Views on Medical and Natural Birth in University Women and Men

Elizabeth Soliday and Stefani Mammenga
Department of Human Development
Washington State University Vancouver (USA)

Abstract: In the U.S. and other industrialized nations, the prevailing childbirth approach has been described as medicalized, a view in which safe birth is characterized as requiring specialized intervention. From the perspective that birth attitudes are largely enculturated, we assessed medical and natural birth attitudes among 1,467 nulliparous university women and men, expecting that pre-parents would endorse medical more strongly than natural birth attitudes. We analyzed data in subgroups categorized by sex, race, and future childbearing plans. White men and women who did not plan to have children scored significantly higher on the medical than natural birth scale whereas non-white women and men rated the natural birth scale higher. Our results reflect the complex interplay between demographics and birth philosophy and indicate the need for awareness of enculturated beliefs, particularly in developing childbirth informational campaigns to address growing evidence indicating that intensive intervention has not led to measurably increased maternal or newborn health.

Keywords: childbirth, preconception, birth attitudes, men and birth, medical paradigm

The prevailing childbirth care approach in the U.S. and other industrialized nations has been described as "medicalized," which involves treating birth as a medical condition requiring the assistance of highly specialized care professionals and technological intervention (Davis-Floyd, 2001). The dominance of the medical birth paradigm is reflected in 21st century data indicating that over 98% of U.S. births took place in hospitals (Martin et al., 2010), where women routinely receive one or more procedures such as IV antibiotics, synthetic oxytocin, or episiotomy; similarly, more than 40% of women reported having had labor induced, and 30-32% had cesareans (Declercq, Sakala, Corry, & Appelbaum, 2006; Martin et al., 2010). These data underscore how medicalized birth is the U.S.'s current normative standard, whereas physiologic birth, which relies primarily on the innate capacities within mothers and fetuses, is in the minority position (Soliday, 2012).

Unfortunately, investment in intensive medical intervention during the perinatal period has failed to translate into measurably better maternal or newborn health outcomes at the population level (Moos, 2006; Sakala & Corry, 2008). Health care reimbursement structures and defensive practice have been

Dr. Elizabeth Soliday is Associate Professor of Human Development at WSU Vancouver (USA) and a licensed clinical psychologist.
Stefani Mammenga is a Ph.D. student in Prevention Science at WSU Vancouver.
Contact Elizabeth Soliday, PhD, Department of Human Development, WSU Vancouver, 14204 NE Salmon Creek Ave., Vancouver, WA 98686, USA. Phone 01/360-546-9727; e-mail esoliday@wsu.edu.

cited as among the reasons for the widespread acceptance of medicalized birth (Francis, 2014; Perl, 2010; Sakala, 2006). However, to say that systemic and professional influences are wholly responsible for the dominance of the medicalized birth paradigm may be inaccurate, as women have historically had some role in shaping the care culture through their uptake of procedures, particularly those with the promise of treating pain (Pitcock & Clark, 1992; Wertz & Wertz, 1989). This is not to say that women are making care decisions autonomously or with the benefit of full information. To the contrary, women have reported that they felt pressured to accept interventions that they either felt poorly informed about or did not want (Declercq, Sakala, Corry, Applebaum, & Herrlich, 2013; Soliday, 2012). For this reason, we focused this study on birth attitudes of women and men who had not yet given birth, i.e. "preparents," because they have matured in a medicalized birth culture but have not yet directly experienced care that could influence their perspectives.

According to Bronfenbrenner and Evans (2000), cultural standards influence individual development, which include views on medical approaches and care (Cassidy, 1995). From that perspective, the prevailing medicalized birth culture would be reflected in individual views, with greater weight assigned to the normative, medicalized birth paradigm relative to physiologic birth. We tested that prediction by assessing medicalized and physiologic ("natural") birth attitudes in university women and men who had not yet become parents. Traditional-age college students are an appropriate sample because the average age of first birth in U.S. women is 26 years (Martin, Hamilton, Osterman, Curtin, & Mathews, 2015), and men in this age range have the highest fertility rates (Martin, Hamilton, Osterman, Curtin, & Mathews, 2013). Understanding this population's views is essential to developing effective, evidence-based birth information campaigns, which could have a greater impact among preparents because they are not yet under the stress of impending parenthood.

