

# ANALYSIS OF THE RELATIONSHIP BETWEEN MATERNAL AGE AND PREFERRED MODE OF DELIVERY

Sheelu Yadav<sup>1</sup>, Dr. Sandhya Srivastava<sup>2</sup>

<sup>1</sup>Research Scholar, Home Science Deptt., Bhagwant University, Ajmer, Rajasthan

<sup>2</sup>Prof., Home Science Deptt., Bhagwant University, Ajmer, Rajasthan

## ABSTRACT

*This study aimed to investigate how pregnant women feel about cesarean section and natural birth and whether there is an association between maternal age and preferred method of delivery. The consecutive sample consisted of 534 pregnant women presenting themselves for prenatal diagnosis at the Obstetrics and Gynecology Clinic of the University Hospital Schleswig Holstein, Campus Leucht (Germany). Pregnant women rate their wishes on birth expectations on a standardized questionnaire on a five-point Likert scale. Socio-demographic data were collected separately. In addition to descriptive statistics, an inferential (t-test) statistics method was applied to assess age groups. The level of significance was 5%.*

**Keyword :** - Mode of delivery; Vaginal delivery; Cesarean section; Maternal age...

## 1. INTRODUCTION

The population tendency to delay childbearing has various implications for obstetric practice and pregnancy outcome. Several studies have demonstrated a correlation between advanced maternal age and specific obstetric risks. Perinatal outcomes vary with maternal age with respect to gestational age, birth weight, preterm birth, low birth weight, small for gestational age infants, fetal distress, and perinatal morbidity and mortality. Increasing maternal age is independently associated with specific adverse outcomes. Maternal age is a risk factor for gestational diabetes, hypertension and ketosis for women over the age of 35 with their first pregnancy and under the age of 40 for women with two pregnancies. The Austrian study analyzed 10,765 women aged 17 to 49. Others over the age of 35 years had the highest rates of newborn flow weight (3.7%) and the highest rates of macrocosmic newborn births (>4.000 g).

Changes in maternal age and specific obstetric risk factors, as well as indecisive changes related to mode of delivery, play an important role in the actual development of medicalization in childbirth practice. The increase in primary cesarean rates coincides with an increasing trend in average maternal age. Various studies show that older women are more likely to have a cesarean delivery. An American study shows that cesarean delivery rates increased with increasing maternal age (<25 years 11.6%; >40 years 43.1%). Older women were more likely to have cesarean delivery without labor (<25 years 3.6%; >40 years 21.1%). Increasing maternal age increases the risk of cesarean delivery partly because they are more likely to have cesarean delivery without preterm labor. Regarding mode of delivery in the German investigation, 77.1%(>22 years) and 53.1%(>32 years) experienced spontaneous delivery, 14.5%(<22 years) and 32.3%(>32 years) had cesarean section.

Table 1. Questionnaire item characteristics on birth expectations

<b>Argument in favor of vaginal delivery</b>	<b>Argument in favour of caesarean</b>
Birth experience	Delivery at desired date
Natural event	“Aesthetics” during childbirth
Mother-child bonding	Pain control
Presence of supporting person	Safety for the mother
Safety for the mother	Safety for the baby Maintaining body functions intact
<b>Argument against vaginal delivery</b>	<b>Argument against caesarean</b>
Uncontrollable pain	Surgery

Somatic late effects	Post-operative pain
Negative influence on sexuality	Loss of control
Impairment of baby's health	Impairment of baby's health
Loss of control	Late effects due surgery
"Un-aesthetics" during childbirth	Reduced mother-child bonding

A British study showed that increasing maternal age was associated with longer duration of labor (0.49 hours longer for every five-year increase in age) and increased risk of operative vaginal birth. In the period 1980 to 2005, cesarean delivery rates among multiparous women more than doubled and the proportion of women aged 30–34 years increased threefold, the proportion of women aged 35–39 years increased sevenfold and those aged 40 years The proportion of women above 10 years of age increased tenfold. Similar relationships were seen in polygamous women.

The authors discussed decreased spontaneous activity in vitro and an increased likelihood of multiphasic spontaneous myometrial contractions as contributing factors to problematic vaginal births and advanced maternal age.

The average maternal age continues to increase in developed countries. The growth of cesarean section rates parallels the increasing rates of pregnancy at advanced maternal age. Several reviews have evaluated the impact of advanced maternal age on pregnancy and birth risks. In case of older pregnant women, cesarean section is often done. Although many of the reasons described above contribute to the belief that older women may benefit from cesarean delivery, there is a lack of information related to women's individual preferences. The study aimed to investigate how pregnant women feel about cesarean section and vaginal birth and whether there is an association between maternal age and preferred method of delivery.

## 2. METHODS

### 2.1 Sample

The consecutive sample consisted of 534 pregnant women who presented for prenatal diagnosis at the Obstetrics and Gynecology Clinic of the University Hospital.

