Effects of the birthing room environment on vaginal births and client-centred outcomes in women at term planning a vaginal birth: a multicentre RCT

Background + Objective

In Germany there are high caesarean section rates compared with other European countries [1]. While in Ethiopia the overall national caesarean section rate is low (2%), in the capital Addis Ababa it is comparatively high (21.4%)[2].

A caesarean section is associated with an increased risk for maternal morbidity and mortality [3]. In order to increase vaginal birth (VB) rates the multicenter RCT “BE-UP” tests the effect of a redesigned birthing room on the probability of VB (primary efficacy endpoint) in 17 hospitals [4]. Theoretically, the trial is based on theories (sociology of technology, symbolic interactionism) and results of international research.

Methodology

Since April 2018, 3,800 pregnant women will be randomized to the intervention group (redesigned birthing room: no central delivery bed but materials and aids to promote mobility and upright maternal posture) or the control group (usual delivery room) in 17 obstetric hospitals in Germany. Inclusion criteria include singleton pregnancy in cephalic position, at least 37 + 0 weeks of gestation and a planned vaginal birth. In both groups, midwives and physicians professionally care for the parturients during their labor and childbirth. During birth, the position and mobility of the laboring woman, obstetric interventions, and obstetric outcomes are documented. Continuous monitoring ensures data quality. Three months postpartum, patient-relevant outcome parameters (secondary outcomes) and health economic data are collected. Following the randomization phase, the job satisfaction of midwives and physicians working in both birthing room models (intervention; control) will be assessed.
In the parity stratifying data analysis, methods of descriptive as well as interference statistics (multivariate regression analyses) are used.

The 3-year trial was submitted to the Federal Ministry of Education and Research (BMBF; project number KS2014-66) competition for research funding titled "Clinical studies with high relevance for patient care" (2016) and recommended for funding.

Results

The primary outcome is the rate of vaginal births. Secondary outcomes include the woman's self-efficacy during childbirth, the rate of medical interventions, maternal and perinatal morbidity, and health status of mother and child 3 months postpartum. The health economic analysis will provide information about the cost-effectiveness ratio.

Conclusion

If the BE-UP trial provides proof of the independent effect of the intervention and, moreover, demonstrates an efficient cost-effectiveness ratio, this intervention has a high potential to be implemented nationwide in the hospitals’ obstetric departments at low cost and with little effort. Results on midwives’ and physicians’ job satisfaction may be the basis for adjustments to workplace design.

References:


Keywords:

clinical trial / redesigned delivery room / changes of the birth environment
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