Inequities in under-five child nutritional status in South Africa

What progress has been made?

Julian May

Inequities in child outcomes

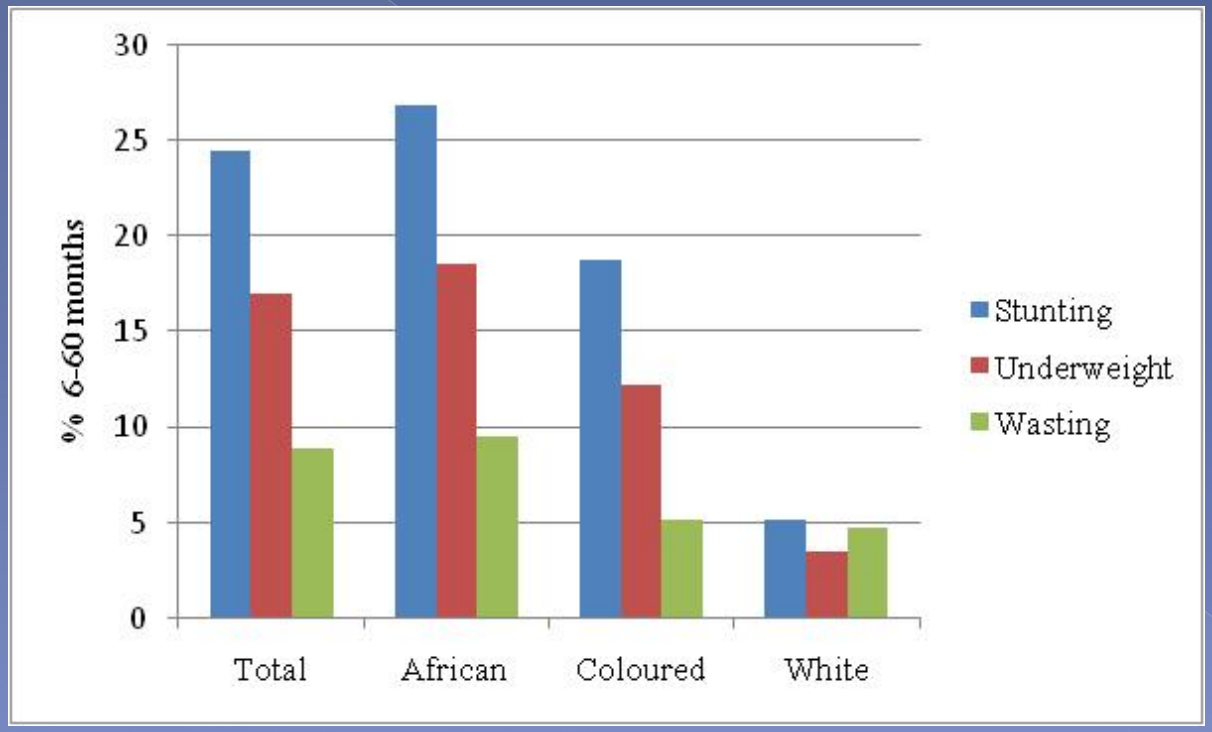
- About 60 million children experience moderate acute and 13 million severe acute malnutrition.
- About a third of the 6 million preventable deaths of young children occurring in poor and middle-income countries each year have been ascribed to under-nutrition
- Of those that survive, an estimated 200 million children under 5 years fail to reach their potential in cognitive development because of poverty, poor health and nutrition, and deficient care.
- This early childhood development has been shown to have a significant impact on an individual's adult health and life prospects.
- "Socioeconomic status gaps in child mortality (and morbidity) are not simply inequalities, they are also inequities – inequalities that are unjust and unfair"

Measures

- Poverty: PCE is <R515 per person per month
- Stunting: height-for-age that is less than the international reference value by more than two standard deviations;
- Wasting: weight-for-height less than the international reference value by more than two standard deviations;
- Underweight: weight-for-age that is more than two standard deviations below the international reference value.
- Values exceeding -6 or +6 deemed implausible

