Tata Institute of Fundamental Research
Survey No. 36/P, Gopanpally Village, Serilingampally, Ranga Reddy Dist., Hyderabad – 500 046

Internal Seminar

Understanding double burden of malnutrition: from epidemiology to basic biology

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Nutrition plays a crucial role in health, influencing growth, development, and the risk of chronic diseases across the lifespan. Malnutrition, encompassing both undernutrition (stunting, wasting, and micronutrient deficiencies) and overnutrition (overweight, obesity, and diet-related non-communicable diseases), represents a significant global health challenge. The double burden of malnutrition (DBM), where these conditions coexist, is particularly concerning in low- and middle-income countries (LMICs), including India.

My research focuses on addressing malnutrition from a nutritional perspective. One of our recent studies showed that DBM often emerges after age 5 and worsens by age 9, with maternal BMI playing a critical role in shaping children's BMI trajectories. Micronutrient deficiencies, a form of undernutrition, are highly prevalent in both India and LMICs. We have been working on a perspective paper wherein we focused on anaemia to identify key gaps from biological mechanisms to policy and intervention. Additionally, we are planning to start a project to address the micronutrient profile among Indian adolescent girls and to develop strategies to tackle micronutrient deficiencies. Innovative methodologies, including body composition analysis using deuterium oxide (D_2O), reveal the limitations of traditional anthropometry in assessing growth and nutritional status, especially in malnourished populations. We have aimed to measure body composition in adults with different body mass index (BMI) and generate 3- and 4-compartment body composition analyses.

Tuesday, Jan 21st 2025

12:00 Hrs

Seminar Hall, TIFRH