



**PD014**

**Paediatric Cardiology & Congenital Heart Disease** • Poster Presentation

## **ESTABLISHING NORMATIVE VALUES OF HEART RATE VARIABILITY IN HEALTHY NIGERIAN CHILDREN**

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**Background** Heart rate variability (HRV) is an important physiologic parameter derived from the electrocardiogram with wide clinical applications, including screening, risk stratification, and prognostication in viral myocarditis, heart failure, mental disorders, and congenital heart diseases. Normative values of HRV in Nigerian children are lacking.

**Aim** To determine the distribution of short-term ECG-derived HRV parameters in apparently healthy Nigerian schoolchildren aged 6–15 years.

**Methodology** The study will be a cross-sectional study recruiting 1,200 healthy schoolchildren aged 6 to 15 years in primary and secondary schools in Abakaliki, Ebonyi State. Baseline demographics, weight, height and blood pressure will be collected based on standard procedures. ECG data acquisition for HRV will adhere strictly to the guidelines established by the task force of the relevant professional bodies using a Cardiax electrocardiograph. A 5-minute recording will be done to determine frequency- and time-domain parameters.

**Result** Our expected outcomes are: 1. To generate age- and sex-specific reference values or percentile distributions for key time-domain and frequency-domain HRV parameters. 2. To determine the relationship between HRV parameters and age, sex, heart rate, BMI-for-age, and blood pressure status. 3. To examine whether selected resting ECG patterns, including early repolarisation where clearly defined, are associated with HRV parameters

**Conclusion** Heart rate variability is becoming an important cardiovascular marker in clinical practice with prospects in the age of artificial intelligence. Establishing normative values is the first step to its utility in the Nigerian population.

**Keywords:** ? Heart rate variability ?Children ? Artificial Intelligence