

POSTER

IMPACT OF RESOURCE-LIMITED GESTATIONS ON THE PHYSICAL DEVELOPMENT OF BRAZILIAN TWIN CHILDREN: A STUDY OF ZYGOSITY AND CHORIONICITY

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ABSTRACT

Monochorionic twins generally experience resource-limited gestation, and the developmental impacts need to be determined. Our aim was to longitudinally investigate the physical developmental trajectory of Brazilian twins based on zygosity and chorionicity, a pioneering effort in Brazil and part of the USP Twin Panel Research. The sample consists of 156 twins: 70 monozygotic (MZ) (49 female), 40 same-sex dizygotic (DZss) (24 male), and 46 opposite-sex dizygotic (DZos) twins. Based on chorionicity, it includes 112 individuals - 86 dichorionic (DC) (44 male) and 26 monochorionic-diamniotic (MCDA) (16 female) twins. These twins were evaluated at birth and between ages 7-13. Using the Kruskal-Wallis test, a significant difference was found in the Z-Score percentiles for initial weight (between ages 7-13) among female individuals of the different zygosity groups (KW-Stat = 7,16; p-value = 0.0278) - with a higher concentration of samples in Z-Score percentiles close to or below 0.5 for DZss, and for DZos and MZ, close to or above 0.625. Additionally, a significant difference was found between the Z-Score percentiles for Body Mass Index (BMI) in female individuals of different chorionicity groups (KW-Stat = 3.88; p-value = 0.0489) - with a higher concentration of samples in Z-Score percentiles close to or below 0.5 for DC, and close to 0.80 for MCDA. Our analysis revealed that during the development of female twins, weight and BMI were significantly related to zygosity and chorionicity. Our study is still in progress, and further analyses are programmed, including additional measures.