**Screen Time Analytics - Week 7: Visual Report & Dashboard Insight**

**Project:** Screen Time Behaviour Visualization

**1. Project Overview**

This project explores digital screen usage patterns among children and teens. The Week 7 deliverable focuses on a Power BI–based dashboard that visualizes screen time behaviour across multiple dimensions - age group, gender, living environment (urban/rural), device type, and associated health impacts.

The report aims to help **parents, educators, and policymakers** understand how excessive screen time correlates with lifestyle and mental health outcomes, enabling them to promote balanced digital habits.

**2. Objectives & Expected Outcomes**

**Objectives:**

* Visualize average screen time across demographic segments.
* Identify correlations between screen time and reported health issues.
* Analyse device usage trends among different age groups.
* Compare rural vs. urban usage behaviours.

**Expected Outcomes:**

* Clear, data-driven visuals that communicate screen time patterns.
* Actionable insights for awareness programs and digital well-being campaigns.
* A Power BI dashboard enabling interactive filtering by gender, location, and age.

**3. Dataset Summary**

**Source:** Screen Time Behaviour Dataset (Processed in Power BI)  
**Key Attributes:**

* **Age Group:** Child (0–10), Pre-Teen (11–13), Teen (14–16), Late Teen (17–19)
* **Gender:** Male, Female
* **Location:** Urban, Rural
* **Primary Device:** Smartphone, TV, Laptop, Tablet
* **Metrics:** Average daily screen time (hours), number of users, exceeded limit users, and health impacts (e.g., poor sleep, eye strain, anxiety, obesity risk).

**Highlights:**

* **Total Users:** 9,240
* **Average Screen Time:** 4.43 hours/day
* **Exceeded Limit Users:** 8,158 (≈88%) - indicating overuse patterns.

**4. Dashboard Design & Structure**

**Platform:** Microsoft Power BI Desktop

**Layout Overview:**

* **Header:** Title + overall KPIs (Total Users, Avg. Screen Time, Exceeded Limit Users)
* **Main Panels:**
  + Left: Demographic and device distribution
  + Centre: Average screen time visuals (bar and line charts)
  + Right: Health impact analytics
* **Filters:** Gender, Urban/Rural, Primary Device, Health Impacts

**Colour Scheme:**

* **Gender:** Blue for Male, Pink for Female
* **Health Impacts:** Red tones for risk indicators
* **Neutral:** Green/Gray for general summaries

**5. Visual Storyline & Key Insights**

**Visual 1 - Average Screen Time vs Recommended Limit**

**Type:** Comparative Bar Chart  
**Insight:** The average daily screen time (4.43 hrs) exceeds the recommended 3-hour limit for all age groups, highlighting a general overuse trend.

**Visual 2 - Screen Time Trends Across Age Groups**

**Type:** Horizontal Bar Chart  
**Insight:** Screen time increases steadily with age - **Late Teens (17–19)** record the highest average hours, followed by **Teens (14–16)**. This indicates growing device dependency as children mature.

**Visual 3 - Primary Device Usage**

**Type:** Donut/Stacked Bar Chart  
**Insight:** **Smartphones dominate (47%)**, followed by **TV (25%)**, **Laptops (15%)**, and **Tablets (12%)**. This shows that portable devices drive most of the screen time, especially among urban users.

**Visual 4 - Urban vs Rural Distribution**

**Type:** Clustered Bar Chart  
**Insight:** Urban users generally record higher screen time than rural users, driven by better internet access and wider device availability.

**Visual 5 - Health Impacts by Age & Gender**

**Type:** Multi-dimensional Heatmap / Bar Chart  
**Insight:**

* **Poor Sleep** and **Anxiety** are the most frequent issues.
* **Eye strain** and **Obesity risk** are increasing among **teens** and **late teens**, particularly for **urban females**.
* Indicates strong correlation between prolonged digital exposure and physical/mental health concerns.

**6. Key Insights for Stakeholders**

1. **Excessive Screen Time:** 88% of users exceed the recommended limit.
2. **Age Factor:** Screen engagement grows sharply from pre-teens to late teens.
3. **Gender Patterns:** Males show higher recreational usage; females show balanced educational and entertainment usage.
4. **Device Dependence:** Smartphones are the leading contributor to screen exposure.
5. **Health Risks:** Anxiety, poor sleep, and eye strain dominate across all demographics.

**7. Actionable Recommendations**

**For Parents:**

* Enforce daily screen time caps and encourage offline hobbies.
* Promote healthy bedtime routines free from screens.

**For Educators:**

* Integrate awareness sessions on digital wellness.
* Use screen-based tools mindfully for blended learning.

**For Policymakers & Health Advocates:**

* Design campaigns promoting healthy digital lifestyles.
* Provide resources for managing digital addiction in schools.

**8. Implementation Notes**

**Deliverables:**

* Interactive Power BI Dashboard with user-based filtering.
* This insight report summarizing visualization outcomes.

**Next Steps:**

1. Add drill-through pages for detailed health pattern analysis.
2. Integrate real-time data updates or periodic survey data.
3. Include trend forecasting visuals for future screen time predictions.

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**Week 7 Deliverable - Screen Time Analytics Dashboard**