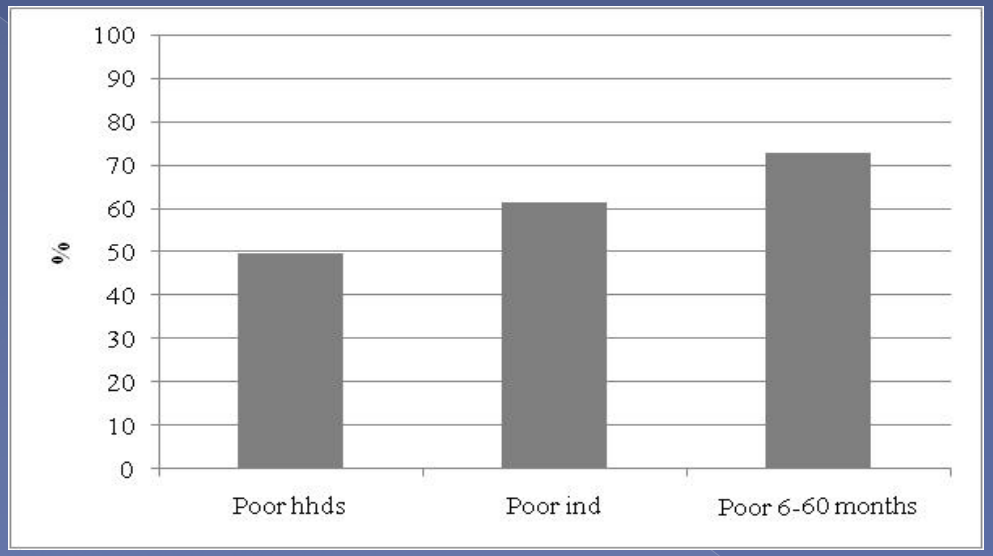
Eve of the transition to democracy (1993)

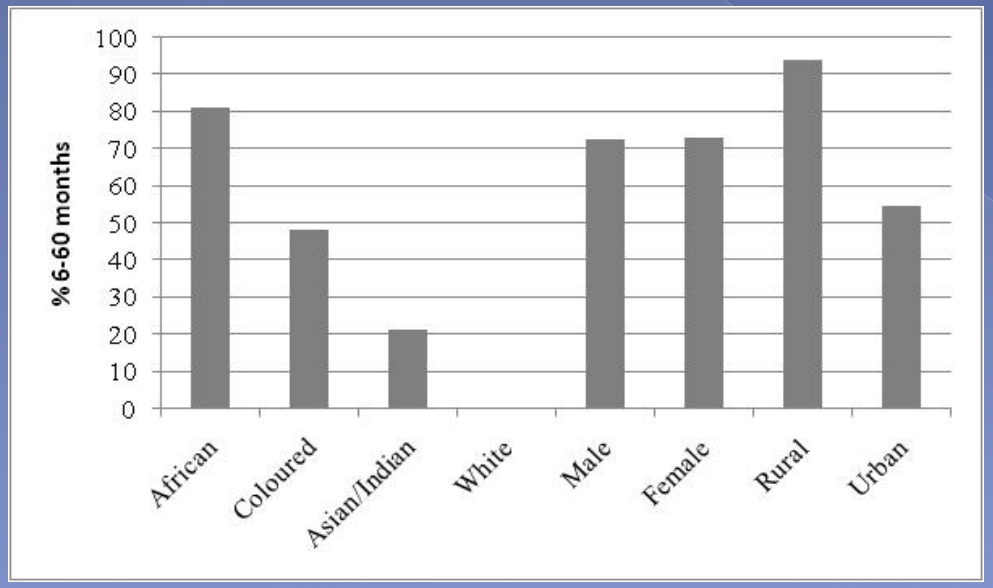
- Eyob Zere and Diane McIntyre, 2003. Inequities in under-five child malnutrition in South Africa, *International Journal for Equity in Health* (2)7



Stunting prevalence and GNI (2007-2010)

Incidence of poverty for children 6-60 months (2008)