Birth Philosophy Background and Scale

The Birth Philosophy Scale (Wilson & Sirois, 2010) was originally designed to assess natural and medicalized (medical) birth philosophies. The authors conceptualized the two dimensions as reflecting distinguishing views on the social/relational nature of birth, technology use, and perceived risk. Their 11-item *natural* birth scale contains items such as, "I would want to have a good relationship with my birth attendant," which captures the social/relational aspect; "Some routine medical interventions during labor seem unnecessary," addresses views on technology, and "Giving birth is a normal event," reflects perceived risk. On the 11-item *medical* birth subscale, "Women depend on medical professionals to ensure they have a safe delivery," is a social/relational item, "Things like fetal monitoring reduce the risk … during childbirth," addresses technology, and "Giving birth is a potentially dangerous event,"

reflects perceived risk. Factor analysis on data from 133 lower-risk pregnant women supported the two-factor structure (two items were dropped).

Consistent with theoretical notions of birth philosophies that distinguish women's personal preferences and birth attendant practice approaches, Wilson and Sirois (2010) found that women in early pregnancy with higher scores on the natural birth subscale were 10 times more likely to have selected a midwife than obstetrician; those same women had marginally (p = .06) lower scores on medical birth philosophy. These findings confirmed earlier research indicating that pregnant women who rated lower on medicalized birth views were significantly more likely to choose a midwife instead of an obstetrician (Howell-White, 1997). Howell-White conceptualized her 6-item medicalized birth philosophy scale largely from the perspective of risk (e.g., i.e. medical expertise and intervention are necessary for safe birth).

Medicalized Birth Views in Preparents

Research with preparent populations has generally not involved structured scales on medicalized birth or birth philosophy. However, study results indicate that students hold identifiable attitudes about childbirth. Cleeton (2001) interviewed female and male college students who viewed a childbirth video. Consistent with the prevailing medicalized birth paradigm, most viewed hospital birth as "normal" due to availability of pain treatments and advanced technology. Overall, students had limited knowledge of the birth process, little awareness of specific birth interventions and their risks, and they feared birth and birth pain.

Other studies have focused on how birth philosophy/attitudes connect to birth care-related preferences. In university women and men, Fairbrother, Stoll, Schummers, and Carty (2013) found that those who expressed medicalized birth preferences, as assessed by single items on preference for epidural vs. no epidural and cesarean vs. vaginal birth, were significantly more likely to indicate preference for obstetrician-led care as opposed to M.D. family practitioners or midwives. Qualitative data indicated that desire for safe care and specialist care and quality relationship with care provider factored into preferences. Response patterns appeared similar between women and men.

D'Cruz and Lee (2014) used an open-ended question to assess young childless women's reasons for desiring specific birth attendant and delivery mode. Women reporting a preference for vaginal birth most frequently stated "a desire for natural birth" and "cesarean as unnecessary" as the reasons for their preference. Women desiring a medicalized birth (a cesarean) most frequently cited as their reason the view that cesarean birth was relatively safer and more predictable/convenient. Stevens and Miller (2012) assessed medicalized birth views using a structured scale similar to Howell-White (1997). In their sample that included preparents, women reporting higher medicalized birth views were up to eight times more likely to assign labor induction (vs. no induction) to a hypothetical patient.

The Current Study

Accumulating research indicates that preparents hold childbirth attitudes consistent with the prevailing paradigm, and that those attitudes relate to care preferences. Further research on preparents' birth attitudes is warranted in light of growing evidence on birth outcomes and shifting perspectives on care. U.S. and global organizations have raised concerns about rising rates of medical birth intervention such as labor induction and cesarean delivery that increase risk absent corresponding evidence of improved maternal-newborn health (American College of Obstetricians and Gynecologists [ACOG], 2013; 2014; Sakala & Corry, 2008; World Health Organization [WHO], 2009). Though contextual factors such as medical practitioner training and institutional policies are undeniably associated with increasing unnecessary birth intervention, large-scale initiatives to increase patients' role in health care decisions (e.g., Patient-Centered Outcomes Research Institute, 2015) highlight the need to focus on patients' role in the equation.

