**Pathways to inequalities in child health: Supplement**

*Capturing socio-economic inequalities in child health*

In adults, socio-economic health inequalities refer to the systematic differences in health experienced by individuals or groups who occupy different positions within the social, cultural and economic structures of a society[1](#_ENREF_1)[2](#_ENREF_2). A plethora of research from a range of disciplines has sought to unpick the meaning of socio-economic position (SEP) and how it might be measured[1](#_ENREF_1)[2](#_ENREF_2). The degree of health inequality between groups (and our understanding of how these differences arise) are dependent on the measure being used to represent SEP. Common proxies for SEP include occupational status, household income, and highest educational qualifications[1](#_ENREF_1)[2](#_ENREF_2), and subjective measures can be used to reflect where an individual perceives themselves to be within a social hierarchy[3](#_ENREF_3). None of these measures can entirely capture, in isolation or collectively, the complexities of SEP.

Measuring health inequalities in children and young people is even more of a challenge. At birth, children do not have their own SEP. Instead they experience a multitude of *socio-economic circumstances* (SECs) that come from their parent, parents or caregivers (which may include parental educational qualifications and occupational status), the household unit more broadly (such as family structure, housing tenure or household income), and the socio-economic characteristics of the neighbourhood in which they live (such as indices of multiple deprivation)[1](#_ENREF_1)[4](#_ENREF_4). As children grow up their worlds expand and so do their SECs. The influence of schools, peers and communities increases, and from as young as 11 years, children have started to develop a sense of their social positioning - shaped by their perceptions of their family’s wealth compared to others[5](#_ENREF_5)[6](#_ENREF_6) and material conditions[7](#_ENREF_7). So, as with adults, there is no single measure to encapsulate the entirety of childhood SECs and each is likely to contribute differently to our understanding of the pathways through which SECs influence health. Unfortunately the most readily available measures of SECs may underestimate inequality or provide a limited view point – for example, although neighbourhood deprivation has important contextual influences on health[8](#_ENREF_8), it is a relatively poor proxy for individual-level SECs.

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