Public Health Awareness

Data Preparation:

Gather and clean your data, ensuring it's in a format suitable for analysis.

If you have data in different sources, integrate and transform it into a unified dataset.

IBM Cognos Dashboard Design:

Access IBM Cognos and create a new dashboard or report.

Select the appropriate data source and add relevant data items for campaign reach, awareness levels, and impact metrics.

Visualization Creation:

Add visualizations like charts (e.g., bar charts, line charts, pie charts), tables, and maps to represent your data.

Customize each visualization to show the specific metrics you're interested in.

Interactivity and Filters:

Enhance your dashboard by adding interactive elements like filters or drill-through capabilities, allowing users to explore data dynamically.

Python Code Integration:

For advanced data analysis, you can export data from IBM Cognos to Python for further processing.

Use libraries like Pandas, Matplotlib, and Seaborn for data manipulation and visualization.

Write Python code to calculate engagement rates, conduct demographic analysis, or run statistical tests as per your requirements.

Data Presentation:

Integrate Python-generated visualizations and insights back into your IBM Cognos dashboard or report.

Automation and Scheduled Updates:

Set up automated data refreshes and scheduled updates for your IBM Cognos dashboard to keep it up to date.

Documentation:

Document your dashboard design, data sources, and the Python code used for analysis to ensure transparency and reproducibility.

Remember, the specific code for data analysis will depend on the nature of your data and the analysis you want to perform. You may need to import and manipulate your data in Python, perform calculations, and then visualize the results.

If you have specific questions or need help with particular aspects of this process, feel free to ask for more detailed guidance.

Presentation:

If required, create a presentation or report summarizing the findings from your analysis. This should include the visualizations created in IBM Cognos and insights from your Python analysis.

Testing and Validation:

Before finalizing your work, thoroughly test your dashboards, reports, and analysis code to ensure accuracy.

CODE:-

```
# Import necessary libraries
import pandas as pd
import matplotlib.pyplot as plt

# Load the data exported from IBM Cognos
data = pd.read_csv('survey.csv')

# Calculate engagement rate
data['Engagement Rate'] = (data['Engagement'] / data['Impressions']) * 100

# Demographic analysis
demographic_summary = data.groupby('Demographic')['Engagement'].sum()

# Statistical tests (e.g., t-test)
from scipy.stats import ttest_ind
group_A = data[data['Group'] == 'A']['Engagement']
group_B = data[data['Group'] == 'B']['Engagement']
t_stat, p_value = ttest_ind(group_A, group_B)

# Create visualizations
plt.figure(figsize=(10, 6))

# Visualization 1: Bar chart for demographic analysis
plt.subplot(2, 2, 1)
demographic_summary.plot(kind='bar')
plt.title('Demographic Analysis')

# Visualization 2: Line chart for engagement rate over time
```

```
plt.subplot(2, 2, 2)
data.plot(x='Date', y='Engagement Rate')
plt.title('Engagement Rate Over Time')

# Visualization 3: Pie chart for campaign impact metrics
plt.subplot(2, 2, 3)
data['Impact Metric'].value_counts().plot(kind='pie', autopct='%1.1f%%')
plt.title('Impact Metrics Distribution')

# Display t-test results
plt.subplot(2, 2, 4)
plt.text(0.1, 0.5, f'T-statistic: {t_stat:.2f}\nP-value: {p_value:.4f}', fontsize=12)
plt.title('T-Test Results')

plt.tight_layout()
plt.show()
```

CREAT A DASHBORD IN IBM

Data Preparation:

Ensure you have the necessary data in a suitable format for use in IBM Cognos. This may involve data cleaning, transformation, and consolidation. Your data should include information on campaign reach, awareness levels, and impact metrics, with appropriate date and campaign identifiers.

Data Connection

In IBM Cognos, connect to your data source. Cognos supports a wide range of data sources, including databases, spreadsheets, and web services. Create data connections to your data source to access your campaign data.

