AN INTERIM REPORT ON THE ASSESSMENT OF CHILDREN'S BMI DATA AND ATTENDANCE

1. Introduction

This report presents an analysis of children's BMI data collected from 2021 to 2025 to assess the effectiveness of the school lunch program and supplementary food provided to families. The supplementary food program experienced a gap in 2023, while the school lunch program remained continuous. Additionally, the assessment included attendance records to evaluate the impact of these programs on school attendance.

2. Findings and Discussion

2.1 Overall BMI Trends (2021–2025)

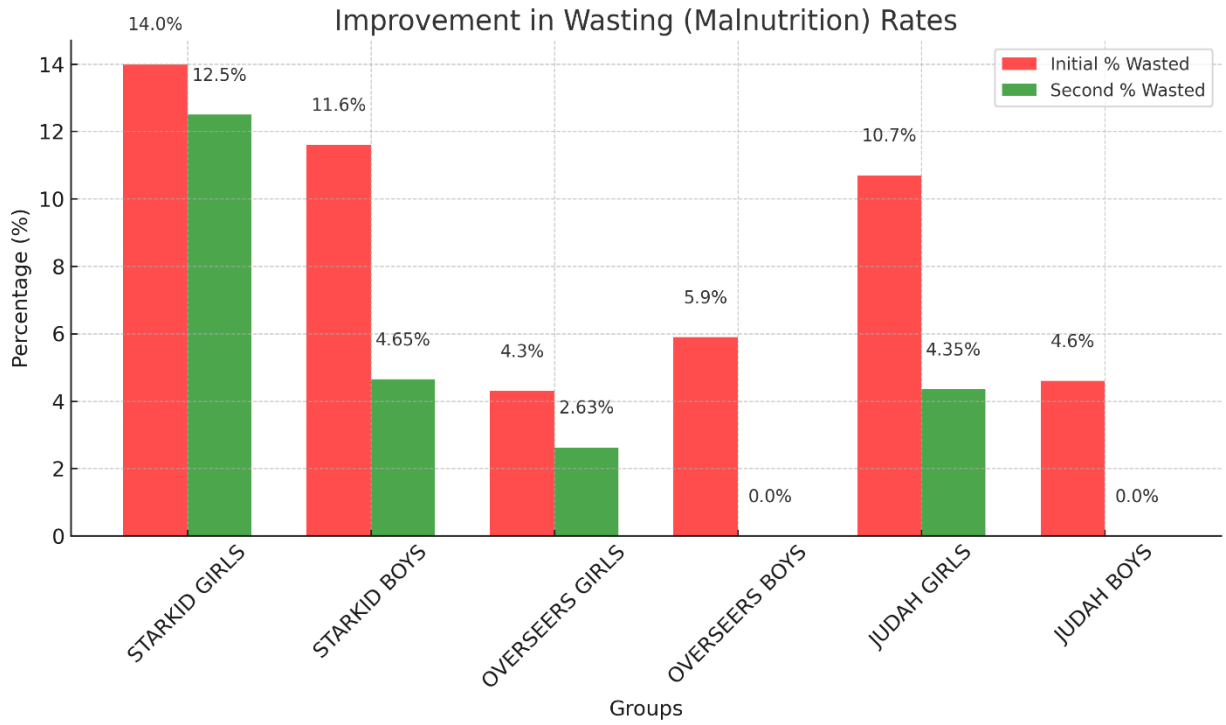
An evaluation of the BMI data over the years reveals:

2.11 General patterns of improvement in children's BMI.

The number of the malnourished children decreased significantly.

