UNDERSTANDING THE DOUBLE BURDEN OF MALNUTRITION AND APPROACHES TO TACKLE IT: LESSONS FROM SOUTH AFRICA

Presented by TL Moeng Mahlangu
DRIVERS OF OBESITY AND UNDERWEIGHT

- Early introduction of complementary feeding
- Poor breastfeeding practices
- Over reliance on ready to use foods

- Individual and lifestyle factors
- Perceived high cost of healthy foods
- Nutrition transition
- Food insecurity

- Knowledge on the nutritional value of foods
- Commercial influence
- Modern lifestyle
- Reliance of processed and ready to use foods

- Early feeding practices
- Poor diet
- Environmental factors

- Knowledge
- Poor Diet
- Early feeding practices
- Environmental factors
OBESITY TRENDS IN SA: ADULT MEN AND WOMEN

- **2016 SADHS**
  - Women overweight and obese: 68%
  - Men overweight and obese: 31%

- **2012 SANHANES**
  - Women overweight and obese: 64%
  - Men overweight and obese: 30.7%

- **2003 SADHS**
  - Women overweight and obese: 54.9%
  - Men overweight and obese: 29.8%

Legend:
- Women overweight and obese
- Men overweight and obese
## Trends in the Prevalence of Undernutrition and Overweight in Young Children 2003-2016

Table 1. Anthropometric indicators of malnutrition in women age 15 to 49 yr and children under five according to data from SADHS 2003, NFCS 2005, SANHANES 2012, and SADHS 2016. *  
* SADHS 2016 data obtained from Key Indicator Report tables. For SADHS 2003, NFCS 2005 and SANHANES 2012, the database was available to the researchers.

<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td><strong>Women (15 – 49 yr)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BMI mean</td>
<td>26.3</td>
<td>26.4</td>
<td>27.8</td>
<td>28.3</td>
</tr>
<tr>
<td><strong>BMI Category</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Underweight</td>
<td>7.0%</td>
<td>4.5%</td>
<td>4.6%</td>
<td>3.1%</td>
</tr>
<tr>
<td>Normal</td>
<td>42.8%</td>
<td>44.0%</td>
<td>37.0%</td>
<td>34.7%</td>
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<tr>
<td>Overweight</td>
<td>25.8%</td>
<td>26.6%</td>
<td>25.1%</td>
<td>26.3%</td>
</tr>
<tr>
<td>Obese</td>
<td>24.4%</td>
<td>24.8%</td>
<td>33.3%</td>
<td>35.9%</td>
</tr>
<tr>
<td><strong>Child (under-five)</strong></td>
<td></td>
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<tr>
<td>HAZ mean</td>
<td>-1.3</td>
<td>-1.0</td>
<td>-1.1</td>
<td>-1.1</td>
</tr>
<tr>
<td>Stunting (HAZ &lt; -2SD)</td>
<td>33.4%</td>
<td>26.4%</td>
<td>26.5%</td>
<td>27.4%</td>
</tr>
<tr>
<td>WAZ mean</td>
<td>-0.4</td>
<td>-0.4</td>
<td>-0.2</td>
<td>-0.2</td>
</tr>
<tr>
<td>Underweight (WAZ &lt; -2SD)</td>
<td>9.9%</td>
<td>6.3%</td>
<td>6.2%</td>
<td>5.9%</td>
</tr>
<tr>
<td>Overweight (WAZ &gt; +2SD)</td>
<td>3.6%</td>
<td>2.6%</td>
<td>3.7%</td>
<td>4.5%</td>
</tr>
<tr>
<td>WHZ mean</td>
<td>0.5</td>
<td>0.2</td>
<td>0.6</td>
<td>0.6</td>
</tr>
<tr>
<td>Wasting (WHZ &lt; -2SD)</td>
<td>7.5%</td>
<td>6.0%</td>
<td>2.9%</td>
<td>2.5%</td>
</tr>
<tr>
<td>At risk of overweight (WHZ &gt; +1SD; ≤ +2SD)</td>
<td>20.1%</td>
<td>16.6%</td>
<td>22.8%</td>
<td></td>
</tr>
<tr>
<td>Overweight (WHZ &gt; +2SD; ≤ +3SD)</td>
<td>11.3%</td>
<td>6.8%</td>
<td>10.7%</td>
<td></td>
</tr>
<tr>
<td>Overweight (WHZ &gt; +2SD)</td>
<td><strong>18.3%</strong></td>
<td>8.4%</td>
<td><strong>14.2%</strong></td>
<td><strong>13.3%</strong></td>
</tr>
<tr>
<td>Obese (WHZ &gt; +3SD)</td>
<td>7.0%</td>
<td>1.6%</td>
<td>3.5%</td>
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</tr>
<tr>
<td><strong>BAZ mean</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wasting (BAZ &lt; -2SD)</td>
<td>7.1%</td>
<td>6.3%</td>
<td>2.6%</td>
<td></td>
</tr>
<tr>
<td>At risk of overweight (BAZ &gt; +1SD; ≤ +2SD)</td>
<td>20.7%</td>
<td>7.6%</td>
<td>24.9%</td>
<td></td>
</tr>
<tr>
<td>Overweight (BAZ &gt; +2SD; ≤ +3SD)</td>
<td>12.0%</td>
<td>10.2%</td>
<td>12%</td>
<td></td>
</tr>
<tr>
<td>Obese (BAZ &gt; +3SD)</td>
<td>8.5%</td>
<td>2.6%</td>
<td>4%</td>
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</tbody>
</table>
INTERVENTION PROGRAMMES