We further propose that assessing men's attitudes is important because pregnancy usually occurs in the context of a sexual relationship, and partners influence one another's health-related attitudes and behaviors (Homish & Leonard, 2007; Lee et al., 2005). In the long term, understanding young women's and men's birth philosophies could ultimately help prepare them for better birth and, indirectly, a lifetime of considering care-related preferences and decisions.

Study Hypotheses

Based on the prevailing paradigm of "medicalized" as opposed to "natural" birth in the U.S., we expected students to score significantly higher on medical vs. natural birth scales. Assuming the prevailing birth paradigm results largely from socialization, we expected the same pattern of results for women and men. Also on the view that medicalized birth is an enculturated perspective, we expected that those planning to become and not planning to become parents at some point in the future would have higher scores on medical vs. natural birth scales.

Method

Participants. Participants were recruited from a Pacific Northwest multi-campus university for a larger study on pregnancy-related beliefs and decisions. Students completed the study to fulfill an undergraduate psychology course requirement or to earn extra credit in a social science undergraduate class.

Measures

Demographics. Students were asked to report their age, year in school, and major. They completed questions on general health and were asked to report whether they anticipated having children in the future.

Birth Philosophy Scale. The 22 items of the Birth Philosophy Scale (Wilson & Sirois, 2010) were scaled 1 (strongly disagree) to 6 (strongly agree). Items such as, "Women depend on medical professionals to ensure they have a safe delivery" made up the 11-item medical birth subscale. Scores on this scale ranged from 11-66. Items such as, "Giving birth is a normal event," characterized the 9-item natural birth subscale, which had a total score range of 9-54. Participants were instructed to select the number that best corresponded to their views, and items were modified when necessary to be appropriate for both women and men (e.g., "My body is designed to give birth" reworded to, "A woman's body is designed to give birth"). Higher scores on each scale indicated greater agreement with its respective construct. In our sample, alpha reliabilities for the medical birth subscale were .84 for women and .88 for men; *alpha* reliabilities on the natural birth scale were .74 for women and .73 for men.

Procedure

This study was reviewed and categorized as "exempt" by the authors' IRB. Students were alerted to the study via in-class announcements (delivered by trained student assistants) and study postings through a departmental research participation site. Students were given a URL with study information that then routed them to a consent page and online questionnaires. Students had to indicate consent before proceeding to study measures.

Results

Final Sample Composition and Missing Data Treatment. Of the 1,695 students who participated, 1,593 (94.0%) reported not having had (or having a partner who had) children. Data from 1,470 (92.3% of 1593) were 90% or more complete; three (0.2%) participants over age 40 were dropped so that the age range in the sample would be consistent with other studies of preparents. The final sample consisted of 1,140 women and 327 men. Women's and men's data were analyzed separately.

Table 1 reviews sample characteristics. Most women (n = 1,083, 95.8%) and men (n = 303, 94.7%) were ages 18-25. Approximately one third of women (n = 330, 29.0%) and men (n = 107, 32.9%) were non-white (e.g., African-American, Asian) or Latino/a. Nearly identical percentages of women (n = 1,045, 91.9%) and men (n = 300, 91.7%) reported that they anticipated having children in the future.

Table 1
Study Participants

Variable	Women, n (%) (n = 1140)	Men, n (%) (n = 327)
Age category (years)		
18-25	1084 (95.8)	303 (94.7)
26-35	27 (2.4)	9 (2.8)
35-40	20 (1.8)	8 (2.5)
Race, non-white (n, %)	330 (29.0)	107 (32.9)
Anticipate having children in future	1042 (91.9)	300 (91.7)

Preliminary Analyses. Preliminary analyses were used to test for effects of age and race on the two primary outcomes (medicalized, natural birth scale scores) and race (white, non-white).

For women, correlations between age and the two scales were less than 0.13 and were not significant. Women's medical birth scores did not differ by race, t (1106) = .64, p = .52. Women's scores on natural birth differed by race, with non-white women scoring slightly higher than white women, M = 42.99 (SD = 6.33) and M = 41.90 (SD = 6.19), respectively, t (1106) = -2.60, p < .01.

