Research questions: My research questions fall into three key areas. Firstly, to understand the long-term association and nuances of childhood adversity on developmental outcomes, including cognitive functioning and mental health. This involves the use of quantitative person-centred approaches, such as the longitudinal heterogeneity models, to examine the variability in the effects of adversity on outcomes across a given population. Secondly, my research also seeks to understand childhood adversity from the "adaptation" perspective by primarily exploring whether cognitive gaps typically observed between privileged and underprivileged children can be bridged by redesigning cognitive tasks from standard stimuli to ecological stimuli. Lastly, an attempt will be made to explore the short-term and long-term gains of a cognitive intervention program for the most vulnerable children through a series of cognitive training sessions. The overarching objective of my research is to examine childhood adversity and its nuances, including a better cross-cultural understanding of childhood adversity, mechanisms of effect manifestations, and potential mechanistic interventions in vulnerable children across diverse cultural backgrounds.

Adaptation or deficit? Several studies have investigated the effect of childhood adversity on a wide range of developmental outcomes. While the dominant assumption is that childhood adversity generally leads to poorer development, a few studies have found a non-significant or contrary effect. The adaptation model (which assumes that certain individuals develop resilient skills in response to adversity) aims to understand how and why certain people become resilient to the negative effects of adversity. In one of my earliest projects, I presented a cross-cultural perspective to this debate by publishing a study that showed that parentally deprived Nigerian children (institutionalized and foster care children) have better working memory relative to their non-deprived peers. I argued in the paper that people from less privileged backgrounds, such as the deprived children in our study, may see educational pursuit and academic excellence as one of the few existing pathways to economic prosperity in a country lacking attractive job opportunities. As one of the few such studies from Africa, the study contributed to the debate on whether adaptation or deficit drives childhood adversity exposure. However, significant work that would incorporate a more diverse and representative sample still needs to be carried out before we can conclusively establish the cross-cultural variation in both the perception and interpretation of adversity as well as their effects on development. In future studies, I am looking to understand more nuances in childhood adversity across cross-cultural perspectives by administering a parallel standardized cognitive test battery and an ecological task version to both children in the United States and Nigeria. This would enable me to examine whether the gap in cognitive abilities observed among privileged and underprivileged Western children, change in ways different from non-western children, if cognitive tasks are re-examined using a more ecologically relevant tasks (i.e., cognitive tasks designed with familiar, concrete stimuli) relative to standardized tasks (i.e., tasks designed with abstract stimuli) that are believed to disadvantage underprivileged children.

Understanding the importance of timing, heterogeneity, and the mechanism of childhood adversity: In addition to the above, I have an interest in understanding how the timing of the adversity exposure shapes outcomes, as well as the heterogeneity of outcomes following adversity and the mechanism underlying the observed outcomes. I have published past studies related to these questions. In the first thesis paper titled *Childhood mental health difficulties across ages 3-14 mediate the long-term association between early-life adversity at*

age 3 and poorer cognitive functioning at age 11 and 14, I found that early life adversity has a stable negative effect on mental health. Using longitudinal mediation analysis, further analysis revealed that mental health substantially mediated the poorer cognitive functioning often observed among people who experienced adversity. This is such that if the mental health of people reared in adversity is targeted for intervention, their cognitive abilities may improve as well. In another paper *Cognitive variations following exposure to childhood adversity: Evidence from a pre-registered, longitudinal study*, I used a combination of clustering techniques (latent class analysis) and a structured life-course modelling approach (SLCMA) to understand the underlying heterogeneity of adversity in the British sample. The results showed that adversity measures entered in the analysis clustered into five: low adversity, dysfunctional family, parental deprivation, family poverty, and global adversity. Of these five classes, participants in the family poverty class performed poorer than those in the low adversity class in the inhibition task, while participants in the global adversity class performed poorer than those in the low adversity class and dysfunctional family class in the working memory task.

Future work: My future research work has four goals. First, I will aim to throw more light on transgenerational adversity to better understand developmental processes that may influence the heredity of adverse experiences, including poverty, neglect, and (maternal) mental health. I will seek to explore the extent individuals born into less privileged environments either sustain the adversity they "inherited" or overcome such experiences by raising their offspring in a healthier environment. Secondly, I will seek to explore the longitudinal heterogeneity linking adversity, executive functioning, and mental health. This will involve using secondary datasets to examine the profiles and subpopulations of depression and executive functioning and establishing any correlation or mechanistic pathway between adversity and these profiles of depression and executive functioning. Thirdly, I will attempt to establish the effectiveness of cognitive remediation among vulnerable children, both in the short and long term, by conducting cognitive training sessions among the most vulnerable children. Lastly, I will examine whether the gap in cognitive abilities observed among privileged and underprivileged children can be reduced if cognitive tasks are re-examined using a more ecologically relevant tasks (i.e., cognitive tasks designed with familiar, concrete stimuli) relative to standardized tasks (i.e., tasks designed with abstract stimuli) that are believed to disadvantage underprivileged children. I will do this by sampling a diverse sample of Nigerian and American middle school children.