wall, Jessica A.; and Lee, Chien-Yueh, "Reducing Perineal Tears: The Effect of Pushing Methods and Length of 2nd Stage of Labor" (2015). *Pharmacy and Nursing Student Research and Evidence-Based Medicine Poster Session*. 70.
http://digitalcommons.cedarville.edu/pharmacy_nursing_poster_session/70

This Poster Session is brought to you for free and open access by DigitalCommons@Cedarville, a service of the Centennial Library. It has been accepted for inclusion in Pharmacy and Nursing Student Research and Evidence-Based Medicine Poster Session by an authorized administrator of DigitalCommons@Cedarville. For more information, please contact digitalcommons@cedarville.edu.





Reducing Perineal Tears: The Effect of Pushing Methods and Length of 2nd Stage of Labor

Chien-Yueh Lee, Kristen Mohre, and Jessica Wall
Cedarville University School of Nursing



Patient Care Issue

- ◆ Lacerations (tears) of the vagina and surrounding tissue commonly occur during delivery due to stretching forces from the baby passing through the birth canal.
- ◆ 18% of obstetrical procedures are laceration repairs, even higher than the C-section rate. (CDC.gov)
- ◆ Laceration effects: include pain, risk for infection, decreased mental/social well-being following delivery
- ◆ 2 types of pushing methods:
 - Instructed (immediate): patient is advised to begin pushing methodically upon complete cervical dilation (10cm)
 - Spontaneous (delayed): the patient is encouraged to postpone pushing until she feels the urge (Prins et al., 2011)
- ◆ This subject has not been adequately studied previously.

Evidence-Based Practice Question

In women in the 2nd stage of labor (pushing stage), how does spontaneous pushing compared to instructed pushing affect perineal lacerations and length of 2nd stage labor?

- ◆ **Population:** women in 2nd stage of labor
- ◆ **Intervention:** spontaneous pushing
- ◆ **Comparison:** instructed pushing
- ◆ **Outcomes:** perineal lacerations/length of 2nd stage labor

Registered Nurse Interview

The researchers interviewed an RN with about eight years of experience in a labor and delivery unit. The following questions were asked:

- 1. Is it better for mothers to push when they feel the urge?**
 - ◆ When the woman feels the urge to push, she should because it is difficult to suppress this urge.
- 2. Is it better for mothers to push only when directed in order to maintain steady pushing?**
 - ◆ If the woman has an epidural and cannot sense the urge to push, maintaining slow, steady pushing is better because it more gradually stretches the birth canal.
- 3. Which type of pushing causes less severe perineal trauma?**
 - ◆ There is no significant difference has been noticed.
- 4. Which method is typically practiced in this hospital?**
 - ◆ Depends on the situation and preferences of medical personnel.

Search Methods

Databases: PubMed, Cochrane Collection Plus, Cedarville University OneSearch, World Health Organization

Key words: perineal laceration, spontaneous pushing, instructed pushing, second stage labor, valsalva, labor and pushing

Inclusion criteria: childbearing age, scholarly articles, spontaneous vaginal delivery