**Nutrition and infant feeding**
- Nutrition road map
- Regulations relating to feeding of infants and young children.
- Infant feeding declaration (Tshwane declaration)
- Infant feeding policy (with BFHI Implementation)
- NGO involvement in BF promotion
- National strategy for the prevention and control of obesity

**Poverty and food Security**
- War on Poverty
- Food and Nutrition security policy
- National Food and Nutrition security plan (cabinet approved and led by Deputy President)
- Various poverty alleviation projects (Province Specific) eg Sukuma Sakhe in KZN)
WHY SSB Tax

• Rationale for SSB tax

• South Africa has the highest overweight and obesity rate in Sub-Saharan Africa and the second/third highest in Africa.

• There is evidence of the link between SSB and obesity especially among children.

• At a population level cost effective.

<table>
<thead>
<tr>
<th>Intervention</th>
<th>Cost in rands per head</th>
</tr>
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<tbody>
<tr>
<td>Fiscal measures (taxes, subsidies)</td>
<td>R0.20</td>
</tr>
<tr>
<td>Regulating food advertising</td>
<td>R0.90</td>
</tr>
<tr>
<td>Food labeling</td>
<td>R2.50</td>
</tr>
<tr>
<td>Worksite interventions</td>
<td>R4.50</td>
</tr>
<tr>
<td>Mass media campaigns</td>
<td>R7.50</td>
</tr>
<tr>
<td>School based intervention</td>
<td>R11.10</td>
</tr>
<tr>
<td>Physician counselling</td>
<td>R11.80</td>
</tr>
</tbody>
</table>
While 20% tax is proposed by SA policy paper and other studies, the health impacts are greater if tax is higher:

**Obesity reductions by benchmark tax rate:**

<table>
<thead>
<tr>
<th></th>
<th>10%</th>
<th>20%</th>
<th>30%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Men</td>
<td>-2.3%</td>
<td>-3.8%</td>
<td>-4.9%</td>
</tr>
<tr>
<td>Women</td>
<td>-1.4%</td>
<td>-2.4%</td>
<td>-3.1%</td>
</tr>
</tbody>
</table>
ADVOCACY FOR SUPPORT TO SUGAR TAX

Tax Bill published for comments

Government

Scientist to present

Business

Health presents

Presentations from: Beverage industry

labor

Job losses

Civil society

Freedom of choice

media

Sugar industry

Small business
CHALLENGES OF SUGAR TAX IMPLEMENTATION

- POOR ADVOCACY BEFORE IMPLEMENTATION
- POOR INVESTMENT IN COMMUNICATION
- LIMITED LOCAL STUDIES
- SIMULTANEOUS IMPLEMENTATION OF OTHER OBESITY PREVENTION AND CONTROL INTERVENTIONS
Health Impact Pyramid

- Socioeconomic factors
- Long lasting protective interventions
- Clinical interventions
- Counselling and education
- Increasing population impact

Increasing individual effort needed

Operation Sukuma Sakhe (let's stand together and build) is a call for the people of KwaZulu-Natal to be determined to overcome the issues that have destroyed the communities such as poverty, unemployment, crime, substance abuse, HIV & AIDS and TB.

Population 11.4 million
> 50% reside in rural areas
SUCCESS FACTORS

- Coordination (All of Government approach)
- Political will and support
- Leadership (Resource allocation)
- Research capacity
- Evidence based implementation
- Community engagement

Sukuma Sakhe Project coordinated from Premiers office

- A provincial inter-sectoral committee appointed focusing on most affected districts and reporting to Premier at Quarterly bases.
- Appointment of a Nutrition Director to make strategic decision, Increased budget for Nutrition.
- M&E of projects and reporting

CHW and health workers trained on Nutrition and HIV.

- Appointed CHW to focus on Nutrition, appointed sub-district Nutrition Coordinators

Province working closer with research Institutes, to provide evidence based policy making and
• REDUCTIONS IN HOSPITAL ADMISSION AND CASE FATALITIES DUE TO MALNUTRITION
• INCREASE EXCLUSIVE BREASTFEEDING RATE
• REDUCTION IN STUNTING IN SOME DISTRICTS.
CONCLUSION

• POCKETS OF SUCCESSFUL IMPLEMENTATION ACROSS THE PROVINCES

• COLLABORATION BETWEEN POLICY MAKERS AND RESEARCHERS IS CRITICAL

• FUNDED POLICIES YIELD DESIRED RESULTS

• FUNDING FOR RESEARCH IS CRITICAL TO ENSURE MONITORING OF PROGRAMS
THANK YOU!