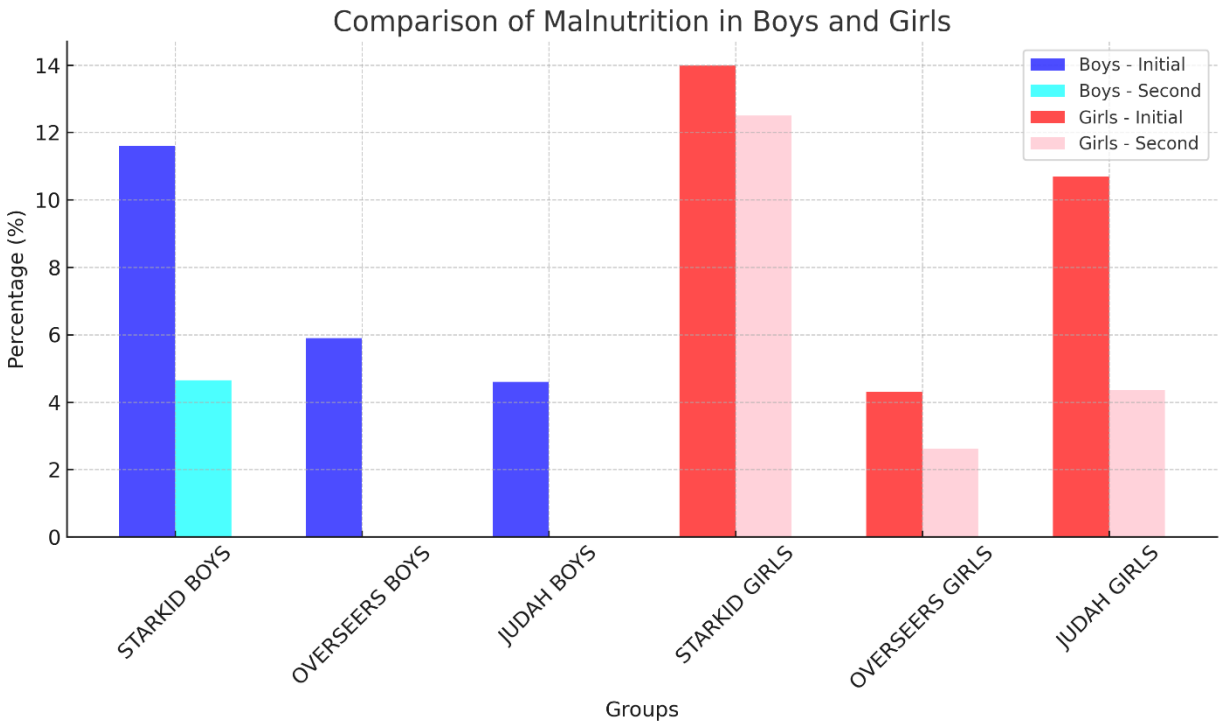
Group	Initial %	Second %	Improvement (%)
STARKID GIRLS	14.0%	12.5%	10.71%
STARKID BOYS	11.6%	4.65%	59.91%
OVERSEERS GIRLS	4.3%	2.63%	38.84%
OVERSEERS BOYS	5.9%	0.0%	100.00%
JUDAH GIRLS	10.7%	4.35%	59.35%
JUDAH BOYS	4.6%	0.0%	100.00%

Graphical representation



2.12 Variations in BMI trends based on age groups, gender and other socio-demographic factors.

We have more malnourished girls than boys.



Starkid girls have the highest number of malnourished children.

The most affected age group is 5-10 years with peak cases at 8 years (3 cases).

BMI is relatively stable in younger children but increases during adolescence.

There are large variations in teenagers, indicating different growth patterns.

There are possible outliers at ages 10. 13,15 and 17 where BMI is notably high.

2.2 Impact of Supplementary Food

Based on the analysis of the data, we establish:

2.21 A comparison of BMI trends during periods when families received supplementary food (2021–2022, 2024–2025) versus when they did not (2023).