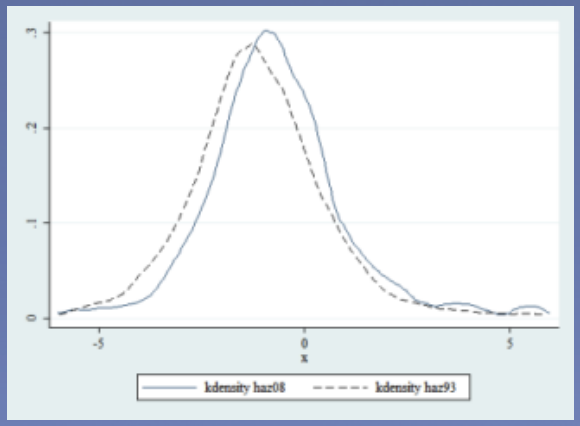


Incidence of stunting, wasting, underweight and poverty

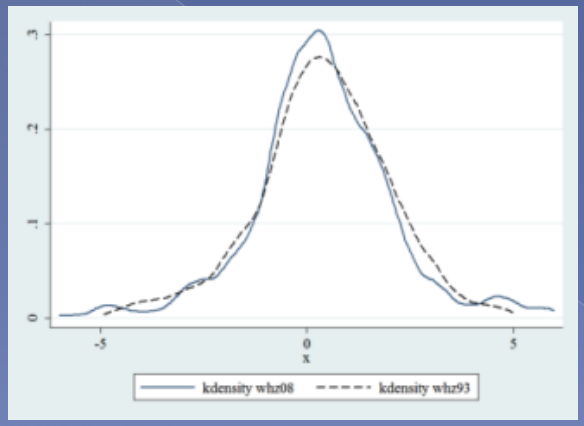
Year	HAZ	WHZ	WAZ	CIF	Poverty Headcount
1993	30.4%	7.8%	13.2%	30.4%	68.2%
2008	23.9 %	4.6%	8.7%	31.3%	72.7%