For men, correlations between age and the two scales were less than 0.08 (n. s.). Men's medical birth scores differed by race, t (317) = .2.74, p < .001; M for white men was 53.98 (SD = 7.81) and for non-white men was lower, M = 51.25, SD = 9.31. Men's scores on natural birth did not differ by race, t (317) = -.56, p = .57.

Major Analyses. Due to occasional significant differences by race, comparisons between the two birth philosophy scores were conducted on subgroups. Data were first separated into women and men, and in each sex category, were divided by race (white, nonwhite) for one set of analyses, and were divided by plans to have children (yes/no) for another. This resulted in comparisons of medical vs. natural birth scores in four sex x race subgroups and four sex x childbirth plans (8 subgroup tests total). For purposes of comparison, raw scale scores were standardized to z scores because the two subscales had different numbers of items and thus different upper and lower score limits. Paired samples t-tests were used because they account for the dependency of within-subject repeated measures data.

Standardized scores are presented by subgroup (Women - by race; by plans to have children; Men - by race; by plans to have children) in Table 2. As can be seen, scores on medical and natural birth philosophy scales differed significantly, but only in certain subgroups and in some cases contrary to expected directions.

Table 2
Standardized scores on birth philosophy subscales by subgroup

Group/Subgroup	Women	Men
Non-white		
Medicalized	-0.03 (0.98)	-0.21 (1.11)
Natural	0.13 (1.01)	0.08 (1.01)
Difference test	t (297) = -2.25*	t (101) = -2.63**
White		
Medicalized	0.02 (1.00)	0.15 (.92)
Natural	-0.06 (.99)	-0.03 (.98)
Difference test	t (772) = 1.68	t (202) = 2.20*
Expects children		
Medicalized	0.03 (0.98)	0.02 (1.00)
Natural	0.06 (0.95)	0.03 (.98)
Difference test	t (985) = -0.85	t (280) = -0.13
Does not expect children		
Medicalized	-0.28 (1.19)	0.08 (1.00)
Natural	-0.89 (1.14)	-0.28 (1.10)
Difference test	t (79) = 4.19***	t (26) = 1.25

* $p < .05$; ** $p < .01$; *** $p < .001$

Of the tests conducted on the four sex/race subgroups, Table 2 shows that three were statistically significant. However, only one of the three significant tests was in the expected direction: men who identified as white had significantly higher scores on medical vs. natural birth. Contrary to the expected direction, both women and men who identified as non-white scored significantly *lower* on medical vs. natural birth. There was not a statistically significant difference on medical vs. natural birth scale scores for white women.

Of the four tests conducted on medical vs. natural birth scales in men and women divided into subgroups by future plans to have children, only one was statistically significant (Table 2). Women who did not expect to have children scored significantly higher on medical vs. natural birth, which was in the expected direction.

Discussion

The purpose of this study was to examine differences in medicalized vs. physiologic, or natural, birth views in university women and men who had not yet become parents. We chose this population because we expected their reports would largely be reflective of enculturated birth attitudes and less influenced by direct care experiences, as can be the case with pregnant participants and/or their partners. With contemporary birth statistics indicating that medicalized birth is the prevailing care model in the U.S., we expected that women and men would report significantly higher scores on a medical compared to natural birth scale, and we expected that finding to hold across subgroups. Our hypotheses were partially borne out.

In support of our hypotheses, scores on medical vs. natural birth were significantly higher in two of the eight subgroups tested. The two subgroups were white men and women who did not anticipate becoming parents. Tests on two additional subgroups were statistically significant, but the differences occurred contrary to expected directions. That is, non-white women and men scored significantly *lower* on medical vs. natural birth.

In considering this complex results picture, we turned to the scale items. The medical birth scale has several items directly assessing the use of technology, such as, "I believe that modern technology has improved the quality of the birth experience," and, "Women should have all the latest technology to assist them in giving birth." In contrast, the natural birth scale contains items either focused on women's physical capacities for giving birth or on avoiding medical technology as in, "Giving birth naturally, without any medical interventions, would be ideal." These items reflect contrasting views on the role of technology in childbirth, with the medical scale emphasizing its centrality, whereas the natural birth scale items emphasize reliance on women's physical capacities and a trusting relationship with a care provider.

