

Project Details	
Project Code	MRC21NMHBr Mars
Title	What is it about ACEs? Understanding the relationship between adversity and mental health
Research Theme	Neuroscience & Mental Health
Summary	This interdisciplinary PhD project will provide training in advanced epidemiological and statistical methods. Data from a large birth cohort will be used to improve understanding of the relationship between adverse childhood experiences (ACEs) and mental health outcomes (depression and self-harm). This will include investigation of specific ACEs and ACE profiles, the role of timing, chronicity and recency of exposure, and identification of potential mechanisms.
Description	<p>Adverse childhood experiences (ACEs) such as abuse, bullying or family disruption are increasingly recognised as one of the most potent determinants of later mental health problems. Estimates suggest that mental health problems, including depression and self-harm are at least double among those who have been exposed to ACEs. Despite the recognised importance of ACEs to later mental health outcomes, relatively little is known about the characteristics of ACEs that have the greatest impact. Firstly, many studies have relied on cumulative scores, whereby ACEs are simply dichotomised and summed. This approach assumes that each ACE contributes equitably to the outcome of interest and that they operate via the same mechanisms. Other research has focused on the relationship between individual ACEs and mental health. Although such studies have provided useful insights, it is known that ACEs often co-occur and most have failed to take account of this clustering. Secondly, little attention has been paid to the role of timing, chronicity, or recency of exposure in relation to mental health, and findings from existing studies have been inconclusive. Disentangling these effects is challenging as it may be that those who have been exposed earlier in childhood have also been exposed for longer. Person centred approaches such as Latent Class Analysis (LCA) have been used to identify variability in ACE profiles between individuals, however it is not currently known whether ACE profiles differ during different stages of the life-course. This PhD will address these limitations and generate valuable new insights into the relationship between ACEs and two mental health outcomes – depression and self-harm. Both depression and self-harm are major public health concerns which have been rising over recent years. The proposed study will use data from the Avon Longitudinal Study of Parents and Children (ALSPAC); a UK birth cohort study of over 14,000 participants born in 1991-1992. ALSPAC has unrivalled data on ACEs, with over 500 questions asked prospectively across childhood and adolescence, as well as repeated measures data on depression and self-harm into adulthood. The study also includes rich information on biological (e.g. inflammation), social (e.g. educational outcomes), and cognitive (e.g. emotion recognition) factors that could be explored as potential mechanisms linking ACEs with later mental health outcomes. The study will address the following research questions</p> <p>1) What is the relationship between specific ACEs and mental health outcomes (depression and self-harm) in adolescence and adulthood?</p> <p>2) How do ACEs cluster together during different stages of</p>

	<p>the life course, and how do different ACE profiles relate to mental health? 3) How do timing, chronicity, and recency of exposure to ACEs impact on risk for mental health problems? 4) What are the mechanisms through which ACEs have an impact on mental health? This PhD project spans the disciplines of psychology and epidemiology. It provides a unique opportunity for the student to develop skills across a range of sophisticated epidemiological and statistical techniques. These include structural equation modelling, mediation analysis, strategies for dealing with missing data (such as multiple imputation) and causal analysis methods. The project has the potential to have a large impact on the field, informing intervention targets, and also optimising the timing of delivery of intervention/prevention efforts.</p>
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