Create Data Modules:

Define data modules within Cognos to organize and prepare your data for reporting. Data modules allow you to combine data from multiple sources, join tables, and apply calculations. Ensure that you create modules that align with your campaign data structure.

Build Queries:

Construct data queries within Cognos to extract the specific information needed for your reports. These queries can include filters, calculations, and aggregations to extract the relevant campaign reach, awareness, and impact metrics.

Design Dashboards and Reports:

Design your dashboards and reports within Cognos to visualize the campaign data. Here's how you can structure them:

a. Dashboard Creation:

- Create a new dashboard in Cognos.

- Add widgets: Choose the type of widgets (charts, tables, text, etc.) that best represent your campaign data. Common choices might include line charts, bar charts, pie charts, and data tables.

- Arrange widgets: Place the widgets on the dashboard canvas and organize them for a clear and logical presentation.

b. Report Creation:

- Create individual reports for campaign reach, awareness levels, and impact metrics.

- Customize each report by adding the relevant charts and tables.

- Apply filters and parameters to allow users to interact with and customize the report data.

Data Visualization:

Utilize a variety of chart types to visualize the data effectively. For example:

- Line charts can show trends over time.

- Bar charts can compare different campaigns or channels.

- Pie charts can display the distribution of awareness levels.

- Tables can provide detailed metrics and raw data.

Interactivity:

Enhance your reports and dashboards with interactivity. Use parameters, prompts, and filters to allow users to focus on specific campaigns, time periods, or metrics.

Scheduled Reports:

Configure Cognos to automatically generate and distribute reports on a schedule. This ensures that stakeholders receive up-to-date campaign information.

Security and Access Control:

Set up user roles and permissions to control who can access and modify reports and dashboards.

Testing and Validation:

Thoroughly test your dashboards and reports to ensure they accurately represent your campaign data and that all interactivity functions as expected.

Publish and Share:

Publish your dashboards and reports for easy access. Stakeholders can view them through the Cognos web portal or export them in different formats (e.g., PDF, Excel) for offline use.

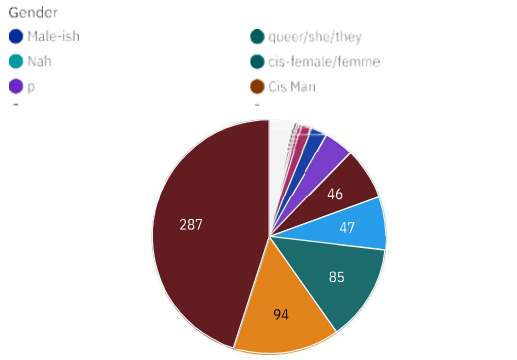
Training and Documentation:

Provide training and documentation for users to effectively navigate and utilize the reports and dashboards.

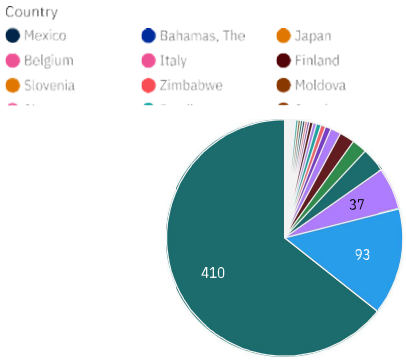
Remember that the specific steps may vary depending on the version of IBM Cognos you are using, and the exact implementation details should align with your campaign data and reporting requirements. IBM Cognos documentation and training resources are valuable references to help you create and customize your dashboards and reports effectively.