Anthropometric scores 1993 and 2008

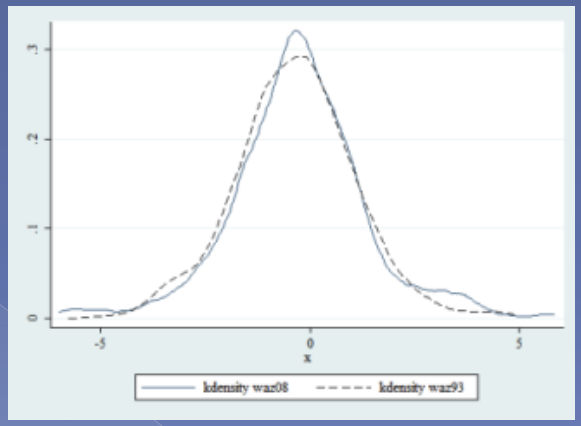
HAZ



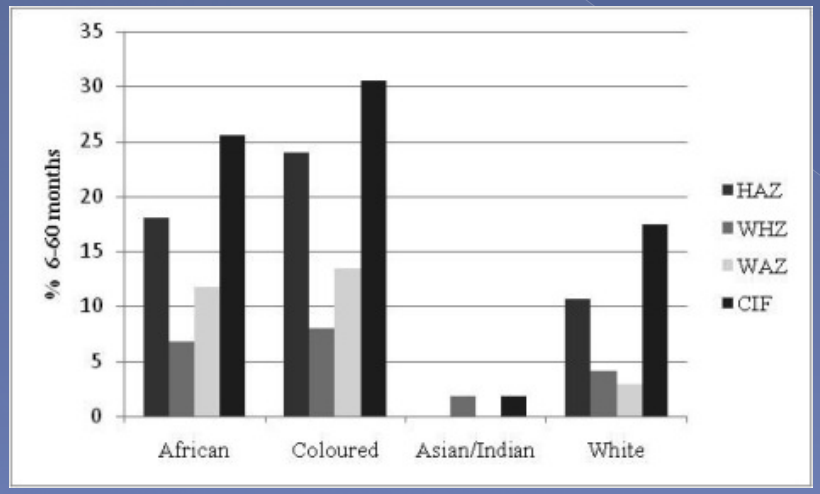
WHZ

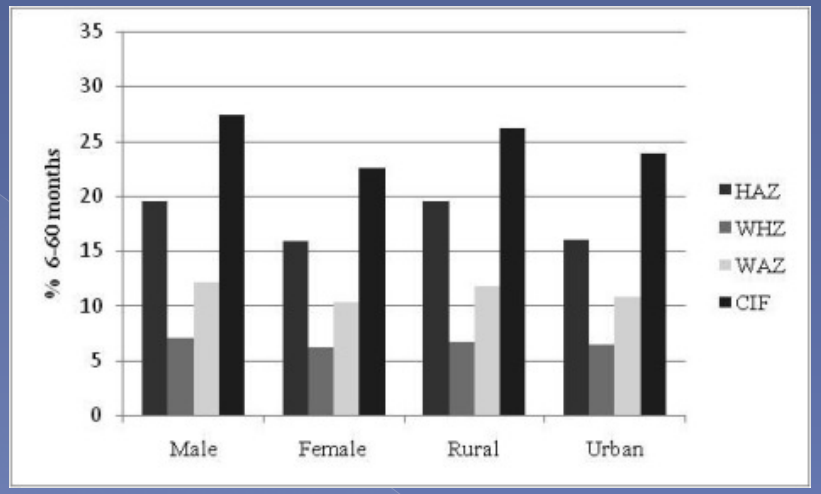


WAZ

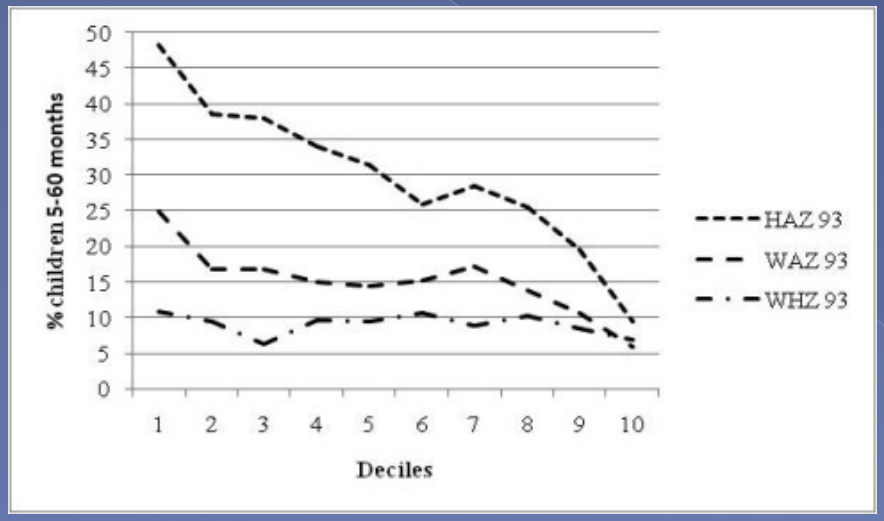


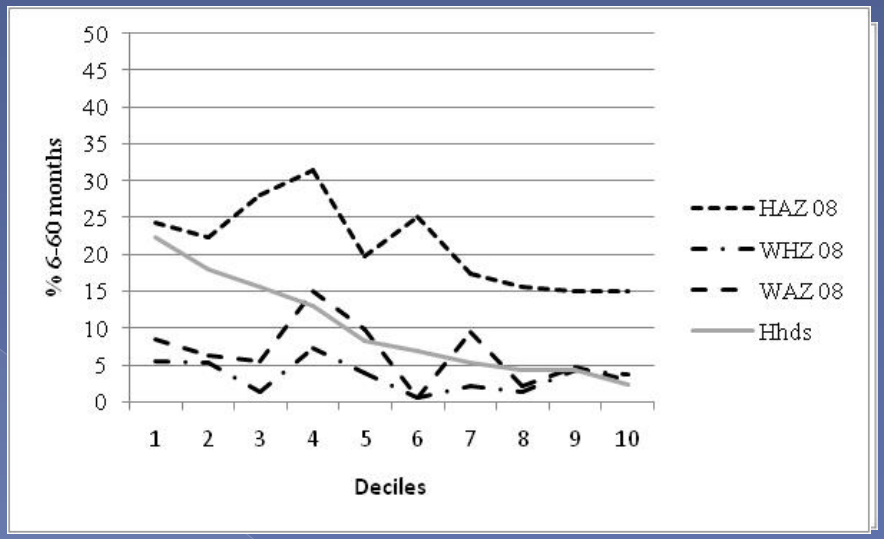
Incidence of anthropometric failure (2008)