Item	Mean Values		Significance (P values)
	Group1(<=35 ys)	Group2(>=35ys)	
Negativevaginalbirth			
Impairment baby	1.89	1.43	0.001*
Negativevaginalbirth			
Un-aesthetics	0.92	0.65	0.017*

Schleswig Holstein, Campus Lübeck, Germany. Pregnant women state their wishes in an investigator-developed standardized questionnaire on birth expectations. Socio-demographic data were collected separately.

### 2.2 Material

The two-part questionnaire included demographic information, details of previous births and current pregnancy. Part one asked about age, material condition and level of education, occupation and antenatal care. In addition, information about the participant's previous births was collected, including parity, obstetric history, and mode of delivery.

The questionnaire on birth expectations formed the second part. This included the potential advantages and disadvantages of two methods of delivery, vaginal birth and cesarean section. All items are shown in Table 1. Pregnant women were asked to rate how much they agreed with the itemized arguments on a five-point Likert scale ranging from (0) "does not apply to all foods" to (4) completely.

### 2.3 Statistical analyses

All data were initially collected in one patient data file and analyzed by the Statistical Package for the Social Sciences (release 15.0 SPSS Inc., Chicago, IL, USA). Variables were summarized by their mean value and median.

Standard deviation, mean anger as well as minimum and maximum values were evaluated. In addition to descriptive display of results, inferential statistics were used to compare outcomes between two age groups. Homogeneity of variance of normally distributed data was analyzed by the Levene-test. Next, Student's t test Home or Hate was used to compare mean ranges based on the level of variance. A specific significance level of 5% was applied for statistical tests.

### 3. RESULT

Women's views on vaginal birth and cesarean section:

Table 2. Positive items without significant differences between age groups (t-test) questionnaire on birth expectations

Item	Mean values		Significance (P-value)
	Group 1 (< 35 ys)	Group 2 ( $\geq$ 35 ys)	
Negative vaginal birth			
Impairment baby	1.89	1.43	0.001*
Negative vaginal birth			
Un-aesthetics	0.92	0.65	0.017*
Positive vaginal birth			
Safety baby	2.79	2.49	0.006*
Positive vaginal birth			
Mother-child bonding	3.02	2.70	0.007*
Negative Caesarean			
Mother-child bonding	2.04	1.75	0.050*
Positive Caesarean			
Desired date	1.10	0.84	0.050*

Women support vaginal birth and place high importance on criteria such as physiology, active birth experience and personal support. Negatively viewed characteristics of cesarean section include surgery and pain.

Preferred type of birth among older women: The pregnant women included in our study ranged in age from 16 to 44 years, with an average age of 32.8 years. 55.8% (n=298) are under 35 years of age, 43.8% (n=234) are 35 years of age or older. To gauge the views of women aged 35 years and above on different methods of delivery, two age groups were created. Group one included women aged < 35 years, group two included women aged  $\geq$  35 years. The relationship between birth type preference and maternal age is compared by analyzing coincidences and differences in identifying items characterizing birth types. The following six items (13.6%) out of 44 show significantly different judgments between women <35 years and women  $\geq$ 35 years: loss of the child is an argument against cesarean section, safety of the child is an argument in favor of vaginal delivery, The mother-child bond is an argument for vaginal delivery, "aesthetics" during delivery is an argument for cesarean section. Two-group differences in setting preferences are assessed by differences in the mean values of items when looking at distribution patterns. The maximum difference of 0.46 is found for "impairment of child's health": for women of group one aged <35 years, the item expression is 1.89; Group two women  $\geq$  35 years item expression is 1.43. The

difference value for the criterion of “mother-child bond” and “child safety” between the groups is 0.32. The minimum difference between the two groups for positive cesarean: desired date is 0.26. Table 2 contains complete data for items rated as significantly different with respect to maternal age. Complete data for those items that did not show relevant evaluation differences are given in Tables 3 and 4.

Table 3. Negative items with no significant differences between age groups (t-test) Questionnaire on birth expectations

Item	Mean values		Significance (P-value)
	Group 1 (< 35 ys)	Group 2 (≥ 35 ys)	
Negative vaginal birth			
Pain	1.93	2.02	0.57
Negative vaginal birth			
Late effects mother	1.69	1.74	0.69
Negative vaginal birth			
Sexuality	1.36	1.24	0.36
Negative vaginal birth			
Late effects baby	1.76	1.86	0.46
Negative vaginal birth			
Loss of control	1.89	1.81	0.58
Negative Caesarean			
Surgery	2.68	2.68	0.89
Negative Caesarean			
Postoperative pain	2.44	2.47	0.87
Negative Caesarean			
Loss of control	2.08	1.99	0.579
Negative Caesarean			
Late effects	2.11	1.92	0.184

#### 4. DISCUSSION

We found that women of older maternal age placed significantly higher importance on the parameters of safety and mother-child attachment in the bay than did younger pregnant women. This may reflect the additional fear of women ≥ 35 years of age due to their special obstetric risks. A US study showed that with increasing maternal age, the incidence of previous abdominal operation, caesarean section, previous perinatal death, infertility and alcohol abuse was higher, but comparatively fewer people suffered from co-occurring conditions or obesity. Are there. Most are of high socio-economic status and have personal physicians. Women over 35 years of age tend to seek prenatal care and early prenatal diagnosis with the implementation of amniocentesis. The risk of gestational glucose intolerance, high blood pressure and hospitalization during pregnancy is higher, with 45% having cesarean delivery and having longer hospital stays. Their rates of apex presentation, pre-maturity, post-maturity, macrosomia induced or augmented labor are similar to that of younger women. Perinatal mortality was lower in women over the age of

35. This study states that women over the age of 35 do not have a greater risk of adverse pregnancy outcomes if the pregnancy is early and full term. However, it seems that the more intensive care and preparation raises more concerns for me about the safety of the delivery method.

