

```
----Preview the data
-- Preview the first 10 rows of the dataset
SELECT TOP 10 *
FROM [dbo].[ethiopia_constructed]

SELECT TOP 10 *
FROM [dbo].[india_constructed]

-- Get the column names and data types of the table
SELECT COLUMN_NAME, DATA_TYPE
FROM INFORMATION_SCHEMA.COLUMNS
WHERE TABLE_NAME = 'ethiopia_constructed';

SELECT COLUMN_NAME, DATA_TYPE
FROM INFORMATION_SCHEMA.COLUMNS
WHERE TABLE_NAME = 'india_constructed';

-- Add Country Column

--(India)

alter table [dbo].[india_constructed]
add Country Varchar(50);

Update [dbo].[india_constructed]
Set Country='India'
WHERE country IS NULL OR country = ''

Select Country
From [dbo].[india_constructed]

--(Ethiopia)

alter table [dbo].[ethiopia_constructed]
add Country Varchar(50);

Update [dbo].[ethiopia_constructed]
Set Country='Ethiopia'
WHERE country IS NULL OR country = ''

Select Country
From [dbo].[ethiopia_constructed]

-- Clean dataset for India
UPDATE [dbo].[india_constructed]
SET
    country = COALESCE(NULLIF(country, ''), 'NA'),
    childid = COALESCE(NULLIF(childid, ''), 'NA'),
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chsex = COALESCE(NULLIF(chsex, ''), 'NA'),
agemon = COALESCE(NULLIF(agemon, ''), 'NA'),
chweight = COALESCE(NULLIF(chweight, ''), 'NA'),
chheight = COALESCE(NULLIF(chheight, ''), 'NA'),
bmi = COALESCE(NULLIF(bmi, ''), 'NA'),
zwfa = COALESCE(NULLIF(zwfa, ''), 'NA'),
zhfa = COALESCE(NULLIF(zhfa, ''), 'NA'),
foodsec = COALESCE(NULLIF(foodsec, ''), 'NA'),
region = COALESCE(NULLIF(region, ''), 'NA'),
commid = COALESCE(NULLIF(commid, ''), 'NA'),
clustid = COALESCE(NULLIF(clustid, ''), 'NA'),
chillness = COALESCE(NULLIF(chillness, ''), 'NA'),
chinjury = COALESCE(NULLIF(chinjury, ''), 'NA'),
yc = COALESCE(NULLIF(yc, ''), 'NA'),
deceased = COALESCE(NULLIF(deceased, ''), 'NA'),
shfam1 = COALESCE(NULLIF(shfam1, ''), 'NA'),
shfam2 = COALESCE(NULLIF(shfam2, ''), 'NA'),
shfam3 = COALESCE(NULLIF(shfam3, ''), 'NA'),
shfam4 = COALESCE(NULLIF(shfam4, ''), 'NA'),
shfam5 = COALESCE(NULLIF(shfam5, ''), 'NA'),
shfam6 = COALESCE(NULLIF(shfam6, ''), 'NA'),
shfam7 = COALESCE(NULLIF(shfam7, ''), 'NA'),
shfam8 = COALESCE(NULLIF(shfam8, ''), 'NA'),
shfam9 = COALESCE(NULLIF(shfam9, ''), 'NA'),
shfam10 = COALESCE(NULLIF(shfam10, ''), 'NA'),
shfam11 = COALESCE(NULLIF(shfam11, ''), 'NA'),
shfam12 = COALESCE(NULLIF(shfam12, ''), 'NA'),
shfam13 = COALESCE(NULLIF(shfam13, ''), 'NA'),
shfam14 = COALESCE(NULLIF(shfam14, ''), 'NA'),
shfam18 = COALESCE(NULLIF(shfam18, ''), 'NA'),
hhsz = COALESCE(NULLIF(hhsz, ''), 'NA'),
caredu = COALESCE(NULLIF(caredu, ''), 'NA'),
hschool = COALESCE(NULLIF(hschool, ''), 'NA'),
chalcohol = COALESCE(NULLIF(chalcohol, ''), 'NA'),
enrol = COALESCE(NULLIF(enrol, ''), 'NA'),
engrade = COALESCE(NULLIF(engrade, ''), 'NA'),
levlread = COALESCE(NULLIF(levlread, ''), 'NA'),
momid = COALESCE(NULLIF(momid, ''), 'NA'),
momedu = COALESCE(NULLIF(momedu, ''), 'NA')