Tab 1

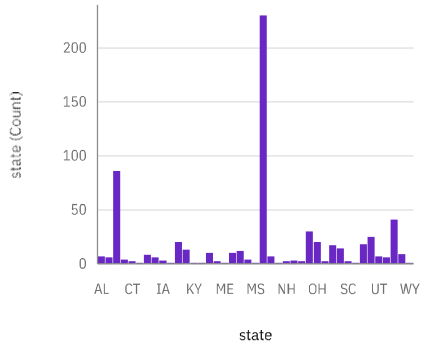
Gender by Gender



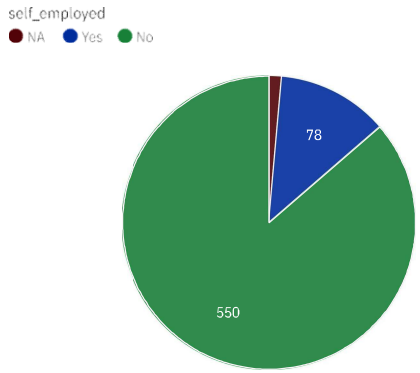
1 Country by Country



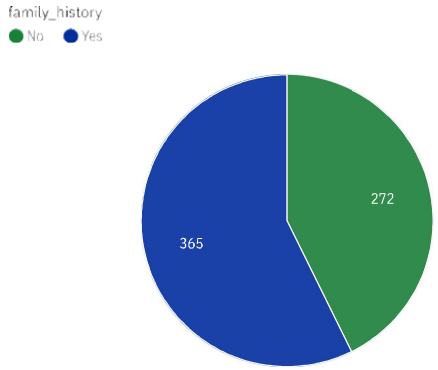
2 state by state 3



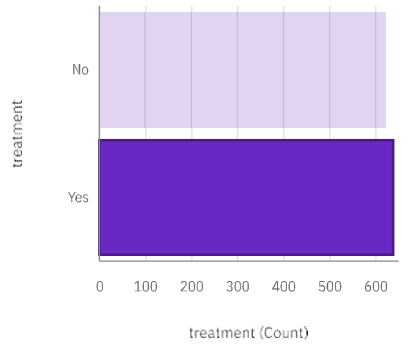
self_employed by self_employed 4



family_history by family_history 5

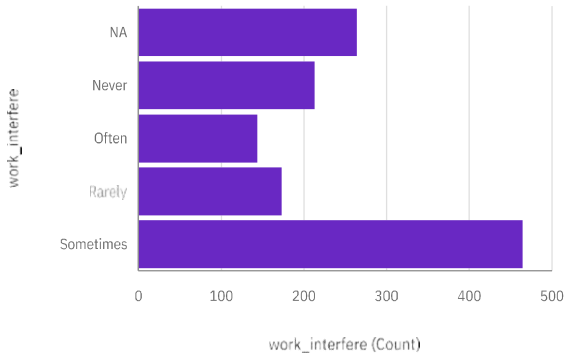


treatment by treatment 6

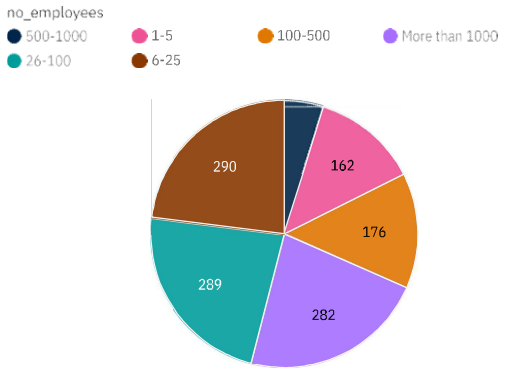


Tab 3

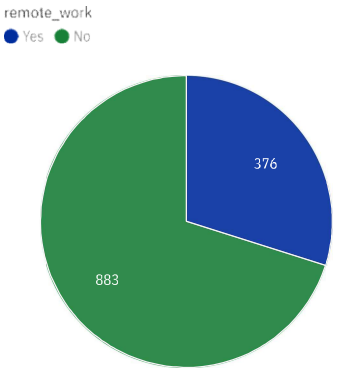
work_interfere by work_interfere 7



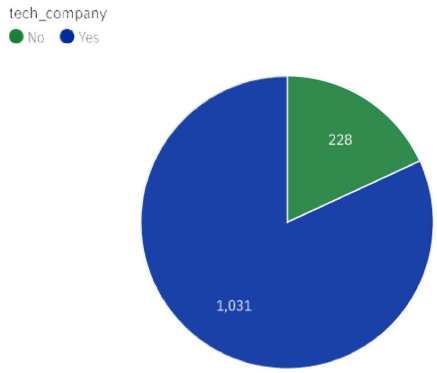
no_employees by no_employees 8



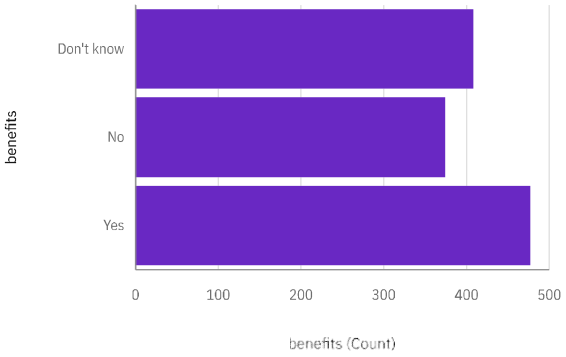
