One Day At A Time:

Analyzing Mental Health Trends by Academic Year in University Students"

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FINAL TERM CAPSTONE PROPOSAL

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Background

- University students often face significant mental health challenges that may change over time.

- This project will examine how year of study, self-care, and attitudes toward academics and recreation affect mental health in Canadian undergraduates.

- Understanding these variations will institutions tailor support and proactively provide needed resources.

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Data Collection & Details

- Students were recruited primarily via social media, various university Facebook groups and ads on REACH BC & Canadian Psychological Association's portal.

- **Sample Size: 1,192 respondents**

- **Number of variables: 147**

- Individual surveys, where hosted on Qualtrics.

- Participant data was collected by Dr. Theone Paterson and Jennifer Reeves at the University of Victoria.

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Problem Statement & Methodology

- Do undergraduate students in different academic years (e.g., first-year vs. fourth-year) report significantly different levels of depression, anxiety, and stress?

- Is there a relationship between employment status and these stress levels, does working while studying cause additional stress?

Data Preparation
- The data set consists of encoded columns. In order to understand the data, the columns need to be relabeled.

Key Metrics
- Relationships between year of undergraduate study and anxiety levels, Relationships between working, studying and anxiety levels.

Objectives

- To provide universities with information in which year groups are most vulnerable to mental health challenges.

- To support tailored wellness initiatives, peer support programs, and preventative mental health campaigns.

Focus Areas

- The relationship between anxiety levels and year of study.

- The relationship between employment, anxiety levels and year of study.

- Do those who rate the importance of games with friends have higher or lower anxiety levels over different years of study?

- Do students who report higher levels of physical activity report higher or lower levels of anxiety?

Techniques To Be Used

- Exploratory Data Analysis (EDA): Identify

  trends.

- Convert columns from scores to text

- Explore relationships between variables

- Data visualization: Power BI line charts,

  bar graphs, interactive slicers and key

  metrics.

```python
#maps to convert column from number response to text response
mappings = {
    'Eligibility': {
        1: "Eligible (undergrad student in Canada)",
        0: "Not eligible"  # assuming 0 for non-eligible or add as needed
    },
    'Ethnicity': {
        1: "Caucasian",
        2: "Asian",
        3: "Indigenous",
        4: "Hispanic or Latino",
        5: "Black",
        6: "Other",
        7: "Metis"
    },
```

Dashboard - Potential Visualizations to display results

Demographics Card – Cards or KPI tiles

Bar Chart – Stress level by employment status

Bar Chart – Stress level by academic year

Matrix or clustered bar chart - Academic Year + Job Status and stress level

Area of focus will be to deliver on our objectives.

The relationship between year of study and stress level

The relationship between employment, anxiety levels and year of study

Relationship between physical activity levels in students and stress levels

Authorship & Institution

Principal Investigator: Dr. Theone Paterson, University of Victoria, Department of Psychology

Co-Investigator: Jennifer Reeves
Location: Victoria, British Columbia, Canada Generated on: February 21, 2022

Citation: Reeves, J. T. H., Paterson, T. S. E. (2022). University Student Mental Health [Data set]. Scholars Portal Dataverse

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