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Research Article

The psychosocial impact of vaginal delivery and cesarean section in primiparous women

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Abstract

The aim of this study was to identify how the method of delivery and birth experience interfere with maternal psychological status early after puerperium.
We conducted a prospective study on 148 women after puerperium from November 2017 to January 2018 in Bucur Maternity Hospital. Women that delivered vaginally mobilized in the first 6 hours in 73.7% of the cases, but for cesarean section after 12-24 hours in 43.6% of the cases. Women described good support from the obstetrician in 58.1% of the cases. 90.5% of the women reported that the method of delivery did not have an impact on infant care and 73% had no lactation problems. The majority described little trauma, in 32.4% of the cases. 70.3% of the patients reported that they wanted to have more children and 59.5% of them desired the same method of delivery. Negative feelings, lactation, and taking care of the baby were not influenced in this study by the method of delivery, but by prematurity of birth and the complications that women experienced at birth.

Keywords : psychosocial impact, vaginal delivery, cesarean section, lactation, prematurity, primiparous

Highlights

- ✓ Majority of the patients didn't find the birth experience difficult, irrespective of the method of delivery.
- ✓ Lactation and taking care of the baby are also not impacted by the method of delivery.

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Introduction

Birth experience is related to obstetric factors such as emergency caesarean section or prolonged painful labor, and it may cause negative feelings for both partners: mother and father. Obstetrical events may have a long-term impact on the mother`s mental status but adverse birth outcomes do not predict long-term depressive trajectories. Socio-demographic and behavioral factors have been associated with maternal patterns of depression and reproductive life course (1).

The aim of our study was to identify how the method of delivery and birth experience might interfere with maternal psychological status and the early perception after puerperium.

Materials and methods

We conducted a prospective cohort study type 1, according to the STROBE Statement, on women that have recently exited the puerperium. The evaluation period was from November 2017 to January 2018. Patients were selected from among those that delivered in Bucur Maternity Saint John Hospital, Bucharest, a tertiary unit with approximately 2000 births per year. Patients were randomly recruited by assigning a number to each registered patient and extracting 1 in 10. All patients sign informed consent for studies when admitted in our clinic. The study was approved by the ethical committee.

The inclusion criteria were: patients that delivered in our maternity ward and were already discharged from the hospital. We included only patients after a single pregnancy and living new born. The exclusion criteria were: twin pregnancy and patients who refused to respond or who responded partially.

Patients were asked to respond to a questionnaire that included 15 items about method of delivery, and medical and psychological-related concerns.

The studied variables were: maternal age, method of delivery, patient's age, weight of the newborn at delivery, APGAR score, how difficult they found delivery (a scale from 1 to 10, 10 being the maximum), birth complications (yes/no), how quickly they mobilized after birth (in days), the perception of psychological support, the birth-related pain period (in days), how rapidly they became concerned about the child after delivery, if the delivery mode impacted their ability to take care of the baby, when lactation started after delivery, if they had difficulties with lactation, if birth was associated with negative feelings such as sadness, anxiety, or helplessness, if they planned to have more children, if they would like to deliver in the same way as the first time, and if they found this birth to be a psychic trauma. We analyzed in parallel the patients that had vaginal birth (group A-control group) and patients that underwent cesarean section (group B-study group).

Data were analyzed using SPSS version 20.0 (statistical packages for social sciences). We evaluated characteristics of the entire group using descriptive statistic tests and frequency characteristics. Pearson's correlation and two-sided P values of <0.05 were used to indicate statistical significance.

Results

We initially selected 200 women that met the inclusion criteria for this study according to the above described algorithm. In all, 148 women completed the questionnaire. Table 1 contains the main characteristics of the study group. The method of delivery was divided into 25.7 % of patients that delivered vaginally (group A-38 women) and 74.3% of patients that delivered by cesarean section (group B- 110 women).

For both groups, pain was described as an important symptom in the first 12 hours after delivery, but 24.3% of the interviewed women indicated that it ceased by the third day after birth. The majority (21.1%) of patients that delivered vaginally admitted that the pain ended within the first day, but after C section, pain intensity began decreasing only from the third day (30.9%).

Mobilization after birth occurred in most cases between 12-24 hours, with 27% under 6 hours, and only 9.5 % (14 patients) after 48 hours. Women that gave birth vaginally mobilized before 6 hours in 73.7% of the cases, but after cesarean section mobilization was reached after 12-24 hours in majority of 43.6% cases. Patients that delivered large babies described later mobilization after delivery ($p=0.001$).