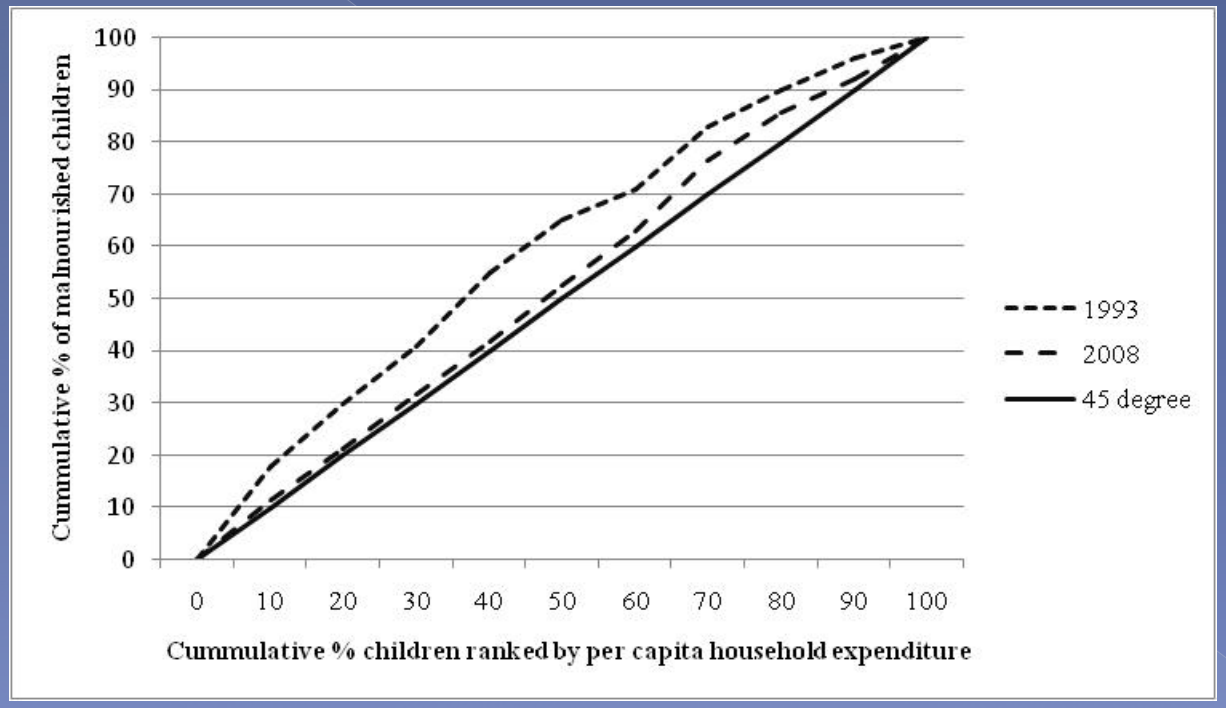


Anthropometric scores by decile (1993 and 2008)





Child malnutrition (HAZ) concentration curves (1993, 2008)



Odd ratios

Predictors	HAZ	WHZ	WAZ	CIF
urban	0.912	1.446	1.177	1.146
wcape	1.260	1.006	**2.530**	1.076
ecape	**1.711**	0.776	**1.809**	**1.805**
ncape	**1.599**	1.232	**3.094**	**1.784**
freestate	1.127	2.941	**2.270**	**1.586**
mpum	0.833	**2.547**	1.339	1.186
limpopo	1.136	**3.086**	**2.712**	**2.084**
northwest	1.013	**2.888**	**3.297**	**1.432**
gauteng	1.314	**3.088**	**1.971**	1.497
african	1.383	0.640	**4.054**	1.585
coloured	1.727	2.089	**5.629**	1.928
indian	1.674	3.075	**22.477**	3.009
male	**1.233**	0.897	**1.579**	1.180
logpce	0.989	0.992	0.981	1.004
hhsize	0.988	0.982	**1.022**	0.973
mother's education	**0.917**	0.908	**0.920**	**0.663**
asset score	0.979	**0.751**	**0.831**	0.985
durables score	0.928	0.897	1.159	**1.005**

Conclusion

- Based on data collected in 1993, Zere and McIntyre identified inequities in child outcomes based on race and income and called for social policies to be put in place to address these
- Data collected in 2008 suggests that inequities at least in terms of income have been reduced
- Something has worked, and available evidence points to the CSG
- However other forms of nutritional disorders emerging, notably obesity
- Nonetheless the bulk of South Africa's children continue to live in households that are below the poverty line
- Further steps are required to address household level poverty and food security

Next questions

- Do these trends show up again?
- What is the effect of past malnourishment on present anthropometric status?
- What does cause/mitigate malnutrition if not money-metric poverty?
- What changes in socio-economic status cause changes in anthropometric status?
- Can an impact of the economic crisis of 2008/9 be seen on child poverty?
- What happens when fixed effects are taken into account?