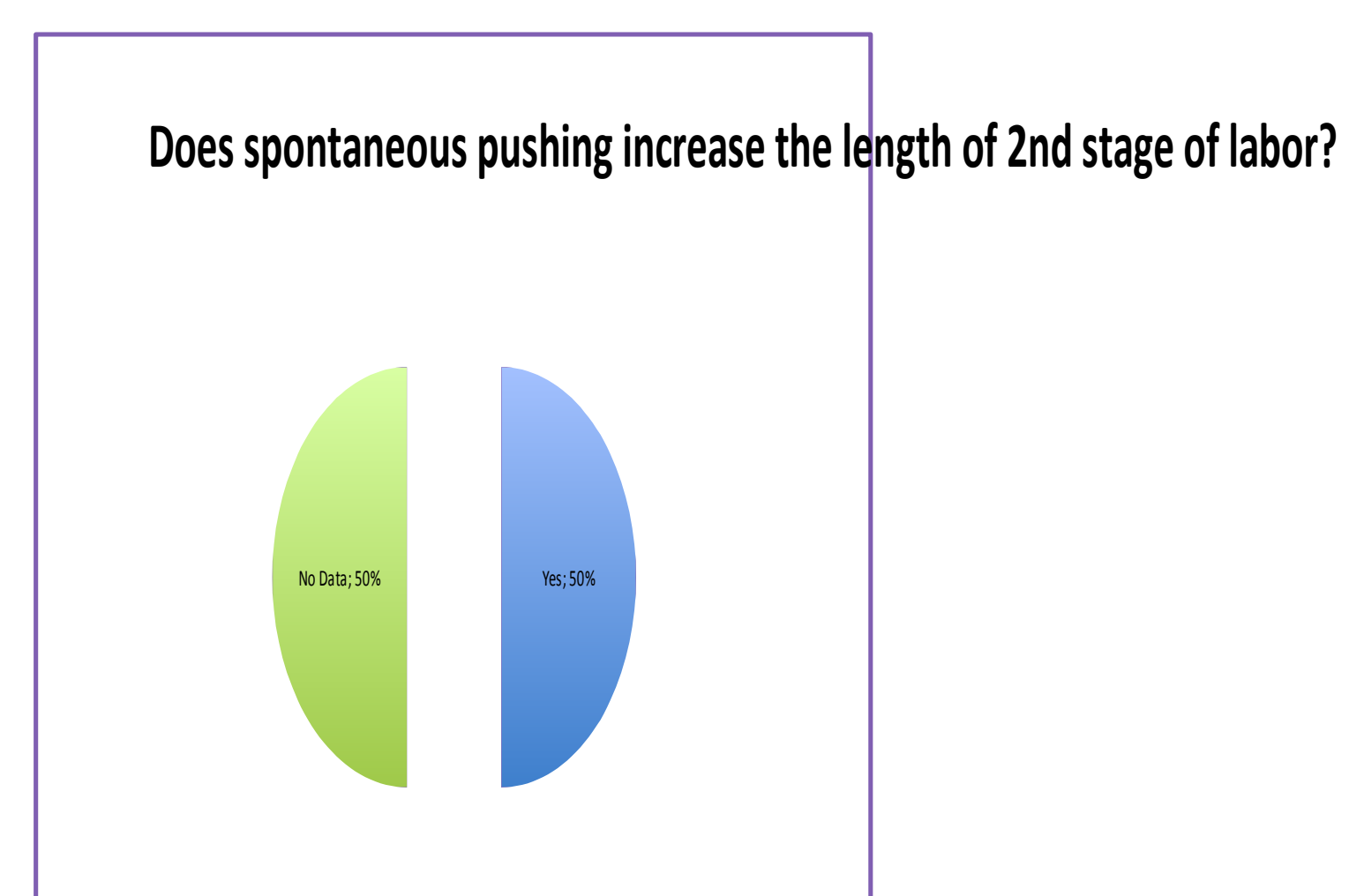
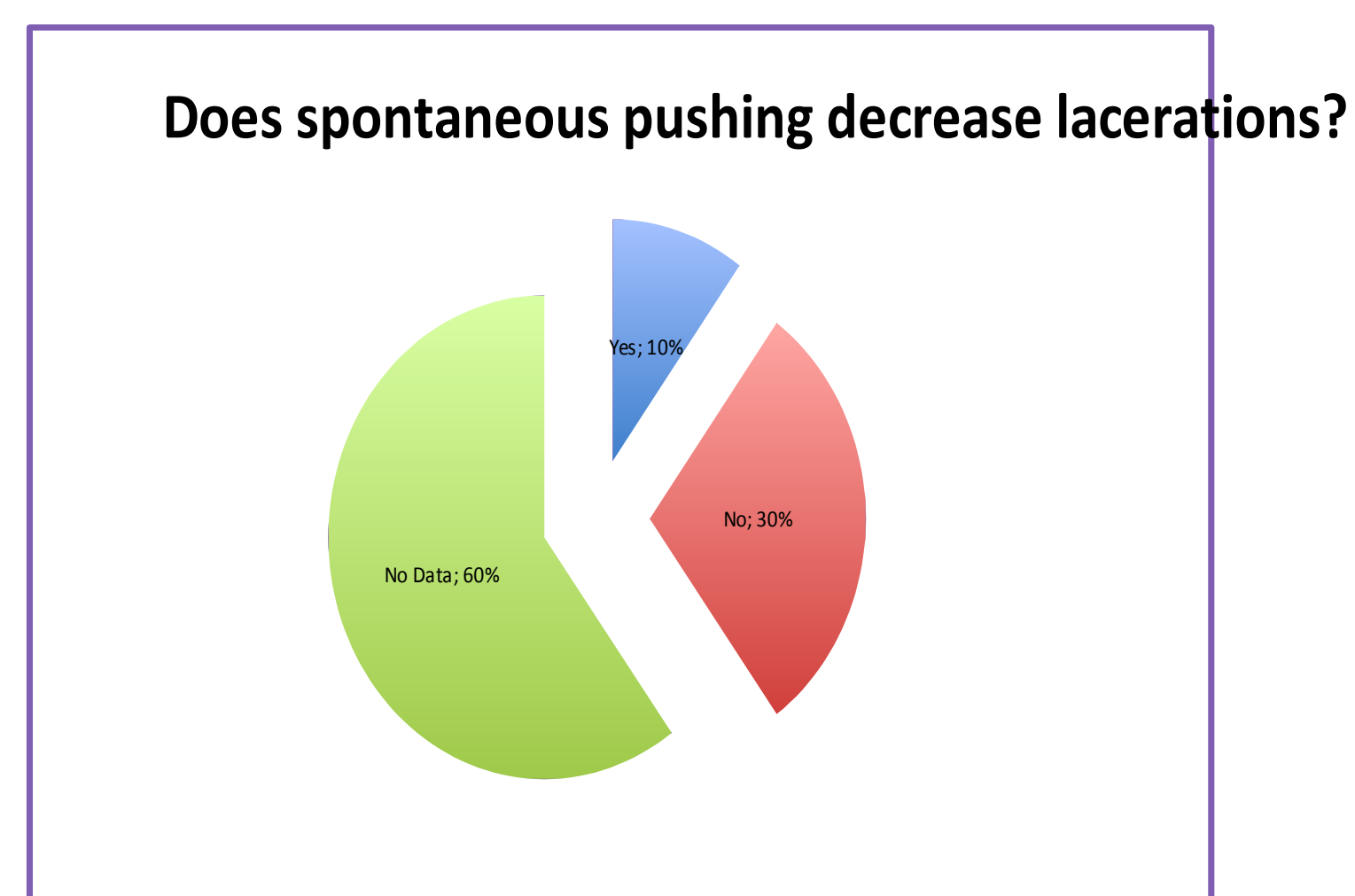
Exclusion criteria: articles in languages other than English, articles published before 2010

