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An investigation into parental awareness of the importance of gut health in infancy and of the effect of mode of delivery and gestational age on their infant's gut health

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The early establishment of the gut microbiome during the first 1000 days of life is crucial for health and development during childhood and beyond^(1,2). The composition of the microbiome is influenced by various factors including mode of delivery, gestational age, feeding method, medication use, and other early life experiences⁽¹⁾. Disruptions to optimal early microbial colonisation, as presented with preterm infants, and infants delivered via caesarean section, can compromise microbial diversity which in turn may manifest in health problems^(2,3). This study aims to investigate parental awareness around infantile gut health to establish potential gaps in the education provided by healthcare professionals (HCPs).

This study involved the distribution of a 15-item questionnaire to parents of infants aged 0-12 months, *via* a parenting platform, 'everymum.ie'. Descriptive statistics were conducted using IBM SPSS V29. Frequencies, Cross-tabulations and Pearson Chi-Squares were performed to analyse categorical variables (significance at $p \leq 0.05$).

A total of 933 valid responses were collected. The majority of respondents were female (98%), aged between 25 and 44 years (95%) and had received third level education (85%). Of the sample, 76% did not receive any information from a HCP on the importance of their infant having a healthy gut. Only 15% of parents received this information before their infant's birth and 22% received this information after. Furthermore, 89% of respondents did not receive any information from a HCP about the role of pre- or probiotics for their infant's gut health.

Of the 364 parents (39%) who gave birth via caesarean section, 70% were not aware that mode of delivery was linked to their infant's gut health and 73% did not receive information on the importance of their infant having a healthy gut. Almost 7% of the sample ($n=64$) had a premature infant. Of this subgroup, only 22% received information after their infant was born on the importance of gut health in infants. Furthermore, 86% of parents with a preterm infant did not receive information about the role of prebiotics or probiotics in relation to their infant's gut health. There was no significant difference in the information provided to those with or without a preterm infant, and those who gave birth vaginally or via caesarean section, where $p=0.950$ and $p=0.824$, respectively.

This study highlights gaps in parental knowledge around infantile gut health and in the education provided by HCPs. Preterm infants and those born via caesarean section are particularly at risk of disruptions to optimal early microbial colonisation and these parents may potentially benefit from information on the importance of supporting their infant's gut microbiome for long term health and development. Further support and education for HCPs appears necessary to help deliver this message to parents to reduce the burden of health problems during infancy.

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References

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