```

WHERE

```

country IS NULL OR country = '' OR
childid IS NULL OR childid = '' OR
chsex IS NULL OR chsex = '' OR
agemon IS NULL OR agemon = '' OR
chweight IS NULL OR chweight = '' OR
chheight IS NULL OR chheight = '' OR
bmi IS NULL OR bmi = '' OR
zwfa IS NULL OR zwfa = '' OR
zhfa IS NULL OR zhfa = '' OR

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```

foodsec IS NULL OR foodsec = '' OR
region IS NULL OR region = '' OR
commid IS NULL OR commid = '' OR
clustid IS NULL OR clustid = '' OR
chillness IS NULL OR chillness = '' OR
chinjury IS NULL OR chinjury = '' OR
yc IS NULL OR yc = '' OR
deceased IS NULL OR deceased = '' OR
shfam1 IS NULL OR shfam1 = '' OR
shfam2 IS NULL OR shfam2 = '' OR
shfam3 IS NULL OR shfam3 = '' OR
shfam4 IS NULL OR shfam4 = '' OR
shfam5 IS NULL OR shfam5 = '' OR
shfam6 IS NULL OR shfam6 = '' OR
shfam7 IS NULL OR shfam7 = '' OR
shfam8 IS NULL OR shfam8 = '' OR
shfam9 IS NULL OR shfam9 = '' OR
shfam10 IS NULL OR shfam10 = '' OR
shfam11 IS NULL OR shfam11 = '' OR
shfam12 IS NULL OR shfam12 = '' OR
shfam13 IS NULL OR shfam13 = '' OR
shfam14 IS NULL OR shfam14 = '' OR
shfam18 IS NULL OR shfam18 = '' OR
hysize IS NULL OR hysize = '' OR
caredu IS NULL OR caredu = '' OR
hschool IS NULL OR hschool = '' OR
chalcohol IS NULL OR chalcohol = '' OR
enrol IS NULL OR enrol = '' OR
engrade IS NULL OR engrade = '' OR
levlread IS NULL OR levlread = '' OR
momid IS NULL OR momid = '' OR
momedu IS NULL OR momedu = '';

```

--- Clean dataset for Ethiopia

UPDATE [dbo].[ethiopia_constructed]

SET

```

country = COALESCE(NULLIF(country, ''), 'NA'),
childid = COALESCE(NULLIF(childid, ''), 'NA'),
chsex = COALESCE(NULLIF(chsex, ''), 'NA'),
agemon = COALESCE(NULLIF(agemon, ''), 'NA'),
chweight = COALESCE(NULLIF(chweight, ''), 'NA'),
chheight = COALESCE(NULLIF(chheight, ''), 'NA'),
bmi = COALESCE(NULLIF(bmi, ''), 'NA'),
zwfa = COALESCE(NULLIF(zwfa, ''), 'NA'),
zhfa = COALESCE(NULLIF(zhfa, ''), 'NA'),
foodsec = COALESCE(NULLIF(foodsec, ''), 'NA'),
region = COALESCE(NULLIF(region, ''), 'NA'),
commid = COALESCE(NULLIF(commid, ''), 'NA'),
clustid = COALESCE(NULLIF(clustid, ''), 'NA'),

```

```

chillness = COALESCE(NULLIF(chillness, ''), 'NA'),
chinjury = COALESCE(NULLIF(chinjury, ''), 'NA'),
yc = COALESCE(NULLIF(yc, ''), 'NA'),
deceased = COALESCE(NULLIF(deceased, ''), 'NA'),
shfam1 = COALESCE(NULLIF(shfam1, ''), 'NA'),
shfam2 = COALESCE(NULLIF(shfam2, ''), 'NA'),
shfam3 = COALESCE(NULLIF(shfam3, ''), 'NA'),
shfam4 = COALESCE(NULLIF(shfam4, ''), 'NA'),
shfam5 = COALESCE(NULLIF(shfam5, ''), 'NA'),
shfam6 = COALESCE(NULLIF(shfam6, ''), 'NA'),
shfam7 = COALESCE(NULLIF(shfam7, ''), 'NA'),
shfam8 = COALESCE(NULLIF(shfam8, ''), 'NA'),
shfam9 = COALESCE(NULLIF(shfam9, ''), 'NA'),
shfam10 = COALESCE(NULLIF(shfam10, ''), 'NA'),
shfam11 = COALESCE(NULLIF(shfam11, ''), 'NA'),
shfam12 = COALESCE(NULLIF(shfam12, ''), 'NA'),
shfam13 = COALESCE(NULLIF(shfam13, ''), 'NA'),
shfam14 = COALESCE(NULLIF(shfam14, ''), 'NA'),
shfam18 = COALESCE(NULLIF(shfam18, ''), 'NA'),
hhszise = COALESCE(NULLIF(hhszise, ''), 'NA'),
caredu = COALESCE(NULLIF(caredu, ''), 'NA'),
hschool = COALESCE(NULLIF(hschool, ''), 'NA'),
chalcohol = COALESCE(NULLIF(chalcohol, ''), 'NA'),
enrol = COALESCE(NULLIF(enrol, ''), 'NA'),
engrade = COALESCE(NULLIF(engrade, ''), 'NA'),
levlread = COALESCE(NULLIF(levlread, ''), 'NA'),
momid = COALESCE(NULLIF(momid, ''), 'NA'),
momedu = COALESCE(NULLIF(momedu, ''), 'NA')