The majority of patients described no birth complications (86.5%) but in 13.5% of the cases variable complications were described. Patients having vaginal birth identified complications in 10.5% of the cases and those with cesarean section in 14.5% of the cases. Women who considered birth difficult were also ones who described complications at delivery ($p=0.019$). This was a self-perception that was not indicated in the medical records.

Most women from the entire group described excellent support due to obstetrician care (58.1%), while 8.1% were not satisfied. The ones with vaginal birth indicated excellent support in 42.1% of the cases but patients with cesarean section found it excellent in 63.6% of the cases. Patients that gave birth earlier than at term reported insufficient medical support for newborn care ($p=0.027$) and also described birth as a traumatic experience ($p=0.023$). Those women also reported birth complications ($p=0.002$) and sadness ($p=0.013$).

Group characteristics	All patients	Vaginal birth	Cesarean section
Maternal age (years)	27.69 (min 17, max 42, std dev 5.145)	25.84 (min 17, max 36, std dev 5.212)	25.84 (min 17, max 42, std dev 414.58)
Gestational age at delivery (weeks)	38.36(min 34, max 41, std dev 1.508)	38.42(min 34, max 41, std dev 1.810)	38.35(min 35, max 41, std dev 1.397)
Fetal birth weight	3036.08 (min 1850, max 3980, std dev 424.88)	2912.11 (min 1980, max 3400, std dev 414.580)	3078.91 (min 1850, max 3980, std dev 421.799)

Table 1. Groups characteristics

Based on the survey used in this study, the majority of the patients did not find the birth experience difficult (Figure 1). Patients that reported delivery as difficult had sadness feelings (p=0.022). It was observed that 25.5% of the patients that delivered by cesarean section did not consider birth a difficult experience (scale 1) compared with 10.5% by vaginal birth. On the other hand, 21.1% of the women that had vaginal birth and 9.1 % of the women with C-section rated ten points on difficulty scale for the delivery process, because they felt birth was a very difficult experience.

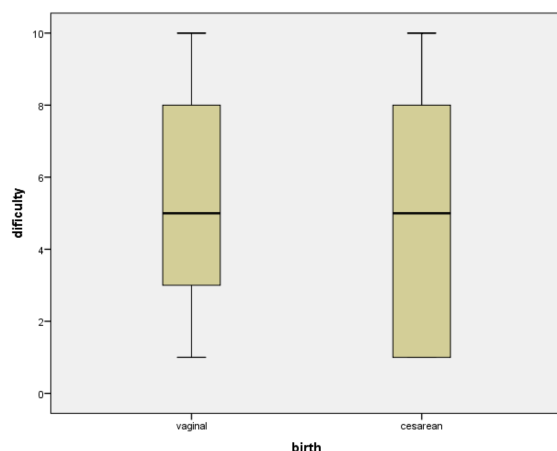

Figure 1. The perception of birth as a difficult experience

Regarding neonatal aspects, the APGAR score was between 7 and 10, with 9 points in 55.5% (without significant differences between groups). Patients with increased fetal weight had higher APGAR scores (p=0.007). Also, patients giving birth to boys had higher APGAR scores than those giving birth to girls (p=0.043) in our study.

Women that delivered baby girls found the psycho-emotional care for them to be supportive (p=0.002), with the majority indicating they could take care of the newborn in the first 24 hours after delivery (29.7%). For vaginal birth, 47.4% could care for the baby in the first day, but after C section, 27.3% fell on the second day. They identified that the method of delivery did not have an impact on their baby care (90.5%) and 73% of had no lactation problems (68.4% for vaginal birth and 74.5% for cesarean section). Lactation occurred in 41.9% of the cases in the first 48 hours after delivery (with no significant differences between vaginal and cesarean birth).

From this sample, 73% of the women found birth to be a happy experience, but 27% of the patients reported sadness associated with delivery. Regarding trauma related perception 28.4% had no concern whereas 24.3% found it to be very traumatic (birth was traumatic for 26.3% of the women that had vaginal delivery and 23.6% for cesarean section). Most women described little associated trauma (32.4%).

Considering long-term birth consequences, 70.3% of the patients reported that they planned to have more children and 59.5% wanted to deliver in the same way (with the same percentages of 63.2% for vaginal birth and 72.7% for C-section for both aspects).