Yet, only four of the 44 items show significantly different preferences. The main part included items describing women's preferred type of birth that are not significantly associated with various judgments regarding maternal age. This gives the impression that women prefer to have vaginal delivery regardless of their age. The higher rate of cesarean section in women over the age of 35 is not associated with more cesarean sections on demand. It would seem that the causes could be discovered by analyzing medical complications during pregnancy and childbirth, but this work shows that they can be countered.

#### 5. LIMITATIONS OF THE STUDY

However, the study has important methodological limitations. As stated in the question, the purpose of the investigation was to provide a list of aspects believed to be closely related to desires for delivery method. The reliability and validity of questionnaires on birth expectations should be reviewed. Our data allowed a hypothesis-like integration of the data of the obtained materials. More hypothesis-driven studies are needed to ensure that the results are predictive data.

#### 6. CONCLUSION

The increase in cesarean section rates cannot be attributed to patient wishes. Although various studies have found special risks for mothers 35 years of age or older, they still prefer vaginal delivery. In the context of patient autonomy, obstetricians should respect women's choice for vaginal delivery, avoiding medical intervention if medically possible. Especially while counseling pregnant women above 35 years of age, special effort should be made to reduce their anxieties and fears due to high obstetric risk level. Further investigation is needed to evaluate the relationship between advanced maternal age and mode of delivery as some of the contributing factors remain unclear.

#### REFERENCE

1. Montan S. The risk increased in older women. *Current Opinion Obstet Gynecol.* 2007; 19(2): 110-112.
2. Joseph KS, Young DC, Dodds L, O'Connell CM, Al-Lane VM, Chandra S, Allen AC. Changes in maternal characteristics and obstetric practice have led to a recent increase in primary cesarean delivery. *Obstet Gynecol.* 2003; 102(4): 791-800.
3. Kirchengast S, Hartmann B. Advanced maternal age is associated not only with the omato metrics of the newborn but also with the mode of delivery. *Enhumbiol.* 2003; 30 (1): 1- 12.
4. BerampourH, HeimanM. Advanced maternal age and risk of cesarean birth: a systematic review. *Birth.*2010;37(3):219-226.
5. AckerJL, ChenKT, CohenAP, Riley, LiebermanES. The risk of cesarean delivery increases with increasing maternal age: indications and associated factors in nulliparous women. 2001;185(4):883-887.
6. M. J. Barry and S. Edgman-Levitan, "Shared decision making—the pinnacle of patient-centered care," *The New England Journal of Medicine*, vol. 366, no. 9, pp. 780-781, 2012.
7. K. A. Houston, A. J. Kaimal, S. Nakagawa, S. E. Gregorich, L. M. Yee, and M. Kuppermann, "Mode of delivery and postpartum depression: the role of patient preferences," *American Journal of Obstetrics and Gynecology*, vol. 212, no. 2, pp. 229.e1–229.e7, 2015.
8. S. Garthus-Niegel, T. von Soest, C. Knoph, T. B. Simonsen, L. Torgersen, and M. Eberhard-Gran, "The influence of women's preferences and actual mode of delivery on post-traumatic stress symptoms following childbirth: a population-based, longitudinal study," *BMC Pregnancy and Childbirth*, vol. 14, no. 1, p. 191, 2014.
9. S. Gebremedhin, "Trend and socio-demographic differentials of Caesarean section rate in Addis Ababa, Ethiopia: analysis based on Ethiopia demographic and health surveys data," *Reproductive Health*, vol. 11, no. 1, 2014.
10. T. Kolås, D. Hofoss, A. K. Daltveit et al., "Indications for cesarean deliveries in Norway," *American Journal of Obstetrics and Gynecology*, vol. 188, no. 4, pp. 864–870, 2003.
11. Centre for Epidemiology and Research and NSW Department of Health, *New South Wales mothers and babies 2007*, NSW Public Health Bulletin, 2010.
12. Centre for Epidemiology and Research and NSW Department of Health, *New South Wales mothers and babies 2002*, NSW Public Health Bulletin, 2002.
13. B. Hamilton, D. Hoyert, J. Martin, D. Strobino, and B. Guyer, "Annual summary of vital statistics: 2010-2011," *Pediatrics*, vol. 131, no. 3, pp. 548–558, 2013.