remote_work by remote_work 9



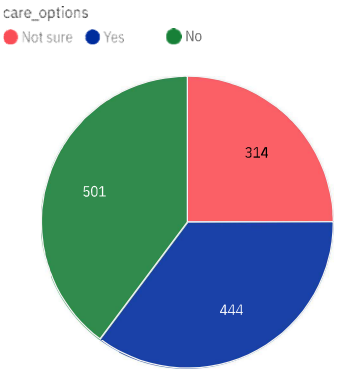
tech_company by tech_company 10



benefits by benefits 11



care_options by care_options 12



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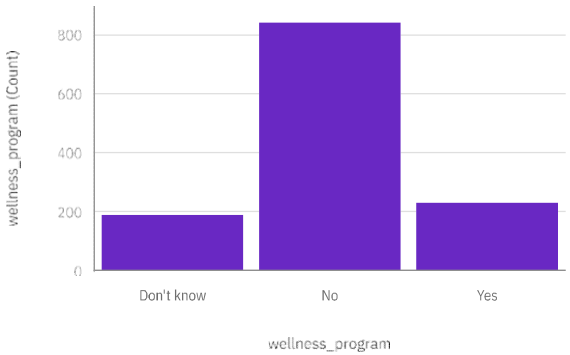
wellness_program by wellness_program



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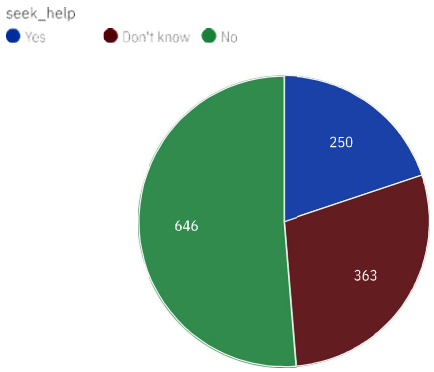
seek_help by seek_help



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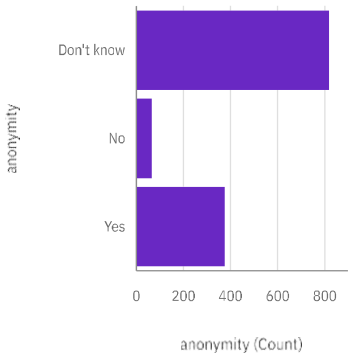
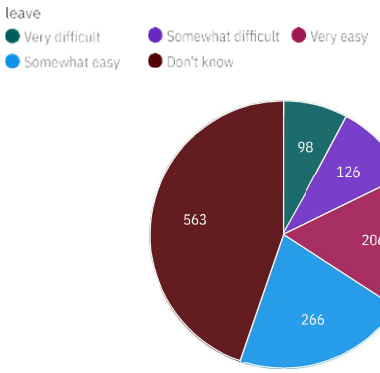
anonymity by anonymity



