The influence of experienced racism and mixed ethnic identity on children’s healthy development

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Lifecourse strategy for disease prevention

Chronic disease risk

Infancy

Childhood

Adulthood

Life course

Inadequate response to new challenges

Plasticity

Late intervention impactful for vulnerable groups

Intervention in childhood increases resilience to new challenges

Very early intervention increases functional capacity & responses

Adapted from Godfrey et al DOI: http://dx.doi.org/10.1016/j.tem.2009.12.008
Mean birthweight (kg) and percent low birthweight (<2500g) by cohort member’s ethnicity

<table>
<thead>
<tr>
<th>Cohort member’s ethnicity</th>
<th>Mean birthweight</th>
<th>% low birthweight</th>
</tr>
</thead>
<tbody>
<tr>
<td>White (N=14988)</td>
<td>3.406</td>
<td>5.4</td>
</tr>
<tr>
<td>Indian (N=522)</td>
<td>3.051</td>
<td>13.7</td>
</tr>
<tr>
<td>Pakistani (N=932)</td>
<td>3.125</td>
<td>12.3</td>
</tr>
<tr>
<td>Bangladeshi (N=379)</td>
<td>3.067</td>
<td>12.6</td>
</tr>
<tr>
<td>Black Caribbean (N=488)</td>
<td>3.256</td>
<td>8.5</td>
</tr>
<tr>
<td>Black African (N=460)</td>
<td>3.333</td>
<td>8.5</td>
</tr>
</tbody>
</table>

Kelly et al 2009
Prevalence of fine motor delay

Kelly et al, DMCN, 2006
Prevalence of obesity at ages 3, 5, 7 & 11
Prevalence of early menarche

Kelly et al., forthcoming
Mother and teacher reports of clinically relevant behavioural difficulties by ethnicity

![Bar chart showing percentages for White, Indian, Pakistani, Bangladeshi, Black Caribbean, and Black African groups.](chart_image)

- **White**
- **Indian**
- **Pakistani**
- **Bangladeshi**
- **Black Caribbean**
- **Black African**

The bar chart compares the percentages reported by mothers (orange bars) and teachers (blue bars) for different ethnicities.
Longitudinal latent verbal profiles

Mean BAS scores

- High (19.5%)
- Average (74.9%)
- Low (5.6%)

Age 3 | Age 5 | Age 7 | Age 11

Zilanawala et al, forthcoming
How might experiences of racism influence children’s health and development?

- Restricted access to social resources – employment, education, healthcare, housing and recreational facilities along with increased exposure to risk factors crime, pollution etc.
- Family environment – parent/carer mental health, ‘supportive parenting’
- Reduced uptake of healthy behaviours and increased uptake of unhealthy behaviours – coping strategies/ reduced self regulation
- Physical injury due to violent attack
- Psychological and physiological ‘insults’ affecting function
How common are reports of experiences of racism?

Kelly et al, J Epidemiology and Community Health, 2013;67:35-41
Experienced racism: children’s health and development

- Gestation and birthweight
- Socioemotional- problem behaviours
- Cognitive performance
- Metabolic processes – BMI, insulin resistance, allostatic load
- Common illnesses
Prevalence of mental health condition symptoms among fifth-grade students, by perceived racial/ethnic discrimination 2004–2006

Regression coefficients for socioemotional difficulties in ethnic minority cohort members when racism in area is fairly/very common

Step 1 adjusts for mother’s age at time of birth, gender, languages spoken at home and ethnicity.
Step 2 additionally adjusts for family income, highest parental educational attainment and area deprivation.
Step 3 additionally adjusts for all other markers of experienced racism.

Kelly et al, J Epidemiology and Community Health, 2013;67:35-41
Risk of preterm delivery for Black vs. White women in the CARDIA study

Mustillo et al, Am J Public Health, 2004
The effect of perceived racial discrimination on allostatic load by level of emotional support.

![Graph showing the relationship between perceived racial discrimination and allostatic load by level of emotional support. The graph includes a line for low levels of emotional support and another for high levels, with statistical details provided for each level.](image-url)
Diurnal cortisol slope for racial/ethnic minorities with high and low levels of perceived discrimination.

Adapted from Zeiders et al, Psychoneuroendocrinology 2014;50:280-288
Bangladeshi children

Predicted total difficulties score vs. Age (years)

- Not mixed
- Mixed

Pakistani children

Predicted total difficulties score vs. Age (years)

- Not mixed
- Mixed

Zilanawala et al, Arch Dis Child 2016
Conclusions

• Growing body of evidence supports links between experiences of racism and wide range of health and developmental markers

• More detailed data on racialised experiences, and biomarkers are required along with studies that employ longitudinal designs

• Links between ‘mixedness’ and children’s development are sensitive to context