Socio-Cultural Practices, Eating Patterns and Presence of Double Burden of Malnutrition in Mothers and their Children in Grand-BoPo, Benin

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Highlights
- This study confirms a coexistence of child undernutrition and maternal overnutrition in the same household.
- A 9.8% prevalence of wasting and a 29.7% prevalence of stunting were revealed. A high prevalence of stunting is reported in the age group 12 to 23 months and 24 to 35 months.
- Overweight and obesity prevalence in mothers is high.
- The dietary patterns of children and their mothers were based on local foods: cereals, roots and tubers, vegetables, and fish.
- Food expenditure, toilet access, and access to drinkable water were related to child nutritional status.
- Food taboos particularly during pregnancy were revealed. Those cultural beliefs were still followed by some mothers and food rich in nutrients were pushed aside.

Introduction
The world faces today a double burden of malnutrition which includes both undernutrition and overweight, especially in developing countries[1]. Managing these two aspects of malnutrition in developing countries is a heavy burden for their failing health systems[2]. Data from FAO show that 161 million children under five years are stunted and at the same time 3.4 million people die each year due to overweight and obesity [3].

Aim
The aim of this study is to investigate the sociocultural influence, feeding practices and the presence of double burden of malnutrition in children and their mothers in Grand-BoPo’s community in Benin.

Methods
A cross-sectional, descriptive and analytical approach was used. A sample of 408 children between 0-59 months and their mothers were selected. A questionnaire was developed to get information on demographic and socio-economic status of the household, breastfeeding and infant feeding practices. Food frequency questionnaire was administrated to assess dietary patterns and four focus groups with mothers were held to determine care practices and food taboos. Weight and height measurements for children and weight, height and waist circumference for their mothers were taken. Height for Age and Weight for Height z scores were determined for children and body mass index (BMI) [4] measurements were calculated for women. For statistics analysis, IBM SPSS 25 was used.

Results
The mean age of children was 24.45 ± 14.9 months with 53.2% of girls in the sample. All children were breastfed. The mean age of mothers was 27.99 ± 6.99 years. About 91.7% of household had a monthly income of $60 and spent on average $24 ± $11.2 on food. Prevalence of wasting was 9.8% and stunting 29.7%. Waist circumference mean of mothers was 79.95 ± 10.35 cm and 19.3% were classified to be at high metabolic risk. BMI assessments revealed 16.9% of mothers were overweight and 7.4% obese.

Conclusion
- Children were introduced to family foods at 5 months on average with very low consumption of animal protein and fruits, and a high consumption of vegetables and maize based meals.
- Food taboos particularly during pregnancy were revealed and those cultural beliefs were still followed by some mothers.
- The findings showed the need for more effort on cultural sensitive interventions to reduce double burden of malnutrition.

Figure 1: Coexistence of stunting and overnutrition in a household (n=408)

Table 1: Correlation between nutritional status of mother and child (n= 408)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Pearson-r</th>
<th>Sig</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMI categories and WC</td>
<td>0.635</td>
<td>0.000</td>
<td>There is a strong positive and significant correlation between BMI and WC</td>
</tr>
<tr>
<td>BMI categories and wasting</td>
<td>0.102</td>
<td>0.039</td>
<td>BMI significantly correlated with wasting; but the correlation is weak.</td>
</tr>
<tr>
<td>BMI and wasting</td>
<td>0.156</td>
<td>0.002</td>
<td>BMI significantly correlated with wasting; but the correlation is weak.</td>
</tr>
<tr>
<td>BMI categories and stunting</td>
<td>0.121</td>
<td>0.015</td>
<td>BMI significantly correlated with stunting; but the correlation is weak.</td>
</tr>
<tr>
<td>BMI and stunting</td>
<td>0.019</td>
<td>0.816</td>
<td>There is no correlation between BMI and stunting.</td>
</tr>
</tbody>
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