Gender differences in relational and technological interests have been long discussed, with evidence indicating that women have a greater "person" orientation whereas men have a greater "thing" orientation. This underlying difference, the origins of which remain the subject of much debate, presumably relates to women's greater preference for work and activities involving people and men's greater orientation towards technology-related work and activities, with technology orientation particularly strong among white men (Ceci, Williams, & Barnett, 2009; Eagly, Wood, & Diekman, 2000; Su, Rounds, & Armstrong, 2009). "Person-thing" gender and cultural differences provide a contextual frame for our findings. That is, white men's significantly higher rating of medical birth over natural birth is consistent with a "thing" orientation, whereas non-white women's and men's significantly higher rating of natural birth over medical birth is consistent with a "person" orientation. Placing our findings within this broader social context makes even more sense when considering that our sample consisted of individuals who had not previously parented, suggesting that their reported views resulted largely from enculturation.

We must note that women who reported not planning to become parents rated medical higher than natural birth. With an approximately 50% reported overall unplanned pregnancy rate (Finer & Henshaw, 2006) that may be even higher in 20-24 year old age group (Henshaw, 1998), our finding warrants special attention. Though we did not directly assess childbirth fear, previous research has indicated that maternal care decisions, particularly interest in planned cesarean delivery, are strongly associated with childbirth fear (Saisto & Halmesmaki, 2007; Sjogren, 2000). However, the long-term consequences of birth interventions such as planned cesarean in the absence of clear medical indication remain unknown (United States National Institutes of Health, 2006), whereas the known short-term risks are those associated with major

abdominal surgery, at minimum. Women have also reported being poorly informed on and later dissatisfied with the risks of specific birth procedures used with increasing frequency, including cesarean delivery (Declercq, et al., 2013; Soliday, 2012). Therefore, young, nulliparous women who report not planning to have children and who rated medical higher than natural birth seem at special risk of negative birth experiences and outcomes should they ever fall into 50% of unplanned pregnancies category.

We again mention that four of the eight subgroups tested did not rate medical birth higher than natural birth. It is possible that young populations are consuming professional information on unnecessary birth interventions (e.g., ACOG, 2013; 2014). Whether or not preparents are gaining greater perspective on the risks of medicalized birth, it remains to be determined how that perspective may translate into patient-centered, empowered decision-making over the reproductive course.

As one of the few existing studies using validated instruments to assess birth attitudes among younger, nulliparous women and men, we should acknowledge the study's limitations. We assessed birth attitudes using a single questionnaire at one point in time. Though it is likely that students' reports reflected enculturated beliefs, in-depth interview studies would better elucidate the influences behind students' birth attitudes. In addition, repeated measures tied to longitudinal outcomes such as care choices and birth experiences would provide needed insight into the role of birth attitudes in decision-making and birth outcomes. Students who participated to fulfill a class requirement had options from which to choose and may have selected this study based on particular interest in pregnancy and parenting. That interest was very likely responsible for the nearly four times higher rate of female compared to male participants.

Clinical Implications and Conclusion

These results have important implications for developing preconception health programs and birth information campaigns. Care models are increasingly emphasizing patients' roles and responsibilities in care and related decision-making. Overall, our female and male participants scored high on both medical and natural birth attitudes. This represents an opportunity to capitalize on what our data would suggest is a time of relatively open attitudes towards birth and one in which individuals are not under the stress of impending parenthood. This life phase presents a unique window for prevention in terms of informing women and men on the risks and benefits of specific birth care choices, including those that postpartum women have reported feeling they were poorly informed on.

Specific target groups for birth informational campaigns might include white men as they will likely be supporting a partner through childbearing at some point and again, in a period of relative openness towards birth approaches, they may be receptive to evidence-based information on benefits

and risks of technology-intensive birth. Similarly, all young women, including those difficult to reach due to reported plans not to have children, should at least be presented the opportunity to access accurate, evidence-based birth-related information during routine reproductive health visits.