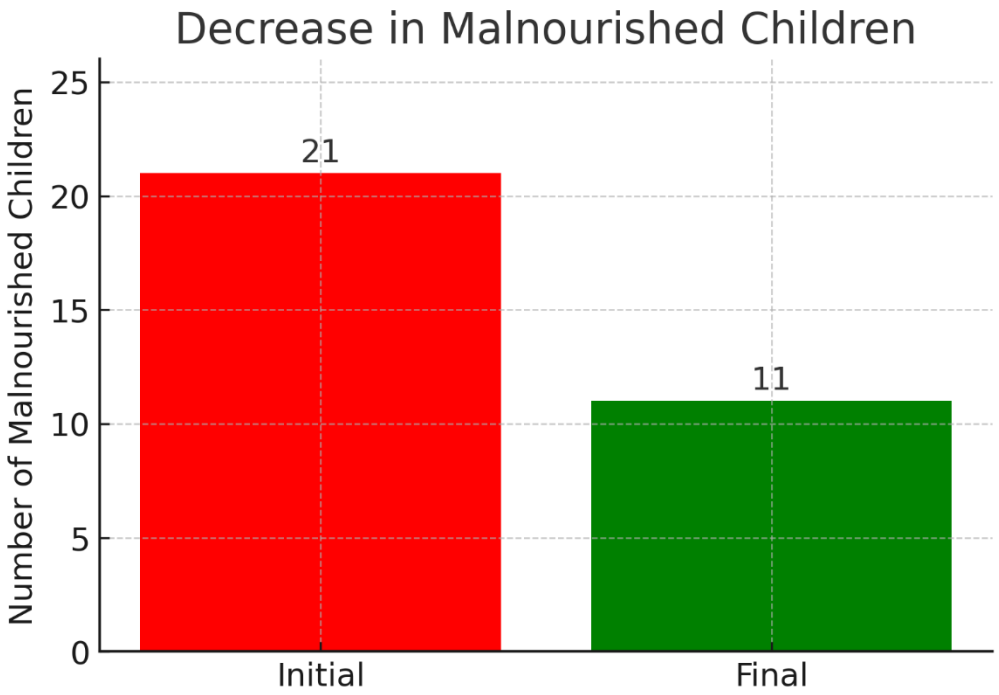
We observed a decrease in the number of malnourishment cases from 21 to 11. That is a percentage decrease of 47.62%.

2.22 The impact of the 2023 gap in supplementary food on children's BMI.

The BMI levels stagnated or declined during the gap year.
There was BMI recovery in most of the children after the reintroduction of supplementary food in 2024.

A 47.62% decrease noted during the 2nd measurements indicates improvement in the children's nutritional status after the reintroduction of the supplementary food program.

Here is a graphical representation:



2.3 Effectiveness of the School Lunch Program

Given that the school lunch program remained continuous, it was observed that:

2.31 The school lunch program to an extent sustained BMI levels despite the absence of supplementary food in 2023.

The school lunch program played a huge role in maintaining a healthy nutritional status of the children during the gap in supplementary food provision. This is because we did not observe an alarmingly high number of malnourished children during the gap year. Moreso, all the children identified as malnourished fall under the category Moderate Acute Malnutrition (MAM) and none of them under Severe Acute Malnutrition (SAM).

2.32 Vulnerable children

The children who are more dependent on school meals (e.g., those from lower-income families and the orphans like in the case of Starkid) showed greater vulnerability to the gap in supplementary food.