Search Results

The search yielded 29,893 articles, of which 10 were chosen:

- ◆ 4 systematic reviews (level of evidence 1)
- ◆ 2 randomized trials (level of evidence 2)
- ◆ 1 quasi-experimental trials (level of evidence 3)
- ◆ 3 cohort studies (level of evidence 4)

Findings from critique of articles:



Synthesis of Evidence

- ◆ Limited evidence was found concerning the direct influence of pushing methods on perineal lacerations.
 - Only one study found a direct statistical difference between type of pushing and laceration rate. (Balogoch et al., 2012)
- ◆ However, there is a relationship between lacerations and length of 2nd stage of labor.
 - Risk of laceration increases when the duration of 2nd stage of labor increases. (Aiken et al., 2015, Frey et al., 2012, Landy et al., 2011)
 - The duration of 2nd stage is significantly longer in women who push spontaneously. (Funai et al, 2015, Frey et al., 2012)
- ◆ Therefore, spontaneous pushing *possibly* increases the rate of lacerations.

Conclusion:

In women during the 2nd stage of labor, spontaneous pushing may decrease perineal lacerations, although it is unclear. However, spontaneous pushing does cause an increase in the length of the 2nd stage of labor, which increases laceration incidence. Therefore, spontaneous pushing may indirectly affect laceration rate.