In conclusion, our results indicated that the birth attitudes of young childless women and men aligned more strongly with a medical as compared to natural birth philosophy. However, this was true only for certain self-identified racial and childbearing planning subgroups. This pattern of findings suggests that introducing preparent populations to the evidence base indicating that low-intervention birth is safest for mothers and newborns in the vast majority of cases (Sakala & Corry, 2008) will require understanding of and sensitivity towards their enculturated beliefs.

References

American College of Obstetricians and Gynecologists [ACOG]. (2013, March 21). Early deliveries without medical indications: Just say no. Retrieved from: http://www.acog.org/About-ACOG/News-Room/News-Releases/2013/Early-Deliveries-Without-Medical-Indications

American College of Obstetricians and Gynecologists [ACOG]. (2014, March 1). Obstetric care consensus: Safe prevention of primary cesarean delivery. Retrieved from: http://www.acog.org/Resources-And-Publications/Obstetric-Care-Consensus-Series/Safe-Prevention-of-the-Primary-Cesarean-Delivery

Bronfenbrenner, U., & Evans, G. A. (2000). Developmental science in the 21st century: Emerging questions, theoretical models, research designs and empirical findings. *Social Development, 9*(1), 115-25.

Cassidy, C. (1995). Social science theory and methods in the study of alternative and complementary medicine. *Journal of Alternative and Complementary Medicine*, *1*(1), 19-40.

Ceci, S. J., Williams, W. M., & Barnett, S. M. (2009). Women's underrepresentation in science: sociocultural and biological considerations. *Psychological Bulletin*, *135*(2), 218.

Cleeton, E. R. (2001). Attitudes and beliefs about childbirth among college students: Results of an educational intervention. *Birth*, *28*(3), 192-200.

D'Cruz, L., & Lee, C. (2014). Childbirth expectations: An Australian study of young childless women. *Journal of Reproductive and Infant Psychology, 32*(2), 199-211.

Davis-Floyd, R. (2001). The technocratic, humanistic, and holistic paradigms of childbirth. *International Journal of Gynecology and Obstetrics, 75*(Supplement 1), S5–S23.

Declercq, E. R., Sakala, C., Corry, M. P., & Appelbaum, S. (2006). *Listening to mothers II: Results of the second national U.S. survey of women's childbearing experiences*. New York: Childbirth Connection. Retrieved from http://www.childbirthconnection.org/listeningtomothers/.

Declercq, E. R., Sakala, C., Corry, M. P., Applebaum, S., & Herrlich, A. (2013). *Listening to mothers III: Pregnancy and birth; report of the third national US survey of women's childbearing experiences*. New York, NY: Childbirth Connection.

Eagly, A. H., Wood, W., & Diekman, A. B. (2000). Social role theory of sex differences and similarities: A current appraisal. In T. Eckes & H. A. Trautner (Eds.), *The developmental social psychology of gender* (pp. 123-174). Mahwah, NJ: Erlbaum.

Fairbrother, N., Stoll, K., Schummers, L., & Carty, E. (2013). Obstetrician, family physician, or midwife: preferences of the next generation of maternity care consumers. *Canadian Journal of Midwifery Research and Practice-Revue Canadienne de la Recherche et de la Pratique Sage-femme*, *11*(2), 8-15.

Finer, L. B., & Henshaw, S. K. (2006). Disparities in rates of pregnancy in the United States, 1994 and 2001. *Perspectives on Sexual Reproductive Health, 38*(2), 90-96.

Francis, K. (2014). Interview with Emerson. *Journal of Prenatal & Perinatal Psychology & Health, 29*(4), 300-312.

Henshaw, S. K. (1998). Unintended pregnancy in the United States. *Family Planning Perspectives, 30*(1), 24-29+46.

Homish, G., & Leonard, K. (2007). Alcohol use and partner expectations among newly married couples. *Substance Use and Misuse, 42*(9), 1427–1441.

Howell-White, S. (1997). Choosing a birth attendant: The influence of a woman's childbirth definition. *Social science & medicine*, *45*(6), 925-936.

