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A Comparison of Early Childhood Health Indicators

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The most commonly used indicator for early childhood health in the medical and scientific communities has been body mass index (BMI) and parent report. However, it is hypothesized that a holistic approach to the health analysis of children based on a variety of indicators, including a comparison of BMI, parent report, and Resonance Raman Spectroscopy (RRS) scans could lead to a more accurate measurement and understanding of children's health status. If children have a healthy BMI and parents report that they frequently eat fruits and vegetables, but they have a low RRS value, it can be concluded that they are not as healthy as their eating habits and BMI suggest. In contrast, children with an unhealthy BMI and parent responses that suggest frequently eating fruits and vegetables, but a high RRS scan could indicate that the child is healthier than their BMI suggests. Factors possibly influencing health indicators include: ethnicity, gender, frequency of sugary or fast food, household income, and Supplemental Nutritional Assistance Program (SNAP) benefits. The current study explores the correlation among these health indicators (BMI, parent interview responses, and RRS scans) among a sample of preschoolers in Lincoln Parish to seek a greater understanding of early childhood health and, from these findings, take steps to improve the health of our community. Preliminary results suggests that while there is some overlap among indicators as expected (e.g., BMI category was positively, significantly correlated with parent report of fast food consumption, $r = .29$, $p = .01$, RRS category was negatively, significantly correlated with parent report of sugary drinks, $r = -.31$, $p = .03$, and RRS category was positively, significantly correlated with parent report of child carrot consumption, $r = .34$, $p = .02$), there is no as much overlap as would be predicated suggesting that there are distinct conclusions that can be drawn from each health indicator which indicating the need for interventionists and medical practitioners to use a variety of tools in making decisions related to nutrition-related health outcomes.