Discussions

The puerperium is defined as the period of confinement after birth, typically the first six weeks. However, not all organ systems return to baseline within this period. Other authors describe the postpartum period as long as 12 months after delivery (2, 3).

About 60% of women choose a birth method that is as pain-free as possible and has a quick recovery (4). Therefore, most women choose cesarean section to the detriment of vaginal delivery. After-birth discomfort in women who had C-section is caused by the abdominal incision (5).

The puerperium is a critical period for both the mother and the newborn. Several disorders and complications can occur during the early and late postpartum periods. The incidence of postnatal depression is estimated at 13% (6). Six observational studies have evaluated post-natal depression and method

of birth in Scotland, Australia, USA and Finland (7- 11). Two studies report a higher prevalence of postnatal depression (in the first 2 weeks after birth) among women who had a cesarean section compared to those who had a vaginal birth, and no difference in the prevalence of postnatal depression between the two groups after 8 weeks postpartum (12, 13).

Experimental studies on rats have attempted to explain the postpartum stress. Recent results suggest that late pregnancy induced stress interferes with maternal behavior and may have consequences on the offspring (12).

Vaginal birth can cause damage to the levator ani muscle with pelvic floor dysfunction and psychological problems. Skinner et al recently reported a strong association between these somatic injuries and psychological symptoms. In such situations, the obstetrician may underestimate the psychological impact. In this study women reported feeling traumatized because such morbidities were not discussed before or after birth (13).

Pereira et al recently evaluated and exposed the women's complaints about pain intensity in the immediate postpartum of vaginal delivery and cesarean section in relation to the method of delivery and parity. Eighty-six women, in puerperium after vaginal delivery (n=43) and cesarean section (n=43), were observed. The main complaints were related to movement activities and cesarean section. No relationship between functional limitations and parity was identified (14).

Holden et al examined timing of motherhood in a longitudinal cohort of young Australian women, and its relationship with mental health-related quality of life and with sociodemographic, health behavior, and health-related variables. The results suggest a trend of good adaptation to situations, with the mental health-related quality of life improving through early adulthood regardless of the timing of motherhood (14).

A longitudinal prospective study in Spain included 546 healthy primiparae that were evaluated during the sixth week and the sixth month postpartum, regarding sociodemographic and clinical characteristics, and compared health-related quality of life by method of birth. The authors did not find differences in health-related quality of life by method of birth at either time periods. Method of birth was not directly or indirectly associated with health-related quality of life in the short term (15-17). Another study demonstrated that women undergoing emergency caesarean section are more likely to experience fear and to have a negative birth experience (18).

In our sample, pain was a persistent symptom until the third day after birth. Women that delivered vaginally mobilized within the first 6 hours in 73.7% of the cases, but after cesarean section they mobilized after 12-24 hours only in 43.6% of the cases. Women who considered birth difficult were those describing complications (p=0.019). Most women described excellent support regarding obstetrician care (58.1%) and only 8.1% were not satisfied. Patients that gave birth prematurely reported insufficient medical support for newborn care (p=0.027) and also described birth as a traumatic experience (p=0.023).

Those women also reported birth complications (p=0.002) and sadness (p=0.013). The majority described that they could take care of the newborn in the first 24 hours after delivery (29.7%), and indicated that mode of delivery did not impact their baby care (90.5%); 73% had no lactation problems. The majority described little trauma (32.4%). 70.3 % of the patients reported that they wanted to have more children and 59.5% desired the same method of delivery. The major study limitation was the relatively small number of patients in each group (19).

Recent recommendations based on evaluation of quality of life after birth, especially in mothers with premature births, call for further research that includes both parents and spans a wide variety of countries and cultures (20). The psychosocial impact after birth should not be overlooked, with long term familial negative consequences avoided with a prophylactic approach.

Considering the present trend toward increased cesarean sections in Romania, possible psychological, emotional, and quality of life effects of methods of delivery need further investigation to support patient education that might alter perceptions regarding the method of delivery (21).

Conclusions

In this study, the majority of the patients did not find the birth experience difficult, irrespective of the method of delivery. Lactation and infant care were also not impacted by the method of delivery. Negative feelings seemed not to be directly influenced by the method of delivery, but by the complications that the women experienced at birth and with prematurity.

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