```

WHERE

```

country IS NULL OR country = '' OR
childid IS NULL OR childid = '' OR
chsex IS NULL OR chsex = '' OR
agemon IS NULL OR agemon = '' OR
chweight IS NULL OR chweight = '' OR
chheight IS NULL OR chheight = '' OR
bmi IS NULL OR bmi = '' OR
zwfa IS NULL OR zwfa = '' OR
zhfa IS NULL OR zhfa = '' OR
foodsec IS NULL OR foodsec = '' OR
region IS NULL OR region = '' OR
commid IS NULL OR commid = '' OR
clustid IS NULL OR clustid = '' OR
chillness IS NULL OR chillness = '' OR
chinjury IS NULL OR chinjury = '' OR
yc IS NULL OR yc = '' OR
deceased IS NULL OR deceased = '' OR
shfam1 IS NULL OR shfam1 = '' OR
shfam2 IS NULL OR shfam2 = '' OR
shfam3 IS NULL OR shfam3 = '' OR

```

```
shfam4 IS NULL OR shfam4 = '' OR
shfam5 IS NULL OR shfam5 = '' OR
shfam6 IS NULL OR shfam6 = '' OR
shfam7 IS NULL OR shfam7 = '' OR
shfam8 IS NULL OR shfam8 = '' OR
shfam9 IS NULL OR shfam9 = '' OR
shfam10 IS NULL OR shfam10 = '' OR
shfam11 IS NULL OR shfam11 = '' OR
shfam12 IS NULL OR shfam12 = '' OR
shfam13 IS NULL OR shfam13 = '' OR
shfam14 IS NULL OR shfam14 = '' OR
shfam18 IS NULL OR shfam18 = '' OR
hhsz IS NULL OR hhsz = '' OR
caredu IS NULL OR caredu = '' OR
hschool IS NULL OR hschool = '' OR
chalcohol IS NULL OR chalcohol = '' OR
enrol IS NULL OR enrol = '' OR
engrade IS NULL OR engrade = '' OR
levlread IS NULL OR levlread = '' OR
momid IS NULL OR momid = '' OR
momedu IS NULL OR momedu = '';
```

```

----Household_FoodSituation_vs_Child_Growth
CREATE VIEW Household_FoodSituation_vs_Child_Growth AS
SELECT
    country,
    foodsec, -- Household food security
    CAST(chweight AS FLOAT) AS chweight, -- Convert child's weight to FLOAT
    CAST(chheight AS FLOAT) AS chheight, -- Convert child's height to FLOAT
    CAST(bmi AS FLOAT) AS bmi, -- Convert Body Mass Index to FLOAT
    CAST(zwfa AS FLOAT) AS zwfa, -- Convert Weight-for-age z-score to FLOAT
    CAST(zhfa AS FLOAT) AS zhfa, -- Convert Height-for-age z-score to FLOAT
    chsex, -- Child's gender (1 = Male, 2 = Female)

    -- New Column: Weight Category based on BMI
    CASE
        WHEN CAST(bmi AS FLOAT) < 18.5 THEN 'Underweight'
        WHEN CAST(bmi AS FLOAT) >= 18.5 AND CAST(bmi AS FLOAT) < 24.9 THEN 'Normal'
        WHEN CAST(bmi AS FLOAT) >= 25 AND CAST(bmi AS FLOAT) < 29.9 THEN
            'Overweight'
        ELSE 'Obese'
    END AS weight_category -- New column for child's weight category

FROM india_constructed
WHERE
    country != 'NA' AND
    foodsec != 'NA' AND
    chweight != 'NA' AND
    chheight != 'NA' AND
    chsex != 'NA' AND
    bmi != 'NA' AND
    zwfa != 'NA' AND
    zhfa != 'NA'

UNION ALL

SELECT
    country,
    foodsec, -- Household food security
    CAST(chweight AS FLOAT) AS chweight, -- Convert child's weight to FLOAT
    CAST(chheight AS FLOAT) AS chheight, -- Convert child's height to FLOAT
    CAST(bmi AS FLOAT) AS bmi, -- Convert Body Mass Index to FLOAT
    CAST(zwfa AS FLOAT) AS zwfa, -- Convert Weight-for-age z-score to FLOAT
    CAST(zhfa AS FLOAT) AS zhfa, -- Convert Height-for-age z-score to FLOAT
    chsex, -- Child's gender (1 = Male, 2 = Female)

    -- New Column: Weight Category based on BMI
    CASE
        WHEN CAST(bmi AS FLOAT) < 18.5 THEN 'Underweight'
        WHEN CAST(bmi AS FLOAT) >= 18.5 AND CAST(bmi AS FLOAT) < 24.9 THEN 'Normal'
        WHEN CAST(bmi AS FLOAT) >= 25 AND CAST(bmi AS FLOAT) < 29.9 THEN
            'Overweight'
        ELSE 'Obese'
    END AS weight_category