Lee, S., Cho, E., Grodstein, F., Kawachi, I., Hu, F. B., & Colditz, G. A. (2005). Effects of marital transitions on changes in dietary and other health behaviours in US women. *International Journal of Epidemiology*, *34*(1), 69-78.

Martin, J. A., Hamilton, B. E., Sutton, P. D., Ventura, S. J., Mathews, T. J., Kirmeyer, S.., & Osterman, M.J. (2010). Births: Final data for 2007. *National Vital Statistics Reports, 58*(24). Hyattsville, MD: National Center for Health Statistics. Retrieved from http://www.cdc.gov/nchs/data/nvsr/nvsr58/nvsr58_24.pdf

Martin, J. A., Hamilton, B. E., Osterman, M. J., Curtin, S. C., & Mathews, T. J. (2013). Births: Final data for 2012. *National Vital Statistics Reports, 62*(9). Hyattsville, MD: National Center for Health Statistics. 2015. http://www.cdc.gov/nchs/products/nvsr.htm (Retrieved 5/31/2015).

Martin, J. A., Hamilton, B. E., Osterman, M. J., Curtin, S. C., & Mathews, T. J. (2015). Births: Final data for 2013. *National Vital Statistics Reports, 64*(1). Hyattsville, MD: National Center for Health Statistics. 2015. http://www.cdc.gov/nchs/products/nvsr.htm (Retrieved 5/31/2015).

Moos, M. K. (2006). Preconception health: Where to from here? *Women's Health Issues, 16*(4), 156-158.

Patient-Centered Outcomes Research Institute (2015). *About us.* Retrieved from www.pcori.org/about-us/landing/

Perl, L. M. (2010). The birth and death of VBACs in a rural community hospital. *Birth, 37*(3), 257–258.

Pitcock, C. D. & Clark, R. B. (1992). From Fanny to Fernand: The development of consumerism in pain control during the birth process. *American Journal of Obstetrics & Gynecology, 167*(3), 581–587.

Saisto, T., & Halmesmaki, E. (2007). Fear of childbirth can be treated, and cesarean section on maternal request avoided. *Acta Obstetricia et Gynecologica Scandinavica, 86*(9), 1148–9.

Sakala, C. (2006). Carol Sakala's letter from North America: An uncontrolled experiment: elective delivery predominates in the United States. *Birth*, *33*(4), 332-335.

Sakala, C., & Corry, M. P. (2008). Evidence-based maternity care: What it is and what it can achieve. Retrieved from

http://www.milbank.org/reports/0809MaternityCare/0809MaternityCare.html#sidebar4
Sjogren, B. (2000). Childbirth: Expectations, choices, and trends. *Lancet,* 356, S12.
Soliday, E. (2012). *Childbirth in a technocratic age: Documentation of women's expectations and experiences.* Amherst, NY: Cambria Press.
Stevens, G., & Miller, Y. D. (2012). Overdue Choices: How Information and Role in Decision-Making Influence Women's Preferences for Induction for Prolonged Pregnancy. *Birth*, *39*(3), 248-257.
Su, R., Rounds, J., & Armstrong, P. I. (2009). Men and things, women and people: A meta-analysis of sex differences in interests. *Psychological Bulletin*, *135*(6), 859.

United States National Institutes of Health [NIH]. (2006). State-of-the-science conference statement on cesarean delivery on maternal request. *NIH Consensus Science Statements, 23*(1). Retrieved from http://consensus.nih.gov/2006/cesarean.htm

Wertz, R. W., & Wertz, D. C. (1989). *Lying in: A history of childbirth in America, expanded edition.* New Haven, CT: Yale University Press.

Wilson, K. L., & Sirois, F. M. (2010). Birth attendant choice and satisfaction with antenatal care: the role of birth philosophy, relational style, and health self-efficacy. *Journal of Reproductive and Infant Psychology*, *28*(1), 69-83.

World Health Organization [WHO] (2009). Monitoring emergency obstetric care: A handbook. Geneva: WHO Press. Retrieved from: http://whqlibdoc.who.int/publications/2009/9789241547734_eng.pdfS