

By: -THEEKSHITHA VARATHARAJSARMA (COADDS221F-009)

ADVANCED DIPLOMA IN DATA SCIENCE(FULL TIME)

NATIONAL INSTITUTE OF BUSINESS MANAGEMENT (NIBM)Colombo, Sri Lanka

INTRODUCTION

Substance usage in youngsters is a growing concern. The usage and frequency of usage of various drugs by males and females will be studied.

Compared to the vast number of researches that analyzed the psychological and psychological effects of drugs, the area of 'drug abuse and personality traits' is very less-explored.

For effective awareness and prevention measures in this area to be implemented, it is necessary to understand the effects caused by substance abuse and to recognize areas that need the most attention.

The research will focus on understanding, and analyzing the relationships and dependencies between drug usage, frequencies, personality traits, intelligence quotient(IQ) scores and selected personality disorders.

RESEARCH PROBLEM

The research problem is

How drug usage affects a person's personality traits and intelligence

Who are the people most exposed to drug usage and changes in personality traits

RESEARCH OBJECTIVES

MAIN OBJECTIVES

- Identifying whether there is a relationship between substance usage and personality traits.
- Finding whether the IQ level of a person is affected by drugs and related personality traits.

SUB OBJECTIVES

- Identifying the most exposed and frequently used drug and the demographic groups of people most affected.
- Analyzing whether usage of one drug enhances the chances of using other ones.
- Exploring the difference in impacts caused by drugs on different types of people.

RESEARCH QUESTIONS

What is the substance usage situation currently and how does it affect a person's personality and behavior?

What are the risks young people are exposed to because of substance usage?

What drugs do different people are most exposed to and what are the differences between them?

What is the dependencies among drug usage, age, gender, personality traits, personality disorders as well as IQ scores?

METHODOLOGY

The dataset has been downloaded from https://data.mendeley.com/ which was collected by Render A from Faculty of Psychology, University of Bavaria, Germany in 2019. The variables are:

Demographics

Drug Usage

Personality Traits

Other

- Age
- Gender

Cannabis

- Amphetamine
- Ecstasy
- LSD
- Cocaine
- Ketamine
- Mushrooms

• Sense of Agency

- Intentionality Bias
- Free will
- Unpredictability

 Score of Narcissism which is a personality disorder

IQ Scores

METHODOLOGY

- Data Collection Tools
 - i. Anonymous Questionnaires Demographics, Drug Usage
 - ii. Scores via Experiments Personality Traits, Other
- Population Youngsters who have the exposure to drugs
- Sample 210 Participants aged 17 34 (With a majority of students)
- Power Analysis was performed to select sample size.
- Hypothesis There is no significant relationship between the independent and dependent variables selected for each objective.



Conceptual Framework

Drug Usage

Youngsters (Male & Female) Personality
Traits & IQ
Scores

METHODOLOGY

Research objectives will be analyzed using Python and R. The following inferential statistical methods and graphical representations will be used. Descriptive statistics will be performed as well. From the results, hypothesizes will be tested, conclusions and significant predictions will be drawn.

Objectives	Methods Used to Test
Identifying whether there is a relationship between substance usage and personality trait	ANOVA
Finding whether the IQ level of a person is affected by drugs and related personality traits.	ANOVA Test & Regression
Identifying the most exposed and frequently used drug and the demographic groups of people most affected.	Graphical Representations (Charts, Graphs & Plots)
Analyzing whether usage of one drug enhances the chances of using other ones.	Chi-squared Test
Exploring the difference in impacts caused by drugs on different people.	Logistic Regression