```

```
        'Overweight'
    ELSE 'Obese'
END AS weight_category -- New column for child's weight category

FROM ethiopia_constructed
WHERE
    country != 'NA' AND
    foodsec != 'NA' AND
    chweight != 'NA' AND
    chheight != 'NA' AND
    bmi != 'NA' AND
    zwfa != 'NA' AND
    zhfa != 'NA' AND
    chsex != 'NA';

----child_age_gender_vs_nutrition
CREATE VIEW child_age_gender_vs_nutrition AS
SELECT
    country,      -- Identify the country
    childid,      -- Child ID
    chsex,        -- Child's gender (1 = Male, 2 = Female)
    agemon,       -- Child's age in months
    chweight,     -- Child's weight (kg)
    chheight,     -- Child's height (cm)
    bmi,          -- Body Mass Index
    zwfa,         -- Weight-for-age z-score
    zhfa          -- Height-for-age z-score
FROM [dbo].[india_constructed]
WHERE
    country != 'NA' AND
    childid != 'NA' AND
    chsex != 'NA' AND
    agemon != 'NA' AND
    chweight != 'NA' AND
    chheight != 'NA' AND
    bmi != 'NA' AND
    zwfa != 'NA' AND
    zhfa != 'NA'

UNION ALL

SELECT
    country,
    childid,
    chsex,
    agemon,
    chweight,
    chheight,
    bmi,
```

```
    zwfa,  
    zhfa  
FROM [dbo].[ethiopia_constructed]  
WHERE  
    country != 'NA' AND  
    childid != 'NA' AND  
    chsex != 'NA' AND  
    agemon != 'NA' AND  
    chweight != 'NA' AND  
    chheight != 'NA' AND  
    bmi != 'NA' AND  
    zwfa != 'NA' AND  
    zhfa != 'NA';
```

---Household_Wealth_Index_and_Child_Health

```
CREATE VIEW Household_Wealth_Index_and_Child_Health AS  
SELECT  
    childid,  
    region,  
    commid,  
    clustid,  
    chillness,  
    chinjury,  
    country  
FROM india_constructed  
WHERE  
    childid != 'NA' AND  
    region != 'NA' AND  
    commid != 'NA' AND  
    country='NA' AND  
    clustid != 'NA' AND  
    chillness != 'NA' AND  
    chinjury != 'NA'  
UNION ALL
```

```
SELECT  
    childid,  
    region,  
    commid,  
    clustid,  
    chillness,  
    chinjury,  
    Country  
FROM ethiopia_constructed  
WHERE  
    childid != 'NA' AND  
    region != 'NA' AND  
    commid != 'NA' AND  
    country='NA' AND
```



```

clustid != 'NA' AND
chillness != 'NA' AND
chinjury != 'NA';

```

----Maternal_Health_and_Child_Nutrition_Summary

```
CREATE VIEW Maternal_Health_and_Child_Nutrition_Summary AS
```

```
SELECT
```

```

    region,                -- Region
    caredu,                -- Caregiver's education level
    COUNT(childid) AS total_children, -- Total number of children
    AVG(CAST(chweight AS FLOAT)) AS avg_weight, -- Average child's weight (kg)
    AVG(CAST(chheight AS FLOAT)) AS avg_height, -- Average child's height (cm)
    AVG(CAST(bmi AS FLOAT)) AS avg_bmi, -- Average Body Mass Index (BMI)
    AVG(CAST(zwfa AS FLOAT)) AS avg_zwfa, -- Average weight-for-age z-score
    AVG(CAST(zhfa AS FLOAT)) AS avg_zhfa -- Average height-for-age z-score

