Phase:5 project submission
Public Health Awareness Campaign Analysis

Project Objective:

The objective of the Public Health Awareness Campaign Analysis project is to evaluate the effectiveness of a public health awareness campaign and provide actionable insights to guide future strategies. The campaign's goal is to raise awareness about a specific health issue and promote healthy behaviours within the target population.

Design Thinking Process:

Empathize: Understand the target audience's needs, concerns, and preferences through surveys, focus groups, and interviews.
Define: Clearly define the campaign's goals, target audience, and desired outcomes.
Ideate: Brainstorm ideas and strategies for the campaign, considering creative and effective ways to reach the audience.
Prototype: Develop campaign materials, such as brochures, posters, social media content, and advertisements.
Test: Pilot the campaign with a small group to gather feedback and make necessary adjustments.
Implement: Launch the campaign to the wider target audience.
Analyze: Collect data on the campaign's impact and effectiveness.

Development Phases:

1. Data Collection: Gather relevant data, including campaign reach, engagement, and health behavior changes among the target population.
2. Data Processing: Clean and prepare the data for analysis.
3. Data Visualization: Utilize IBM Cognos to create visualizations, dashboards, and reports that provide insights into campaign performance.
4. Data Analysis: Interpret the data and extract actionable insights.
5.

Analysis Objectives:

The analysis objectives include:
Assessing the campaign's reach: How many people were exposed to the campaign through various channels (e.g., TV, social media, print media)?
Measuring audience engagement: Determine the level of interaction with campaign materials, such as likes, shares, comments, and website visits.
Tracking behavior change: Evaluate if the campaign led to positive health behavior changes among the target population, such as increased vaccination rates or improved dietary choices.
Data Collection Process:
Data was collected through multiple sources:

- ☐ Social media metrics (likes, shares, comments, etc.)

- ☐ Website traffic and user interaction data
- ☐ Surveys and interviews to gauge behavior change
- ☐ Campaign reach data from media channels
- ☐

Data Visualization Using IBM Cognos:

IBM Cognos was used to create a set of visualizations and reports, including:

- ☐ Line graphs to display the trend in campaign reach over time
- ☐ Pie charts to show the distribution of campaign engagement across different platforms
- ☐ Bar charts to compare behavior change before and after the campaign

Derived Actionable Insights:

Analysis Objectives: The analysis objectives revolve around evaluating the effectiveness of a public health awareness campaign. This includes:

- Assessing Campaign Reach: Determining how many individuals were exposed to the campaign across various channels like social media, television, radio, or print media.
- Measuring Engagement: Evaluating the audience's interaction with campaign materials. This involves metrics such as likes, shares, comments, website visits, or any other relevant interactions.
- Tracking Behavior Change: Analyzing whether the campaign influenced positive health behavior changes among the target population. This might involve changes in vaccination rates, adoption of healthier lifestyles, or other desired behaviors

Steps:

Data Preparation: Collect and clean the data, ensuring it's structured and organized for analysis.
Accessing IBM Cognos: Log in to IBM Cognos and access the tools required for data visualization.
Data Import: Import the cleaned data into IBM Cognos. This might involve connecting to various data sources like spreadsheets, databases, or direct data connections.
Creating Visualizations:

- Select Visualization Type: Choose from various visualization options (bar charts, pie charts, line graphs, etc.) based on the data and the insights you want to convey.
- Data Selection: Select the relevant data fields or variables for visualization.
- Design the Visualization: Customize the visualization by adjusting parameters like colors, labels, axis scales, and other design aspects.

Dashboard Creation: Compile the visualizations into a coherent dashboard that represents the overall insights from the campaign. Arrange the visualizations logically to tell a compelling story and provide a comprehensive overview of the campaign's performance.

Insights and Interpretation: Analyze the visualizations to derive insights. These insights will be used to measure the campaign's effectiveness and guide future strategies.

Steps for Data Visualization Using IBM Cognos:

Access IBM Cognos: Log in to the IBM Cognos platform using your credentials.
Data Upload: Upload or connect your data sources to IBM Cognos.
Create a New Report or Dashboard:

- Select the appropriate tool for visualization, such as Report Studio or Dashboard.
- Choose the data source you uploaded earlier.

Select Visualization Type: Choose the type of visualization that best represents your data (e.g., bar chart, pie chart, line graph).
Drag and Drop Fields: Drag the relevant fields from your data onto the visualization template.
Customize Visualization:

- Edit the visualization parameters like colors, labels, titles, and axis scales.
- Apply filters or sorts to focus on specific data segments if needed.

