Child Wellness Data Analysis Portfolio

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Introduction

This portfolio presents a structured analysis of a child health and wellbeing dataset. The goal was to simulate a realistic NGO-oriented data workflow: transforming raw, messy data into clean, analysis-ready information. This process demonstrates skills in data cleaning, validation, pivot-table analysis, and interpretation of insights to support decision-making in child services.

Dataset Description/Overview

The dataset contains records for 200 children and includes fields such as:

- Country
- Attendance Category
- Age
- Gender
- School Attendance Rate

- Age Group

- Wellbeing Score

- Health Checkup Status

The purpose of the dataset is to analyze how different factors contribute to child wellbeing and identify patterns across demographic groups.

Data Cleaning Process

- Created a duplicate worksheet for data cleaning.

- Removed duplicate rows.

- Standardized categorical values across the dataset (e.g. name, gender, country, notes, etc.)

- Filled or removed missing values based on context.

- Converted mixed numeric formats to percentage values.

- Converted date fields to international standard (DD/MM/YYYY).

- Created a modified data sheet with columns like Age Group, Checkup Status & Attendance Category for analysis and visualization.

Visualizations & Analysis

1.Attendance Category vs Wellbeing Score

Students with higher attendance rates consistently showed better wellbeing. This suggests a positive relationship between attendance and well-being were increased engagement improved wellbeing.

2.Health Checkup Status

55% of children did not complete their health checkups. This indicates a significant gap in healthcare access or follow-up, which may impact long-term wellbeing outcomes.

3.Relationship Between Wellbeing & Attendance Rate

The scatter plot evaluates whether school attendance correlates with child wellbeing. There is a light positive correlation showing that although the relationship is not very strong, children with higher attendance generally tend to score slightly higher in overall wellbeing.

4.Average Wellbeing Score by Age Group

Overall low completion rates shown in all age groups but significantly in the 12-14 age group. This indicates that older children have more barriers to completing health checkups which may be solved by implementations like incentives to participate, age appropriate activity redesign like empowered decision making, guaranteed private

time and utilization of technology for engagement since teens are highly connected to mobile devices.

5. Average Wellbeing Score by Gender

Female children show a slightly higher average wellbeing score (5.4) compared to male children (5.3). While the difference is small, it may suggest subtle differences worth exploring.

6. Country Pivot Summary Table

This shows international comparison between attendance, wellbeing and checkups. Countries with higher average attendance rates also tend to show better wellbeing scores and more frequent medical checkups indicating stronger engagement and support structures.

Overall Insights & Interpretation

- Healthcare access appears to be a major challenge, with more than half of children not completing checkups.

- The dataset highlights the importance of consistent health follow-ups and school engagement in supporting overall wellbeing.

- Attendance is strong globally, but specific regions may require targeted support such as Brazil.

- Gender differences in well-being scores are minimal but worth monitoring.

- Older children may have more barriers to health checkups completion which may be overcome targeted mentoring.

Conclusion & Recommendations

Conclusion:

The analysis highlights several important trends in child wellbeing. While school attendance remains high across most regions, healthcare follow-through is significantly lower. Small demographic differences exist in well-being scores, calling for further investigation into underlying causes.

Recommendations:

- Increase access to healthcare checkups, particularly in regions with low completion rates.

- Provide targeted educational support in countries with lower attendance.

- Explore qualitative data to better understand the reasons behind gender differences in wellbeing scores.

- Provide targeted support catering to specific child age demography.