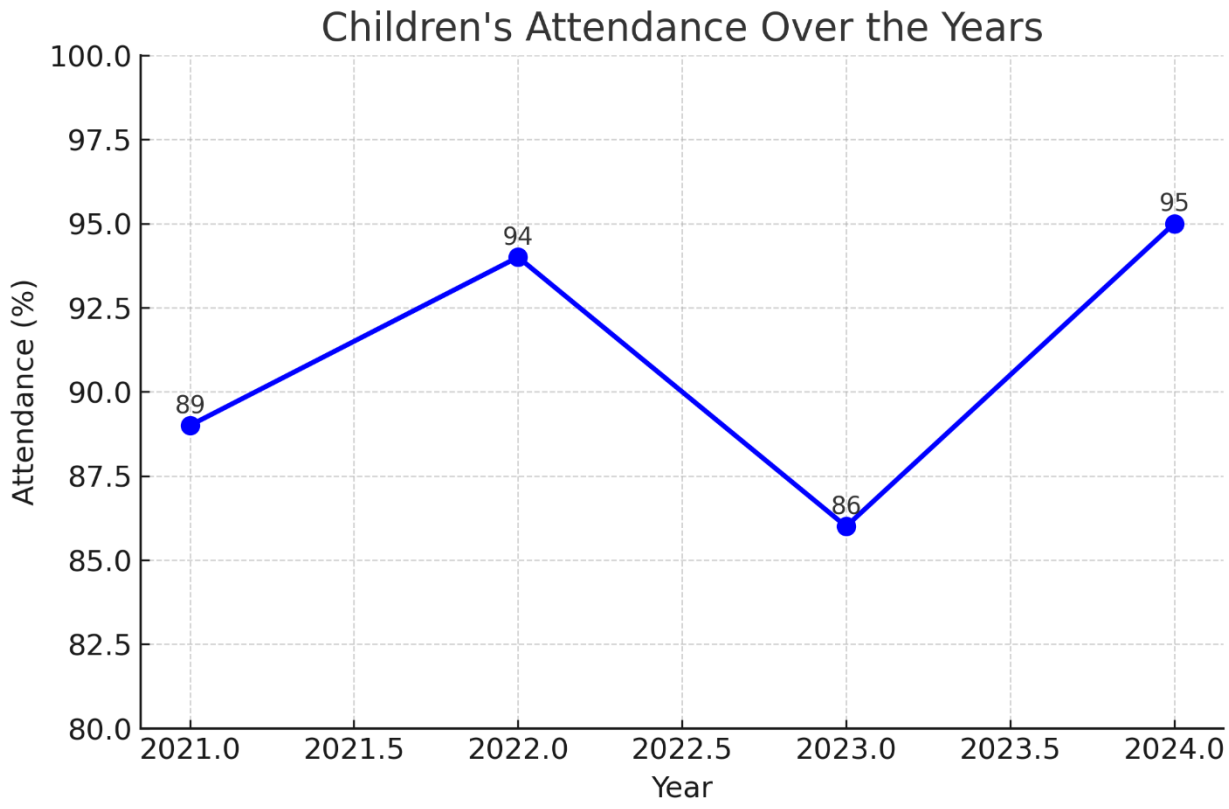
2.4 Attendance Trends and Program Impact

2.41 Attendance Trends

Analysis of attendance records was done in relation to the school lunch and supplementary food programs.

It was observed that attendance improved, declined, or remained stable during different periods of program implementation. In 2021-2022, attendance improved. During the gap year 2023, attendance declined. It improved again after the reintroduction of the supplementary food program in 2024.

Here is a visualization of the attendance:



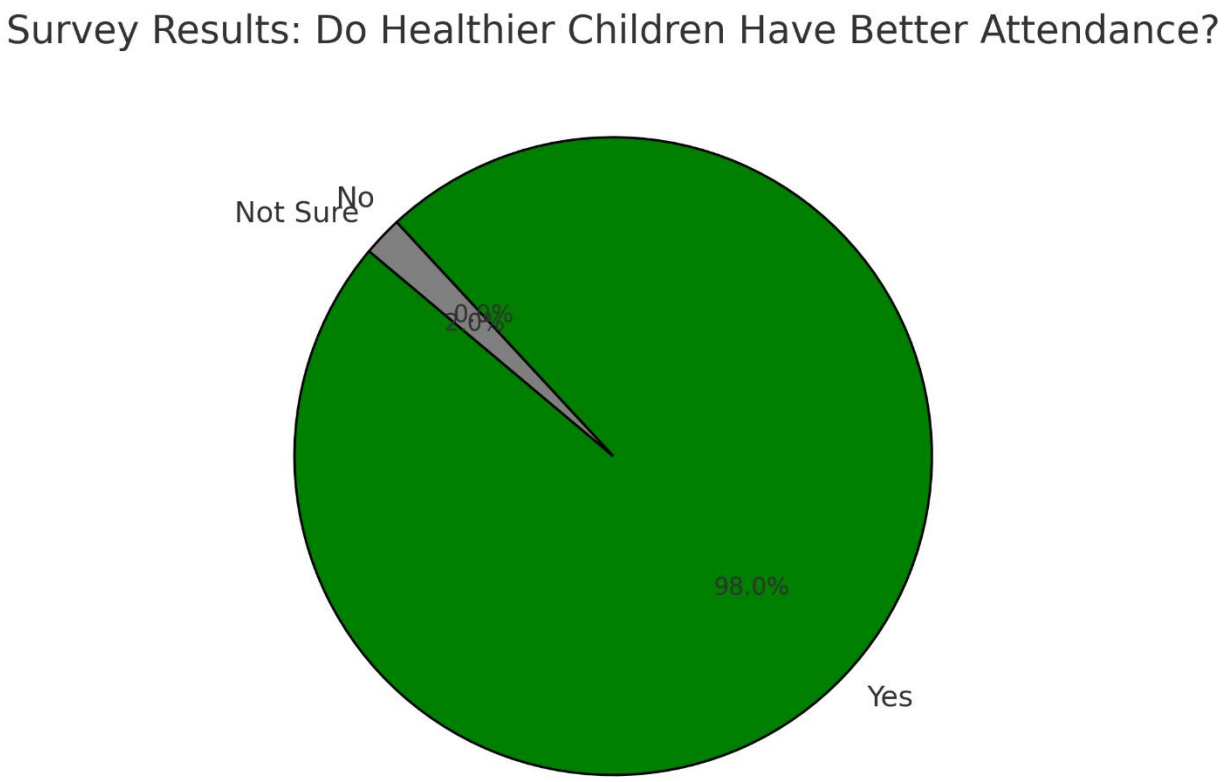
2.42 Correlation

There were patterns suggesting a correlation between improved nutrition and school attendance rates.

Better nutrition generally leads to higher attendance rates. Well-nourished children are healthier, have more energy, and are better able to focus, reducing absenteeism due to illness or fatigue.

We did a survey on whether healthier children's attendance is better than that of their malnourished counterparts.

Here is a pie chart representing the survey results. It clearly shows that an overwhelming **98%** believe healthier children have better attendance, while **0% disagreed**, and **2% were unsure**.



2.5 External and Seasonal Influences

It is important to note that the nutritional status and attendance of the children is not solely impacted by the program but other external factors. Therefore, the report suggests:

- Consideration of other factors affecting BMI trends, such as economic conditions, food prices, or health-related issues. Given the current economic conditions and inflation in Kenya, most households are not able to obtain the bare minimum of 3 meals a day.
- Analysis of potential seasonal fluctuations in children's BMI across different years. The seasonal fluctuations of the children's data could be due to the seasonal influences whereby there are times when food availability is plenty and the cost relatively cheaper and seasons where food is scarce and more costly.
- Examination of seasonal effects on school attendance patterns. Periods of low attendance could be impacted by tough economic times. There are times when the children are sent home because of accrued fee balances. This has a negative impact on their attendance.

3 Recommendations

Based on the findings, we suggest:

- Ensuring consistency in the supplementary food program to avoid negative impacts on children's BMI and attendance.
- Identifying specific groups that may require targeted nutritional interventions.
- Enhancing the school lunch program to further mitigate potential negative effects during food supply gaps.
- Exploring additional strategies to improve school attendance through nutrition-based interventions.

4 Conclusion

This analysis provides critical insights into the role of both the school lunch and supplementary food programs in maintaining children's nutritional well-being and school attendance. The findings can guide future policy decisions to ensure long-term program effectiveness and sustainability.