Save and Share: Save your visualization or dashboard and share it with stakeholders or team members for analysis and discussion.

Using IBM Cognos, analysts can create comprehensive, visually engaging reports and dashboards to present campaign performance metrics, enabling stakeholders to derive meaningful insights and make informed decisions for future strategies.

Derived Insights:

1. Gender Distribution: The code calculates and prints the distribution of gender within the dataset. This insight provides an understanding of the gender diversity in the surveyed population.
2. Age Statistics: The code calculates and prints descriptive statistics (mean, standard deviation, min, max, quartiles, etc.) for the 'Age' column. This helps in understanding the age distribution of the survey participants.
3. Engagement Rate: The code calculates and prints the engagement rate, assuming you have columns like 'Engagement' and 'TotalUsers' in your dataset. This insight measures the level of engagement of users with a particular metric and is expressed as a percentage.

4. Gender Distribution Visualization: The code creates a countplot to visually represent the gender distribution. This visualization provides a quick, visual summary of the gender demographics within the dataset4
5. Correlation Matrix: The code computes a correlation matrix for the entire dataset and creates a heatmap of the correlations using Seaborn. While the code does not explicitly specify which variables are being correlated, this can provide insights into how different variables relate to each other. Correlation values close to 1 or -1 suggest a strong positive or negative relationship, while values close to 0 indicate weak or no correlation.

The insights derived from the analysis play a crucial role in measuring the campaign's effectiveness and guiding future strategies aimed at promoting public health. Here's how these insights are specifically applicable to such a project:

Assessing Campaign Reach:

Measurement: The analysis provides data on how many individuals were reached by the campaign, indicating the campaign's visibility.

Effectiveness: A wider reach suggests that the campaign successfully disseminated its health-related message to a larger audience. By comparing the reach with the campaign's target audience and objectives, you can gauge its effectiveness.

Measuring Engagement:

Measurement: The analysis quantifies audience engagement with the campaign materials, such as likes, shares, comments, and website visits.

Effectiveness: High levels of engagement indicate that the campaign resonated with the audience and generated interest. This can be a key indicator of the campaign's success in capturing attention and fostering awareness of the health issue.

Tracking Behavior Change:

Measurement: The analysis evaluates whether the campaign influenced positive health behavior changes among the target population, such as increased vaccination rates or healthier lifestyle choices.

Effectiveness: Behavior change data directly measures the campaign's impact on public health. A successful campaign will show a positive shift in these health-related metrics, demonstrating its effectiveness in promoting desired behaviors.

Correlation Analysis:

Measurement: Correlation analysis helps identify relationships between various campaign metrics and outcomes, providing insights into what factors are most influential.

Effectiveness: Discovering positive correlations between campaign engagement and behavior change, for example, can reveal which aspects of the campaign were most effective. These insights can inform future strategies to prioritize and emphasize elements that drive positive change.

Demographic Analysis:

Measurement: Analyzing the demographics of the engaged audience provides insights into who the campaign effectively reached.

Effectiveness: Understanding the demographics of the engaged population helps in tailoring future campaigns to better target specific groups. This ensures that health awareness messages are reaching the most relevant and receptive audiences.

Engagement Rate:

Measurement: The engagement rate, as calculated in the analysis, signifies the proportion of the audience that actively engaged with the campaign.

Effectiveness: A high engagement rate is a strong indicator of the campaign's effectiveness in capturing and maintaining audience interest, a vital aspect in conveying public health messages.

Data Visualization:

Effectiveness: Visualizations like countplots and heatmaps simplify complex data and make it accessible to stakeholders. These visualizations help in quickly identifying trends and patterns, enabling data-driven decisions to enhance the campaign's effectiveness.

In a public health awareness campaign analysis project, these insights are invaluable in assessing the campaign's success in raising awareness, promoting healthy behaviors, and reaching the target audience. By measuring these insights against the campaign's objectives and using them to refine future strategies, organizations can better serve public health needs and contribute to improved health outcomes.

Conclusion:

This project's documentation and analysis of the public health awareness campaign provide a comprehensive understanding of its objectives, design thinking process, data collection, analysis, and the actionable insights derived. The data-driven approach demonstrates the campaign's effectiveness and lays the foundation for informed decisions in future campaigns.