```

```
FROM [dbo].[india_constructed]
```

```
WHERE
```

```

    childid != 'NA' AND
    region != 'NA' AND
    commid != 'NA' AND
    caredu != 'NA' AND
    hhsize != 'NA' AND
    chweight != 'NA' AND
    chheight != 'NA' AND
    bmi != 'NA' AND
    zwfa != 'NA' AND
    zhfa != 'NA'

```

```
GROUP BY region, caredu
```

```
UNION ALL
```

```
SELECT
```

```

    region,                -- Region
    caredu,                -- Caregiver's education level
    COUNT(childid) AS total_children, -- Total number of children
    AVG(CAST(chweight AS FLOAT)) AS avg_weight, -- Average child's weight (kg)
    AVG(CAST(chheight AS FLOAT)) AS avg_height, -- Average child's height (cm)
    AVG(CAST(bmi AS FLOAT)) AS avg_bmi, -- Average Body Mass Index (BMI)
    AVG(CAST(zwfa AS FLOAT)) AS avg_zwfa, -- Average weight-for-age z-score
    AVG(CAST(zhfa AS FLOAT)) AS avg_zhfa -- Average height-for-age z-score

```

```
FROM [dbo].[ethiopia_constructed]
```

```
WHERE
```

```

    childid != 'NA' AND
    region != 'NA' AND
    commid != 'NA' AND
    caredu != 'NA' AND
    hhsize != 'NA' AND
    chweight != 'NA' AND
    chheight != 'NA' AND

```

```

bmi != 'NA' AND
zwfa != 'NA' AND
zhfa != 'NA'
GROUP BY region, caredu;

----Parental_Education_vs_Child_Educational_Attainment_Summary
CREATE VIEW Parental_Education_vs_Child_Educational_Attainment_Summary AS
SELECT
    country,
    caredu,
    AVG(CAST(hschool AS FLOAT)) AS avg_hschool,    -- Average hours child spent at school
    SUM(CAST(hschool AS FLOAT)) AS total_hschool,  -- Total hours child spent at school
    COUNT(hschool) AS count_hschool              -- Number of records
FROM india_constructed
WHERE
    country != 'NA' AND
    caredu != 'NA' AND
    hschool != 'NA'
GROUP BY country, caredu;

UNION ALL

SELECT
    country,
    caredu,
    AVG(CAST(hschool AS FLOAT)) AS avg_hschool,    -- Average hours child spent at school
    SUM(CAST(hschool AS FLOAT)) AS total_hschool,  -- Total hours child spent at school
    COUNT(hschool) AS count_hschool              -- Number of records
FROM ethiopia_constructed
WHERE
    country != 'NA' AND
    caredu != 'NA' AND
    hschool != 'NA'
GROUP BY country, caredu;

----parental_education_vs_child_alcohol_summary
CREATE VIEW parental_education_vs_child_alcohol_summary AS
SELECT
    country,          -- Identify the country
    caredu,           -- Caregiver's education level
    COUNT(childid) AS total_children,              -- Total number of children
    SUM(CAST(chalcohol AS INT)) AS alcohol_consumers, -- Number of children who consumed alcohol
    SUM(CASE WHEN chalcohol = 0 THEN 1 ELSE 0 END) AS non_consumers -- Number of children who didn't consume alcohol

```

```

FROM india_constructed
WHERE
    country != 'NA' AND
    childid != 'NA' AND
    caredu != 'NA' AND
    chalcohol != 'NA'
GROUP BY country, caredu

UNION ALL

SELECT
    country,                -- Identify the country
    caredu,                 -- Caregiver's education level
    COUNT(childid) AS total_children, -- Total number of children
    SUM(CAST(chalcohol AS INT)) AS alcohol_consumers, -- Number of children who consumed alcohol
    SUM(CASE WHEN chalcohol = 0 THEN 1 ELSE 0 END) AS non_consumers -- Number of children who didn't consume alcohol
FROM ethiopia_constructed
WHERE
    country != 'NA' AND
    childid != 'NA' AND
    caredu != 'NA' AND
    chalcohol != 'NA'
GROUP BY country, caredu;

```

```

select*
from[dbo].[child_age_gender_vs_nutrition]

```

```

select*
from[dbo].[Household_FoodSituation_vs_Child_Growth]

```

```

select*
from[dbo].[Household_Wealth_Index_and_Child_Health]

```

```

select*
from[dbo].[Maternal_Health_and_Child_Nutrition_Summary]

```

```

select*
from[dbo].[parental_education_vs_child_alcohol_summary]

```

```

select*
from[dbo].[Parental_Education_vs_Child_Educational_Attainment_Summary]

```