Evidence-Based Practice Recommendations

Using the IOWA Model as theoretical framework, the researchers found that lacerations during 2nd stage labor are a significant clinical problem. Upon assembling research findings and synthesizing the evidence, they conclude that further research is needed to determine if utilizing spontaneous pushing could decrease lacerations during delivery. Because the evidence is inconclusive, pregnant women should be educated about the benefits and risks of both pushing methods and be encouraged to decide based on the information they are given.

Acknowledgements

The authors wish to acknowledge the RN who willingly provided answers to interview questions.

Limitations

- ◆ Some studies were conducted outside the US.
- ◆ Some factors were not controlled in all studies, such as maternal position during labor and caregiver differences in practice.
- ◆ Both nulliparous and multiparous mothers were included in many studies. These factors alone may effect on length of 2nd stage of labor.
- ◆ The majority of study participants were Caucasian.

References

- Aiken, Catherine E., Aiken, Abigail R., and Prentice, Andrew. "Influence of the Duration of the Second Stage of Labor on the Likelihood of Obstetric Anal Sphincter Injury." *Birth* (2015) : 86-93. Web. 6 Nov. 2015. doi: 10.1111/birt.12137
- Balogoch, Angela et al. "Noncoached Pushing in the Second Stage of Labor." *Journal of Obstetric, Gynecologic & Neonatal Nursing* (2012) : S136-S137. Web. 6 Nov. 2015. doi: http://dx.doi.org/10.1111/j.1552-6909.2012.01362_26.x
- Frey, Heather A., et al. "Does Delayed Pushing in the Second Stage of Labor Impact Perinatal Outcomes?" *American Journal of Perinatology* 10 (2012) : 807-814. Web. 6 Nov. 2015. doi: 10.1055/s-0032-1316448
- Funai, Edmund F. and Norwitz, Errol R. "Management of Normal Labor and Delivery." *UpToDate.com*. Wolters Kluwer, 17 Sep. 2015. Web. 6 Nov. 2015. <<http://www.uptodate.com/contents/management-of-normal-labor-and-delivery?source=preview&language=en-US&anchor=H25&selectedTitle=1~150-H25>>
- Gillesby, E. et al. "Comparison of Delayed Versus Immediate Pushing During Second Stage of Labor for Nulliparous Women with Epidural Anesthesia." *Journal of Obstetric, Gynecologic & Neonatal Nursing* 6 (2012) : 635-644. Web. 6 Nov. 2015. doi: <http://dx.doi.org/10.1111/j.1552-6909.2010.01195.x>
- Holvey, Nicola. "Supporting Women in the Second Stage of Labour." *British Journal of Midwifery* 3 (2014) : 182-186. Web. 6 Nov. 2015. <<http://0-search.ebscohost.com.library.cedarville.edu/login.aspx?direct=true&db=rzh&AN=104045513&site=eds-live>>
- Landy, Helain J., et al. "Characteristics Associated With Severe Perineal and Cervical Lacerations During Vaginal Delivery." *Obstetrics & Gynecology* 3 (2011) : 627-635. Web. 6 Nov. 2015. doi: 10.1097/AOG.0b013e31820afaf2
- Laughon, Katherine S. et al. "Neonatal and Maternal Outcomes with Prolonged Second Stage of Labor." *Obstetrics & Gynecology* 1 (2014) : 57-67. Web. 6 Nov. 2015. doi: 10.1097/AOG.0000000000000278
- Lemos, Andrea, et al. "Pushing/bearing down methods for the second stage of labour." *Cochrane Database of Systematic Reviews* 10 (2015) : 1-92. Web. 6 Nov. 2015. doi: 10.1002/14651858.CD009124.pub2
- Prins, M., et al. "Effect of spontaneous pushing versus valsalva pushing in the second stage of labour on mother and fetus; a systematic review of randomised trials." *BJOG* 118 (2011) : 662-670. Web. 6 Nov. 2015. doi: 10.1111/j.1471-0528.2011.02910.x
- "Obstetrical Procedures." *Cdc.gov*. Centers for Disease Control and Prevention. 22 Jan. 2015. Web. 19 Nov. 2015. <http://www.cdc.gov/nchs/fastats/obstetrical-procedures.htm>