A QUANTITATIVE ANALYSIS OF LANGUAGE CHANGES DURING COVID-19.

Internship Presentation

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Professional Background - Dental surgeon, PSM-BMHI

Passionate AI in medicine, Data analytics, Decision Modelling and Natural Language Processing.
INTERNSHIP- SPRING 2022

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INTERNSHIP LEARNING OBJECTIVES

- Research Process
- Programming Languages
- Integration of Informatics to Research
OVERVIEW

• Study Background
• Importance of the Study
• Aims and Objectives
• Overview of the Study process
• Methodology
• Participant Recruitment Process
• Data analytics
• Challenges and Lessons Learned
• References
The WHO defines health as “a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity”. (WHO).
APNS (Adverse Post Traumatic Neuropsychiatry sequelae)

Including

Posttraumatic stress (PTS),
Post-concussion syndrome (PCS),
Depression,
and regional or wide-spread pain.

Pre-existing Mental illness
COVID-19 pandemic is a traumatic event

Direct
• Infection

Indirect
• Factors
IMPORTANCE OF THE STUDY

• Pandemic is not just a medical phenomenon.

• Mitigation measures like isolation, social distancing, and closure of educational institutes, workplaces, and entertainment venues force people to stay in their homes and often negatively impact social and mental health.

• Mental health studies: Use of language data from social media.
AIMS AND OBJECTIVES

The aim of this study is to identify changes in the language during the COVID-19 pandemic in a population with or without a history of trauma.
RESEARCH QUESTIONS

❑ How does language change during the COVID-19 pandemic in people with recent trauma history?
❑ How do demographics affect language during the pandemic in this population?
❑ How do direct COVID-19 factors, such as illness and job loss, affect language during the pandemic in this population?
METHODOLOGY OF THE STUDY

Participant Recruitment Process

Building and conducting an online survey.
using UNC Qualtrics

Collect the language data using Twitter handles to extract the tweets.
using R

Analysis of the data and interpretation of the results.
Using Python
PARTICIPANT RECRUITMENT PROCESS

• Flyers will be posted on UNC campus.
• Recruitment emails will be sent to CHIP email list.
• Subjects privacy protection.
DATA ANALYTICS

➢ Twitter Developer account

➢ Programming Languages
  ❖ Python
  ❖ R
LIWC-LINGUISTIC INQUIRY AND WORD COUNT

By Pennebaker and Chung, includes dimensions like:

➢ Positive and negative emotion categories.
➢ Cognitive processes.
➢ Relativity-related words.
➢ Traditional content dimensions.
CHALLENGES AND LESSONS LEARNED

• Literature Review
• Formulating research questions
• CITI training
• IRB application process
• Research Grant Process and Methodology
• Integrating Informatics to research
• Privacy Restrictions
• Twitter developer account- Delay in activation
THANK YOU

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REFERENCES

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