Social Issues in Egypt Dataset Analysis

A Project Methodology & Workflow

To complete this project, our team followed a structured data-analysis workflow to ensure accuracy, reliability, and meaningful insights.

1. Data Collection

We began by gathering data for the five main social issues in Egypt:
Illiteracy in education, women's issues & divorce, homelessness & begging, addiction, and healthcare deterioration.

Data was collected from multiple online platforms, government portals, and public reports covering the years 2019–2023.

We also created and distributed a survey to collect public opinions on these issues. The survey included targeted questions to understand how people perceive the causes and impacts of each issue.

2. Data Cleaning

Each team member was responsible for cleaning one issue to ensure accuracy and reduce inconsistencies.
The cleaning process included:

- Handling missing or incorrect values
- Standardizing formats
- Renaming fields
- Preparing datasets for visualization

Tools used:

- Excel
- Power Query
- Python

3. Data Modeling

We built a professional star-schema data model using Power BI, ensuring efficient relationships and optimized performance.

Modeling steps included:

- Creating fact and dimension tables
- Normalizing data across all issues
- Establishing key relationships (Governorate, Year, Age Group)
- Maintaining a scalable and clean model

4. Data Visualization

This was one of the most detailed and creative stages of the project.
We designed a complete, interactive Power BI dashboard experience.

• Main Navigation Page

A central home page linking to all dashboards inside the project.

• Overview Dashboard

A comprehensive summary combining all five issues for high-level comparison.

• Individual Dashboards

Each issue (Illiteracy, Women & Divorce, Begging, Addiction, Healthcare) has a dedicated dashboard with KPIs, insights, and multi-type visualizations.

• Survey Dashboard

A dashboard analyzing survey responses to highlight public perception and awareness.

• Light & Dark Modes

Every dashboard was produced in both light and dark themes to enhance user experience.

• Enhanced Interactivity

We applied several advanced BI techniques:

- Tooltips for extended information
- Drill-Through pages for deeper insights
- KPIs for quick high-level metrics
- Filters & Slicers for flexible exploration

- Q&A Visual to answer natural-language questions directly
- Multiple chart types tailored to each variable

• Embedded Awareness Videos

In each dashboard, we added a thumbnail image linked directly to an educational YouTube video related to the issue.
This supports awareness, provides context, and enhances user engagement.

• Security

We implemented Row-Level Security (RLS) to control data access and maintain a professional reporting environment.