

# OCD Patient Data Analysis Report

## Introduction

This report presents an analysis of OCD (Obsessive-Compulsive Disorder) patient data based on a dataset containing demographic, diagnostic, and behavioral information. The study aims to identify trends, demographic distributions, and correlations between different OCD symptoms.

## Dataset Overview

The dataset includes anonymized records of OCD patients with the following attributes:

- **Patient ID** (anonymized identifier)
- **Gender** (Male/Female)
- **Ethnicity** (Caucasian, Hispanic, Asian, African)
- **Obsession Type** (e.g., Hoarding, Harm-related, Contamination, Symmetry, Religious)
- **Compulsion Type** (e.g., Ordering, Counting, Praying, Checking, Washing)
- **Y-BOCS Score for Obsessions** (Severity of obsessions)
- **Diagnosis Date** (Date of OCD diagnosis)

## Data Processing

The dataset was processed using SQL Server, and several queries were executed to extract insights. Key queries included:

1. **Gender and Ethnicity Distribution** - Count of male and female patients and their percentage distribution.
2. **Diagnosis Trends Over Time** - Monthly count of OCD diagnosis to detect seasonal trends.
3. **Obsession and Compulsion Analysis** - Most common obsession and compulsion types among patients.
4. **Severity Score Analysis** - Average Y-BOCS score by obsession and compulsion type.

## Key Findings

### 1. Gender and Ethnicity Distribution

- The patient sample is nearly evenly split between male (49.8%) and female (50.2%).
- The highest number of patients belong to the Caucasian ethnic group, followed by Hispanic and Asian groups.

## 2. Trends in OCD Diagnosis

- There is a fluctuating trend in OCD diagnosis over the years, with certain peaks and drops.
- Diagnosis rates remained relatively stable from 2013 to 2022, with periodic increases.

## 3. Obsession and Compulsion Patterns

- The most common obsession type is **Harm-related**, followed by **Contamination** and **Religious** obsessions.
- The most common compulsion type is **Washing**, followed by **Counting** and **Checking** compulsions.
- Patients with **Ordering compulsions** tend to have the highest average Y-BOCS obsession scores.

## Visualizations

The Power BI dashboard provides a visual representation of the analysis, including:

- A time series plot of OCD diagnosis trends.
- Pie charts showing gender and ethnicity distributions.
- Bar charts displaying the frequency of obsession and compulsion types.
- Average obsession severity scores by obsession and compulsion type.

## Conclusion

This analysis provides valuable insights into the characteristics of OCD patients. The findings can help in understanding common OCD patterns and severity, potentially aiding researchers and healthcare professionals in developing targeted interventions.