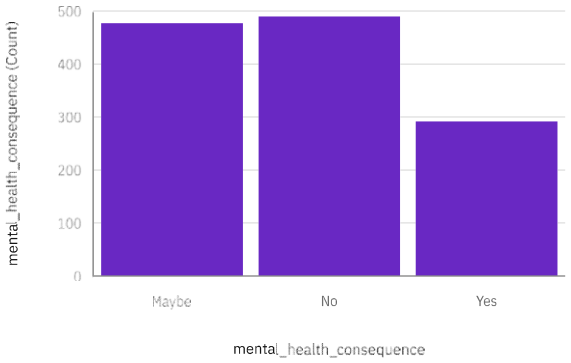
16

leave by leave



17

mental_health_consequence by mental_health_consequence



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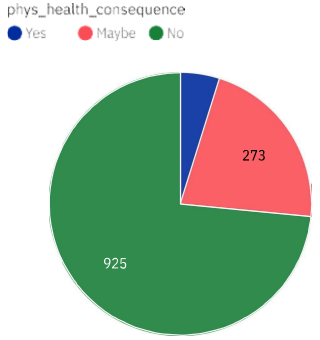
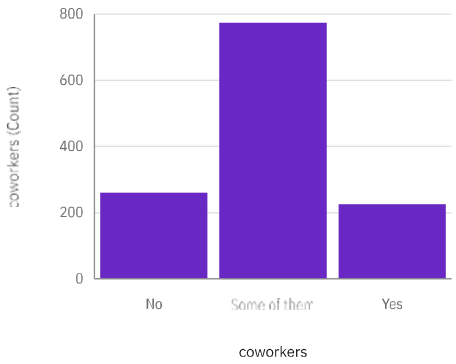
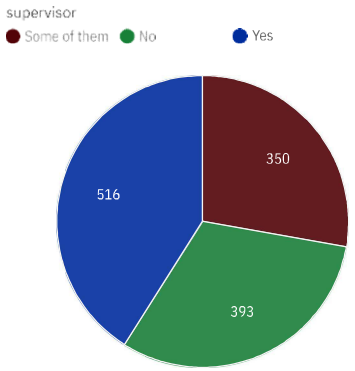
phys_health_consequence by phys_health_consequence



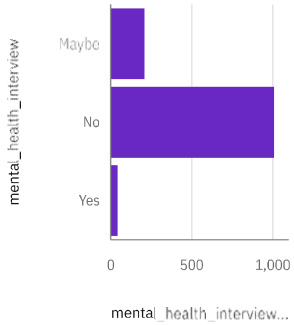
coworkers by coworkers 19



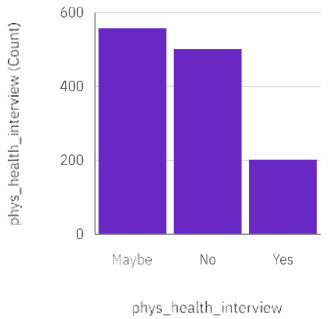
supervisor by supervisor 20



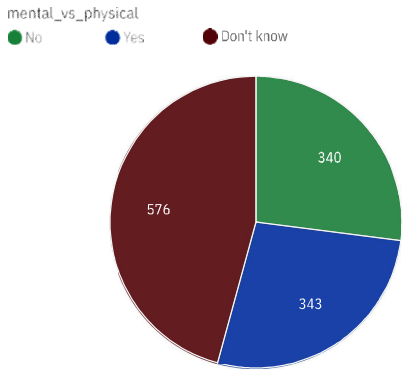
mental_health_interview by mental_health_interview 21



