

Relationship between cesarean section and twins' psychological development

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A research team of the University of Malaga (UMA) in the area of Medicine and Psychology has analyzed the effect of the type of delivery on twins' psychological development and intelligence, demonstrating that cesarean section carries an independent risk in these multiple births.

"Twins are very vulnerable, since their [birth](#) frequently ends prematurely and they often present pregnancy and labor complications," says Professor Ernesto González Mesa. Based on this study, he says the possible difficulties that may derive from [cesarean section](#) are very common in multiple births.

"We have verified that cesarean section becomes a risk factor to development. This is why gynecologists firmly believe in vaginal delivery benefits, and we defend the use of this surgical intervention only as an option when problems arise," says González Mesa.

This study, published in the scientific journal *Frontiers in Psychology*, involved a total of 160 twins who were born in Hospital Materno-Infantil in Málaga in 2005; there were 7000 births, and almost 300 were multiple births. From the sample of all twins, 55 percent were born by vaginal delivery and 45 percent by cesarean delivery.

In a first stage of the study, the participating children's intelligence and neuropsychological and psychopedagogical development were tested. The results were compared in a second stage with information on obstetric and perinatal variables, such as type of delivery, problems, maternal age or newborn weight, among others.

"When comparing all data, we found that those children with a lower intellectual level and [cognitive development](#) were born by cesarean delivery," explains María José González Valenzuela, professor from the Evolutive Psychology and Education Department and main researcher of the study.

She says that apart from [early diagnosis](#), the study seeks intervention through activities at school and primary health care centers. In this regard, Counselor Olga Cazorla Granados, co-author of this study, adds that there is an increased tendency in educational environments to search

for neurological factors to explain difficulties in psychological development.

Addressing the major reading, writing and calculating difficulties that twins often have, and identifying benefits of vaginal delivery as against cesarean section, for example, the neurological effects that children's intestinal flora, different in each type of delivery, may give rise to, are other future lines to progress in this study, in which Professor Dolores López Montiel, from the Department of Psychobiology and Behavioral Science Methodology, has also participated.

More information: María-José González-Valenzuela et al. Type of Delivery, Neuropsychological Development and Intelligence in Twin Births, *Frontiers in Psychology* (2019). [DOI: 10.3389/fpsyg.2019.00972](https://doi.org/10.3389/fpsyg.2019.00972)

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