Public Health Awareness

Project Definition:

The project involves analysing data from public health awareness campaigns to measure their effectiveness in reaching the target audience and increasing awareness. The objective is to provide insights that evaluate the impact of the campaigns and inform future strategies. This project includes defining analysis objectives, collecting campaign data, designing relevant visualizations in IBM Cognos, and using code for data analysis.

Public health awareness refers to the dissemination of information and education to the public with the goal of promoting and protecting the health and well-being of individuals and communities. It involves raising awareness about various health issues, encouraging healthy behaviors, and informing people about available healthcare services. Public health awareness campaigns are an essential component of public health efforts, as they help prevent disease, reduce health disparities, and improve overall community health.

Design Thinking:

1.Analysis Objectives:

i. Measuring Audience Reach:

Objective: Quantify the extent to which the campaign reached the intended target audience by analyzing metrics like impressions, clicks, visits, or other relevant engagement indicators. This aims to assess the campaign's visibility and exposure within the target demographics.

Methods:

- Track website visits originating from campaign-related sources.
- Analyze social media engagement metrics (likes, shares, comments) on campaign posts.

ii. Assessing Awareness Levels:

Objective: Evaluate the level of awareness created among the target audience regarding the specific health issues addressed by the campaign. This involves measuring changes in knowledge, perception, or attitudes related to the health topics.

Methods:

- Conduct pre- and post-campaign surveys to gauge awareness levels.
- Analyze online mentions, comments, or discussions related to the campaign and associated health issues.

iii. Evaluating Campaign Impact:

Objective: Determine the overall impact of the campaign on the target audience, considering both short-term and long-term effects. Assess changes in behavior, intent, or actions attributable to the campaign.

Methods:

- Analyze changes in health-related behaviors through post-campaign surveys.
- Track any increase in inquiries, sign-ups, or participation in health-related activities post-campaign.

2. Data Collection

i. Sources for Campaign Data:

- The dataset employed for this project is ".csv" file from the link: https://www.kaggle.com/datasets/osmi/mental-health-in-tech-survey/data
- Campaign Websites and Landing Pages: Collect data on website traffic, visitor behavior, and engagement metrics.
- Social Media Platforms: Gather engagement metrics (likes, shares, comments), reach, and demographics of the audience engaging with campaign-related content.
- Surveys and Feedback Forms: Conduct pre- and post-campaign surveys to gather audience perceptions, awareness levels, and behavioral intentions.
- Health Organizations and Partners: Collaborate with health organizations to obtain data on campaign reach and impact from their respective databases.

ii. Methods for Data Collection:

- Web Analytics Tools: Utilize tools like Google Analytics to track website traffic and user behavior during the campaign period.
- Social Media Analytics Tools: Utilize platform-specific analytics tools (e.g., Facebook Insights, Twitter Analytics) to track engagement and audience demographics.
- Survey Platforms: Use survey tools (e.g., SurveyMonkey, Google Forms) to conduct pre- and post-campaign surveys to measure awareness levels and campaign impact.
- Collaborations and Partnerships: Collaborate with partner organizations to gather campaign-related data they have collected.

3.Visualization Strategy

i. Dashboard Creation:

- Campaign Overview Dashboard: Visualize campaign reach, impressions, and engagement metrics to provide an overall campaign performance summary.
- Awareness Assessment Dashboard: Create visualizations showcasing pre- and post-campaign awareness levels to illustrate the effectiveness of the campaign in increasing awareness.
- Impact Evaluation Dashboard: Visualize changes in behavior and actions post-campaign to assess the campaign's impact on the audience.

ii. Visual Elements:

- Charts and Graphs: Use line charts for trend analysis, pie charts for percentage distribution, and bar charts for comparisons.

5.Code Integration

i. Data Cleaning:

- Utilize Python libraries (e.g., pandas) to clean and preprocess raw data, handling missing values, outliers, and inconsistencies.

ii. Data Transformation:

- Implement Python scripts to transform data into appropriate formats, aggregating or disaggregating as needed for analysis.

iii. Statistical Analysis:

- Use Python libraries (e.g., SciPy, statsmodels) for statistical tests to validate campaign impact and draw meaningful insights.

iv. Automation:

- Develop scripts to automate repetitive tasks in data processing, allowing for a streamlined and efficient analysis process.

By defining these objectives and strategies, we aim to conduct a comprehensive analysis of public health awareness campaigns, leveraging data collection, visualization, and code integration for insightful and impactful results.