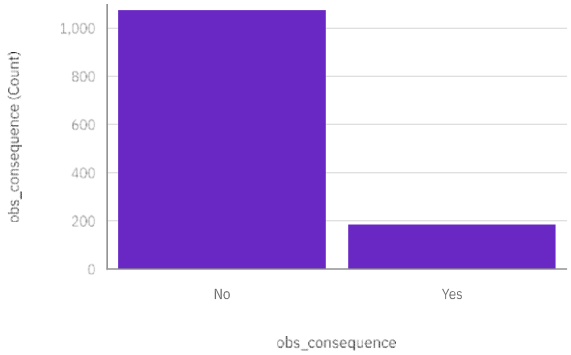
phys_health_interview by phys_health_interview 22



mental_vs_physical by mental_vs_physical 23



obs_consequence by obs_consequence 24



Filter(s) applied to the visualization(s):

Widget 1
Gender Includes: A little about you, Agender, All, Androgyne, Cis Female, Cis Male, Cis Man, Enby, F, Femake, Female, Female (cis), Female (trans), Genderqueer, Guy (-ish) ^_^, M, Mail, Make, Mal, Male, Male (CIS), Male-ish, Malr, Man, Nah, Neuter, Trans woman, Trans-female, Woman, cis male, cis-female/femme, f, femail, female, fluid, m, maile, male, male leaning androgynous, msle, non-binary, ostensibly male, unsure what that really means, p, queer, queer/she/they, something kinda male?, woman
treatment Includes: Yes

Widget 2
Country Includes: Australia, Austria, Bahamas, The, Belgium, Bosnia and Herzegovina, Brazil, Bulgaria, China, Canada, Colombia, Costa Rica, Croatia, Czech Republic, Denmark, Finland, France, Georgia, Germany, Greece, Hungary, India, Ireland, Israel, Italy, Japan, Latvia, Mexico, Moldova, Netherlands, New Zealand, Nigeria, Norway, Philippines, Poland, Portugal, Romania, Russia, Singapore, Slovenia, South Africa, Spain, Sweden, Switzerland, Thailand, United Kingdom, Uruguay, Zimbabwe, United States
treatment Includes: Yes

Widget 3
state Includes: AL, AZ, CA, CO, CT, DC, FL, GA, IA, ID, IL, IN, KS, KY, LA, MA, MD, ME, MI, MN, MO, MS, NA, NC, NE, NH, NJ, NM, NV, NY, OH, OK, OR, PA, RI, SC, SD, TN, TX, UT, VA, VT, WA, WI, WV, WY
treatment Includes: Yes

Widget 4
self_employed Includes: NA, No, Yes
treatment Includes: Yes

Widget 5
family_history Includes: No, Yes
treatment Includes: Yes

Widget 6
treatment Includes: No, Yes
treatment Includes: Yes

Widget 7
work_interfere Includes: NA, Never, Often, Rarely, Sometimes

Widget 8
no_employees Includes: 1-5, 100-500, 26-100, 500-1000, 6-25, More than 1000

Widget 9
remote_work Includes: No, Yes

Widget 10
tech_company Includes: No, Yes

Widget 11
benefits Includes: Don't know, No, Yes

Widget 12
care_options Includes: Not sure, No, Yes

Widget 13

wellness_program Includes: Don't know, No, Yes

Widget 14
seek_help Includes: Don't know, No, Yes

Widget 15
anonymity Includes: Don't know, No, Yes

Widget 16
leave Includes: Don't know, Somewhat difficult, Somewhat easy, Very difficult, Very easy

Widget 17
mental_health_consequence Includes: Maybe, No, Yes

Widget 18
phys_health_consequence Includes: No, Maybe, Yes

Widget 19
coworkers Includes: No, Some of them, Yes

Widget 20
supervisor Includes: No, Some of them, Yes

Widget 21
mental_health_interview Includes: Maybe, No, Yes

Widget 22
phys_health_interview Includes: Maybe, No, Yes

Widget 23
mental_vs_physical Includes: Don't know, No, Yes

Widget 24
obs_consequence Includes: No, Yes